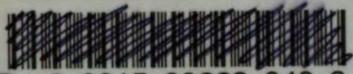

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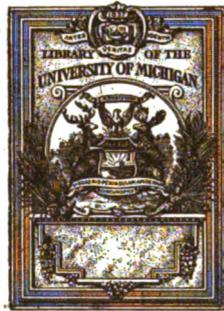
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THE MEDICAL COUNCIL

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A service of truth, and only a service of truth, from cover to cover.

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Vol. XXI

Philadelphia, Pa.

No 1

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Stanolax Liquid Paraffin

Lane, Sir W. Arbuthnot (Guy's Hosp. Ga., Lond., 1911, XXV, 403; Lancet, 1911, 11, p. 1540; Brit. Med. Jour., 1913, 11, p. 1126; Proc. Roy. Soc. Med., 1913, VI, p. 49; Surg., Gynec. and Obst., 1913, p. 600); Most of the toxic intestinal substances are absorbed in the small bowel, though he attributes the primary cause of the trouble to the colon. It is here that the first stasis occurs, causing the colon to sag and to pull upon its mesenteric attachments, producing thereby sharp kinks and

turns in the small intestines instead of the gradual and rounding loops of the normal gut. These kinks represent points of tractions and in time are accentuated by a thickening of the mesentery at these points. Lane advises that such cases should not be treated with laxatives, large quantities of water, buttermilk, etc., because little progress is possible under such treatment. For this condition—intestinal stasis—he recommends liquid paraffin as an ideal remedy.

* * * * *

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Medical Council

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New Year Greeting

A NEW YEAR and A NEW AGE

"An age on ages telling. To be living is sublime," though at the present a testing time. So we do not wish you merely

A Happy New Year

but desire for all physicians a happy entrance upon what will be

A NEWER and A BETTER AGE

for all men and all nations, and one in which the triumphs of medicine will repair the awful wreckage of war, disease and crime. Let our motto now be: *Ad astra, per aspera.*



The Treatment of the Pneumonia Heart.

THE PNEUMONIA HEART is the heart of a toxemia. When the initial toxemia is marked in pneumonia, the heart is always later involved. The safer rule, or so it seems to us, is always to anticipate the weakened heart in toxemic cases of pneumonia and not to wait until cardiac symptoms are a serious factor.

Consolidation is serious anywhere in tissues apt to be invaded by germ life, and the consolidation of pneumonia, with very little circulation through it, favors the proliferation of bacteria of many kinds. If only one specific organism was involved in pneumonia the pneumococcus vaccine, effective in chronic local suppurations due to the pneumococcus, would be vastly more curative in lobar pneumonia than it is. So, then, there is a multi-germ involvement and a severe toxemia. And this toxemia is hard to combat.

Specific Medication.

Spirochetal destruction by salvarsan and other forms of arsenic prompted Morgenroth to believe that bacteria could also be reached by intravenous injection of bactericidal drugs, and he developed ethyl-hydro-cuprein hydrochlorate, which cures pneumococcus septicemia in mice; but it does not cure pneumonia in man. No drug can get into the consolidated area in pneumonia, at least not in sufficient amount to be effective, and that

is the trouble with the whole proposition of a specific treatment in pneumonia.

The Toxemia.

But something must be done for the toxemia. Argue as we will that "something" is stimulation. Theoretically we don't approve of brandy in the treatment of pneumonia; but facts in our own practice are against us, since brandy has tided over quite a number of cases that assuredly looked bad. Camphor hypodermatically has, in our hands, acted very much more effectively than has strychnine. If the toxemia is not profound alcohol may not be needed, as hydrotherapy will accomplish much; but if it is profound hydrotherapy alone will do little. In either event use water freely to flush the kidneys and make the bowels more free, as well as frequent tepid sponging of the whole surface of the body. Hydrotherapy plus stimulation moderates the toxemia appreciably, but it must be ever borne in mind that it takes but little toxemia to seriously embarrass the heart.

What is the Pneumonia Heart?

As in all toxemias, the pneumonia heart is one which first shows weakening in its first sound, and the systolic and diastolic intervals become equal. Then some dilatation occurs, which may

become marked on the right side, and cyanosis marks its progress.

How Shall We Treat It?

First of all, don't overtreat; but begin early, and don't wait until cyanosis is manifest. Standardized tincture digitalis may be given early and may be all that is needed. After expectoration is free ammonium carbonate serves well. Brandy is useful in many cases; but camphor seems to be especially so. Use 20 per cent. solution in olive oil and inject into the deep tissues. A paper in this number of THE MEDICAL COUNCIL exploits venesection. If the right heart is dilated, with great cyanosis, it is a valuable resource; but don't employ it in children or in the poorly nourished. Strychnine is valuable as a potent agent of last resource and in severe cases. Frankly, we never saw oxygen inhalations do much in late pneumonia except in children. Theoretically it is indicated: practically it seldom works unless given quite early.

Proper treatment of the insomnia seems to aid the heart; but don't give bromide or chloral in pneumonia, as they weaken the heart. Paraldehyde often works well. Some physicians claim that passiflora is useful. We never saw it yield any appreciable result. We use hyoscyamus or opium, not morphine. Sulphonal, veronal and the like are not proper remedies in pneumonia, though useful in other conditions. Sponging and ice-cradling often do better than drugs.

Don't give cardiac depressants for the pyrexia. It is not true that combining ammonium carbonate with the coal-tar antipyretics removes their depressing qualities, as is asserted by certain proprietary makers.

Always make the condition of the heart one of your chief concerns in the treatment of pneumonia, and don't give aconite or veratrum after the first forty-eight hours of the disease.

Phosphorus in Tuberculosis.

We are fully convinced of the value of two agents in the treatment of tuberculosis when not far advanced, and these two are cod-liver oil and phosphorus. Both are mentioned in an article we are printing, so this is a proper occasion to say that we find advantage in combining the two agents together. I have made up some of the old phosphorated oil of previous editions of the U. S. P., which was a 1 per cent. solution in sweet almond oil, and add of this from one to four minims to each dose of the cod-liver oil prescribed. Never attempt to add the phosphorus to an emulsion of the oil, since it is oxidized into phosphoric acid by contact with the air and air-containing water therein. The combination seems to serve well.

Alfalfa as a Remedy.

An effort is being made to credit this forage plant as a medicine. Reference to analyses of alfalfa made by agricultural experiment stations show it to possess nothing that would lead one to expect medicinal activity from it. Dr. A. L. Blackwood, of the Chicago Homeopathic College, made a "proving" of alfalfa, and it produced practically no symptoms. And yet we read that alfalfa makes one "feel good," makes his "mind clear and bright," and "makes one rejoice to be alive." It is claimed that it controls polyuria, allays irritation from an enlarged prostate, acts upon the nerve centers, removes all sorts of irritation, promotes the growth of flesh, stimulates the appetite, is a tonic, assists the metabolic processes, eliminates effete matter, and goodness only knows what it will not do—always provided, of course, that "Our" preparation of alfalfa, which is combined with tissue salts, tonics, reconstructives and eliminants, is prescribed.

A more striking instance of empiricism run wild has not been encountered in medical literature for many a day. Not one shred of real evidence can we find serving to give this useful cattle food a place in the medicine case of the doctor; and we have approached the matter with an open mind, making a real effort to find out about it. Absolutely "nothing doing!" Let us forget hay in our prescriptions.

Digestive Elixirs.

There is a great demand for effective digestive elixirs, not only for their direct digestive action but also as a vehicle to carry many drugs which may derange digestion. The mistake was made some years ago of combining pepsin and pancreatin in the same solution, and the mistake was an honest one. But laboratory study by a number of most capable observers has proven beyond any reasonable doubt that pepsin and pancreatin in the same liquid medium gradually destroy each other. We have had made up the Elixir Digestivum of the National Formulary in the exact form in which it appears and also with the pancreatin, diastase and lactic acid eliminated. After full clinical trial, there is absolutely no question in our mind that the latter preparation was the most active. It is the duty of manufacturers to offer a truly scientific digestive elixir.

Read in this issue—

Disseminated Sclerosis.

by Dr. Hansell Crenshaw. A brief analysis of two cases. It is a very interesting practical paper. You'll find it on page 37.

Is the Problem of Pellagra Solved?

In our issue for November, 1914, in the summation of an article upon pellagra, we said:

"The regulation of the diet in pellagra has done most of that for which drugs get the credit.

. . . We have been talking with investigators who are not yet prepared to express themselves in print. These men believe that pellagra is a disease of the scurvy type. This coincides somewhat with the theory of pellagra being an intoxication."

The investigators with whom we then talked were officers of the United States Public Health Service. And now, a year later, comes the definite announcement in *Health News* issued by the Service. The following is from this announcement:

PUBLIC HEALTH SERVICE DISCOVERS CAUSE AND CURE OF PELLAGRA—PELLAGRA CAUSED BY INSUFFICIENT PROTEID DIET.

Announcement was made at the Treasury Department today that as a result of continued research and experiments of the Public Health Service, both the cause and the cure of pellagra have been discovered, and that the spread of this dread malady, which has been increasing in the United States at a terrific rate during the past few years, may now be checked and eventually eradicated. Assistant Secretary Newton, in charge of the Public Health Service, expressed great interest in the discovery and regards it as one of the most important achievements of medical science in recent years.

Alarming Increase.

Pellagra has been increasing alarmingly throughout the United States during the last eight years, and it is estimated that 75,000 cases of the disease will have occurred in the United States in 1915, and of this number at least 7,500 will have died before the end of the year. In many sections only tuberculosis and pneumonia exceed it as a cause of death.

The final epoch-making experiment of the Public Health Service was carried out at the farm of the Mississippi State Penitentiary, about eight miles east of Jackson, Miss., and together with the previous work of the Service completes the chain in the prevention and cure of the disease. The work at the Mississippi farm has been in charge of Surgeon Joseph Goldberger and Assistant Surgeon G. A. Wheeler, of the United States Public Health Service. The farm consists of 3,200 acres, in the center of which is the convict camp. The final experiment was undertaken for the purpose of testing the possibility of producing pellagra in healthy human white adult males by a restricted, one-sided, mainly carbo-hydrate (cereal) diet. Of eleven convicts who volunteered for this experiment, six developed a typical dermatitis and mild nervous gastro-intestinal symptoms.

Experts, including Dr. E. H. Galloway, the

Secretary of the Mississippi State Board of Health; Dr. Nolan Stewart, formerly Superintendent of the Mississippi State Hospital for the Insane at Jackson; Dr. Marcus Hause, Professor of Dermatology, Medical College of the University of Tennessee, Memphis, Tenn., and Dr. Martin R. Engman, Professor of Dermatology in the Washington Medical School, St. Louis, Mo., declare that the disease which was produced was true pellagra.

Carefully Selected Subjects.

Prior to the commencement of these experiments no history could be found of the occurrence of pellagra on the penitentiary farm. On this farm are seventy-five or eighty convicts. Governor Earl Brewer offered to pardon twelve of the convicts who would volunteer for the experiment. They were assured that they would receive proper care throughout the experiment, and treatment should it be necessary. The diet given was bountiful and more than sufficient to sustain life. It differed from that given the other convicts merely in the absence of meats, milk, eggs, beans, peas, and similar proteid foods. In every other particular the convicts selected for the experiment were treated exactly as were the remaining convicts. They had the same routine work and discipline, the same periods of recreation and the same water to drink. Their quarters were better than those of the other convicts. The diet given them consisted of biscuits, fried mush, grits and brown gravy, syrup, corn bread, cabbage, sweet potatoes, rice, collards and coffee with sugar. All components of the dietary were of the best quality and were properly cooked. As a preliminary, and to determine if the convicts were afflicted with any other disease, they were kept under observation from February 4 to April 9, two and a half months, on which date the one-sided diet was begun.

Typical Symptoms.

Although the occurrence of nervous symptoms and gastro-intestinal disturbances was noted early, it was not until September 12, or about five months after the beginning of the restricted diet, that the skin symptoms so characteristic of pellagra began to develop. These symptoms are considered as typical, every precaution being taken to make sure that they were not caused by any other disease. The convicts upon whom the experiment was being made, as well as twenty other convicts who were selected as controls, were kept under continuous medical surveillance. No cases of pellagra developed in camp excepting among those men who were on the restricted diet. The experimenters have therefore drawn the conclusion that pellagra has been caused in at least six of the eleven volunteers as a result of the one-sided diet on which they subsisted.

On the basis of this discovery, the States of Mississippi, Louisiana and Florida have laid their propaganda through their respective boards of health for the eradication of the disease.

Americans in the Tropics.

Very clever books have been written apparently demonstrating that, the white man may not for long find successful tropical residence. From the point of view of the blond northern races these books are correct; but we are a composite race here in the United States.

It has been but for the short space of twenty years that sanitation and rational living adjusted to tropical environment has been efficiently undertaken; hence, the experience in subjugating the tropics is yet insufficient to declare that tropical residence is impracticable for the white man. Indeed American triumphs in Havana, the Philippines and Panama—triumphs in sanitation and reconstruction—would tend to show that, for us at least, the tropics have a lure that will not end either in dreams or in a superlative incidence of disease.

The great wealth of this country is largely due to the fact that, throughout our greater area, we have a long tropical summer which ripens immense crops of many kinds. Such, to us, ordinary crops as corn, tomatoes, lima beans, tobacco, sugar cane, cotton and melons are true tropical products; they are listed as such in foreign writings. This editor has during this present season grown from seed several tropical plants, one, the castor bean, attaining a height of 15 feet. Such growth is impossible except under tropical or semi-tropical environment. With the same amount of labor much more wealth can be produced in the tropics than anywhere else. The world needs money, and in tropical subjugation by the white man will this wealth be brought into being.

So, then, our problem is not the academic one of thermo-biology but of biologic dynamics in tropical environment, and such modification of the man and his new environment as will tend towards comfort, health, wealth and efficiency. After we solve these details, the problem of food for the world will be solved as well.

The American South and Southwest are tropical in many of their climatic phases; the great Mississippi Valley has a tropical summer. South Florida never gets as hot as Philadelphia sometimes does, and even the Southwest desert has cool nights and a dry air that makes living there not so much of a hardship as many suppose. Physicians and sanitarians have demonstrated that these regions are, or can be made, perfectly adapted to the continued residence of white people in comfort and prosperity.

There is a great future for our own people in developing our own semi-tropics and adjacent tropical regions, for our race is so constituted that we are biologically fitted as few other white

racers are to make a success of a project that promises so well that it is time to drop academic objections and proceed to the elaboration of the necessary details which will so greatly promote our interests.

Magnesium Infiltration and Pellagra.

The Italian theories of pellagra in which silica is blamed as the causative agent suggest the use of lime as a preventive. Dr. John B. Aulde believes it is magnesium, not silica, which is the exciting factor, but he recommends the same treatment—lime.

Silica has an affinity for magnesium, and aluminum has for silica, and when these agents infiltrate the tissues lime is depleted, according to the best information we have. Doubtless the Italian investigators and Dr. Aulde have thrown a side light upon the pellagra problem which, with the diet demonstration of the Government, will aid much in a rational solution of the cause and treatment of the disease.

The Surgeons Should Give Operation Certificates.

To-day we were called to a post-operative case—a woman in dire danger. When desirous of knowing what was done by the surgeon and what was his diagnosis, no one knew, and the surgeon was in another State. Calling his office on the telephone elicited the information that he was gunning in the wilds of Georgia and his records were locked up. Such complex situations happen often. The surgeons should give to every case upon whom they do an abdominal or other serious operation a card certificate containing the information a brother practitioner may desperately need—if something happens. Especially should this be done if the patient does not more or less continuously remain under the observation of the operator.

Syphilis of the Central Nervous System.

Dr. O. P. Bigelow, Cleveland, Ohio, in *Cleveland, Med. Jour.*, August, 1915, believes that the cell count in the spinal fluid is the best means for estimating the curative influence of drugs. Following this plan in a number of cases, Dr. Bigelow found that mercury and iodides are insufficient; that salvarsan combined with mercury is effective, and that combined intraspinal and intravenous medication sometimes succeeds where intravenous injections alone do not. Intraspinal treatment should be used cautiously in tabes.

How Far Should Pharmacology Rule in Therapeutics?

Treatment is based upon many factors—physiology, pathology, chemistry and pharmacology. All of these combined and viewed in their proper inter-relationships form the basis for therapeutics, and this art—for therapeutics is an art—is achieved only by the person who learns the necessity for correlating these, as well as the *human element* in each and every individual case. The man who learns therapeutic management and human management knows how to *treat* a case, whereas the man who knows only pharmacology does not know how. Treatment is an art and an inspiration. Many educated physicians never achieve it, either as an art or as an inspiration; but only the properly educated man can hope to attain to it, because the ignorant may have the inspiration but does not attain to the discrimination necessary to being an artist.

Pharmacology has a real province, but one in science. Treatment can be learned only at the bedside. Therapeutic technic is just as hard to acquire as is surgical technic and its learning comes in the same way. One can learn neither in a laboratory, although one can learn much in a laboratory that helps in both technical domains.

What is Pharmacology?

Pharmacology has to do with *some* of the factors in treatment, the principal one being with the physiology of remedies and other active agents not classed as remedies. Pharmacology may be studied as an independent science, even as geology or botany. In this day, when drug treatment is but *part* of the management of a case, pharmacology has become but a *part* of therapeutics, though an important one. It is an underlying science in therapeutics and determines the probabilities involved. In other words, pharmacology tells us whether or no a drug is apt to be of value in the treatment of a disease through its physiological action and what its line of possible utility may be. But pharmacology does not especially concern itself with the pathology of remedies, that is, it tells what action upon physiology may be expected, but does not tell what may be expected in pathology, except by inference or induction. As McCrudden well says, "When and how to use drugs in disease is outside the province of pharmacology."

Illustration.

Pharmacology tells us, for instance, that digitalis raises blood pressure; and it does in laboratory experiments upon animals. Yet H. C. Wood, Jr., says it does not in therapeutic dosage in man; and James Mackenzie, the eminent English authority in heart disease, says: "In all our observations made at Mount Vernon Hospital

and London Hospital, as well as those made in private practices, we have only found rare instances where the blood-pressure was noticeably raised, and a good number in which it was lowered." Again, how is pharmacology to differentiate between acute and chronic disease therapy? Yet again, an organ may be functionally active and yet be the seat of organic disease. What guidance can pharmacology give us here? So it appears that, in determining the utility of a drug, pharmacology gives the utmost help in determining whether it is active but fails to tell us its range of actual utility or lack of utility.

Pharmacology is an Eliminator.

Suppose a dozen cardiac remedies are taken at random, pharmacology tells us which ones are in the digitalis group, which ones may be dangerously toxic, and which ones are inert so far as their cardiac action is concerned. In other words, we no longer need to experiment empirically for years to determine if a given drug is promising or is not. Here pharmacology is a wonderful help. Most of our modern therapeutics is *based* upon pharmacology, just as modern floriculture is based upon botany; but the pharmacologist may not be a therapist, or the botanist a florist. But the therapist who knows his pharmacology proceeds with his eyes open and he gets results because he knows better than to try to get them where they are impossible, and the florist who knows his botany saves himself a world of useless experimenting.

Experience.

It takes a lot of experience to make a commercial florist of a botanist, and a world of it to make a therapist of a pharmacologist. Experience counts just as much in medicine today as it ever did, and medicine is still an art as well as a science. Pharmacologists have been too dominant of late. Let them properly understand their true function and medicine will advance faster. Also practitioners will come to a better understanding and appreciation of pharmacology, a truly wonderful scientific help in the art of treating a sick man.

The True Value of Aconite.

An editorial in *The Therapeutic Gazette*, November 15, 1915, after noting variations in aconitine, which is excellent when pure, goes on to discuss aconite itself. Stimulating the vagus centers, it slows the heart in proper dosage; but this is not believed by some pharmacologists, whose methods are criticized. The point is made that physiologic test of the tincture is more valuable than is alkaloidal assay, and the additional one that aconite is commonly used in too small doses.

Therapeutic Notes.

Rest is a main factor in treating an active endocarditis.

Bismuth subcarbonate and salol is a good combination in acute diarrhea.

Abbe recommends radium in the treatment of X-ray epithelioma, the result of slowly developing lesions.

We have suffered from chronic X-ray lesions for nine years and find that exposure of our hands to direct sunshine does a world of good.

In the later months of pregnancy be very careful in the administration of mercury; it may induce abortion or cause chronic poisoning of the fetus.

A very useful emollient for application to the hands after washing during cold weather consists of equal quantities of glycerin, rose water and hydrogen peroxid.

Papaverin is a most reliable antispasmodic in the treatment of urinary retention in children that is not so severe as to require dilatation of the sphincter.

Don't forget the toxicology of emetine. Even small doses may cause depression, though therapeutic doses are not considered dangerous. Heavy toxic doses cause general paralysis and cardiac failure.

Chenopodium is preferable to thymol in the treatment of hookworm disease; its administration is simple; it does not cause discomfort to the patient; it can be safely given at short intervals, and it is non-toxic in therapeutic doses.

Weil, who was an observer of the inoperable cancer cases treated by Beebe with Autolysin, asserts that of the twenty-three cases treated in the General Memorial Hospital, fourteen died in the hospital, eight were discharged unimproved, and only one showed transitory improvement of moment. See *J. A. M. A.*, November 6, 1915.

If the blood-pressure is low in pneumonia digitalis can not be depended upon to raise it; but aseptic ergot intramuscularly *can* be depended upon to do so, and it also serves to relieve hypostatic congestion of the uninvolved lung. If the blood-pressure is high small doses of nitroglycerin will slow and quiet the circulation.

Wilbur claims that leukemia is an infection with organisms of low virulence but of various kinds working on a soil prepared by previous infections, but principally streptococci. In treating a case foci of infection should be sought out and properly treated. Every effort should be made to ascertain the cause and to treat it rather than to depend upon the usual empiric means of treatment.

A Short Month

is February. But Medical Council for February is not going to be skimpy.

It will be full of really practical matter, truly helpful in our problems of everyday practice.

Here are just some of the many good things we have in store for you in February:

The leading editorial will be upon
"CÆSAREAN SECTION,"
frankly criticising some modern tendencies.

Dr. Harper's admirable paper upon
"PELVIC MECHANO-THERAPY"
will appear in February, as will also Dr. Remy's article upon

"THINGS WE KNOW BUT FORGET,"
which, we regret, was crowded out of this issue.

Prof. Edward Livingstone Hunt, of Columbia University, will present a truly practical paper upon
"HEMIPLEGIA AND ITS COMPLICATIONS."

"CYCLIC VOMITING,"
by Dr. Harry E. Myers, will be a most helpful discussion.

Dr. S. K. Hirshberg will present an outline of
"THE NEW METHOD OF TREATING
DIABETES."

Dr. Charles H. Duncan will have a striking paper, entitled

"AUTOTHERAPY IN ITS APPLICATION TO
THE YOUNG MOTHER."

The Business Side

will have as a leader

"BUSINESS ETHICS VERSUS MEDICAL
ETHICS."

As you can judge from the title, this is going to be worth reading.

Constructive Reform

will carry a paper,

"ALCOHOL AS A THERAPEUTIC SERVANT,"
in which some careful conclusions will be presented of real interest to the Practitioner

"SOME FACTS AND VAGARIES VIEWED
FROM A MEDICAL STANDPOINT,"

by Dr. B. C. Keister, will be a reform paper with some "pep" to it.

Doctor, the Editor wants to assure you that Medical Council is going to give you many times a dollar's worth in 1916.

This splendid February issue that is coming will fully do its part in living up to that promise for the year.

Send \$3.00 for four years' subscription —
Saves a dollar. So much more convenient.

The following papers are contributed exclusively to this journal. Republication is permitted if credited as follows: **MEDICAL COUNCIL, Philadelphia.**

ORIGINAL ARTICLES

Sentences, like sunbeams, burn deepest when most condensed.

We are not responsible for the views expressed by contributors: but every effort is made to eliminate errors by careful editing, thus helping the reader.

The Etiology of Post-Operative or Wound Scarlet Fever.

With Report of Four Cases.

By JOHN B. ROBERTS, M.D.,
313 S. Seventeenth St.,
PHILADELPHIA, PA.

The ever advancing science of bacteriology demands that surgeons investigate anew the relations of infectious medical diseases to wounds. Tuberculosis has been so carefully studied that the profession now realizes that scrofula, white swellings of joints, Pott's disease, lupus and several other surgical affections of bone, viscus and skin have the same origin as pulmonary phthisis. The diagnoses tuberculous arthritis, tuberculous ulcers and similar descriptive names, therefore, now clear the way for intelligent treatment. The medical importance of infections by the gonococcus and by the trepanoma pallidum has been of late so deeply impressed upon us as almost to obscure temporarily the surgical aspects of these widespread sources of public woe.

Surgeons, however, it is true have given thought to the activities of the diphtheria bacillus in skin ulcerations and eye conditions, but most of their interest has been centered on the faucial, laryngeal and nasal infections of that organism. Bacteriology has expelled the word "idiopathic" from the language of surgery in relation to tetanus and erysipelas; indeed, the term "erysipelas" itself might be dropped from nomenclature, since it merely serves to confuse treatment and complicate hospital quarantine.

The possibility of actinomyces, leptothrix and the bacilli of anthrax or of glanders being the causative element in pathological conditions is still too little in mind when surgeons investigate obscure lesions.

Surgical Scarlatina.

These considerations seem to justify the discussion of surgical scarlatina, sometimes termed wound or traumatic scarlet fever; and to suggest that there are several queries regarding it needing categorical replies, which can only be answered by rigid clinical and pathological research.

In a valuable clinical study of eruptions following operation, Dr. F. B. McCarty published last year, in *Surgery, Gynecology and Obstet-*

rics, 1914, Vol. II, p. 509, the results of his experience in 1,000 consecutive operations under ether, nearly all of which were pelvic procedures.

Excluding the transient rashes seen during etherization, there were 43 eruptions in which there was an interval of hours or days between operations and to the onset of the rash. In 41 of these patients there was no other complication than the eruption, but in two there was a mild wound sepsis. He divides the eruptions into two classes: those appearing within 24 to 48 hours after operation, and those occurring later. The second class showed a more definite course and deserves attention here. In some of this class the rash was confined to portions of the skin surface, in others it covered almost the entire surface; the onset was sudden and occurred three or more days after operation, without prodrome, and with a temperature higher than would be expected from the operation.

The Rash.

The rash began as an erythema or a papular lesion, situated at first on the inner surfaces of forearms and thighs and then extended over the entire body; but it not often affected the face, and never the palms or soles. There was some itching, increasing as the rash spread, which lasted until fading took place. The papules were at first pink, later dark red. The rash reached its height in 24 to 36 hours and then subsided. It might break out as late as seven days subsequent to the operation and it lasted from one day to a week. The average duration was four days. The cases beginning on the third or fourth day were the severest and lasted longest.

Desquamation was not observed in any patient, and in no case was there albuminuria or aceturia before or after operation; nor were any casts detected in the urine in any patient in whom casts had not been found previously.

His conclusions are thus stated:

Eruptions following operation are comparatively frequent, particularly after operation upon parts abundantly supplied with sympathetic nerve fibers, as the pelvic organs. They occurred in 4½ per cent. of his series of 1,000 cases

These eruptions may arise after any of the common anesthetics—ether, chloroform or nitrous oxide; and are characterized by an interval be-

tween operation and onset of rash, by lack of prodromes or constitutional symptoms, by the presence of an erythematous or papular eruption with severe itching, and by the presence of an elevated temperature and moderate leucocytosis. They often simulate scarlatina, measles and the so-called drug exanthems.

The exciting cause, which varies, includes drugs, enemas, anesthetics and operative shock. The underlying cause is vaso-motor disturbance, due probably to irritation of the sympathetic nervous system.

The second or late type of eruption described by McCarty seems to resemble many of the cases mentioned in surgical literature as post-operative or surgical scarlatina, admittedly differing from severe scarlatina by the absence of desquamation and renal symptoms.

McCarty's article is accompanied by a valuable bibliography.

Dr. Alice Hamilton, also of Chicago, ten years before McCarty's paper, published, in *Am. Jnl. of Med. Scie.*, 1904, Vol. 128, p. 111, a study of her observations in the Hospital of the Memorial Institute for Infectious Diseases. This paper is marked by a critical review of earlier literature and a discriminating discussion of the evidence therein submitted as to the existence of a special form of scarlatina arising in connection with wounds.

Her opinion is that examination of the reported cases of surgical scarlet fever shows the eruption, often considered evidence of surgical, or wound, scarlet fever, to be frequently due to a septic and not a scarlatinal infection; and that its variations from typical scarlet fever are not the result of an unusual mode or portal of infection, but to a difference in the infecting cause. She therefore records her conclusion that at that time (1904) there was no convincing proof furnished by literature that surgical scarlatina was anything more than true scarlatina occurring in the wounded. It was, in other words, believed by her to be a mere coincidence during an operative convalescence or one arising in the presence of a pre-existing wound.

Surgical Scarlatina Not Coincidental.

Four cases of scarlatina proved to be such by experienced physicians in eruptive fevers, occurring in my surgical practice within recent years, have somewhat shaken my belief that scarlet fever in the course of surgical operations is a mere coincidence. This experience has raised in my mind the question of the true etiology of scarlatina. Bacteriological investigation has apparently not established the exact etiological cause of the disease. Several micro-organisms have been found in the throats of scarlet fever patients, and have been mentioned as the prob-

able infective organism which gives rise to the complexus of symptoms to which the term scarlet fever is applied. It seems to me more likely that the cause, whether it be bacterial or protozoan, is filterable and extra microscopic; that the streptococcus which causes undoubtedly some of the symptoms found in severe scarlet fever may be closely related to the *Streptococcus pyogenes* or the *Streptococcus erysipelatosus*; or that after all the disease called scarlatina, simple or complicated, may really cover several different infections.

What is Scarlatina?

If this last supposition is true, time may show that there are two or more diseases confounded under the name scarlatina, as typhus and typhoid fever were for many years included in the name typhus fever. These questions are too intricate for solution by a surgeon, but I believe the time has come when surgeons and bacteriologists together should study the subject clinically and by laboratory methods. I personally can see no reason why the virus of scarlatina could not enter through wounds of the skin and give rise to a wound scarlet fever, even though it usually finds entrance to the animal system through the mucous membrane of nose and throat. The bacillus of tuberculosis and that of diphtheria may gain entrance by mucous membrane or eroded skin; perhaps that of scarlet fever may likewise have more than one portal of infection. It may not be necessary for its bacterial cause to be restricted in its activities to infectious contacts with mucous membranes, even though that surface is more penetrable.

Disease Similarity.

There are certainly many clinical observations and some bacteriological ones which show a similarity in at least some of the organisms found in what are termed diphtheritic pharyngitis, scarlatinal pharyngitis and erysipelatosus pharyngitis. The great variety of organisms found in the oral, nasal and pharyngeal cavities is admitted by all. The differentiation of the infecting agent of one disease from the others of these three may be difficult. It is also possible that double or triple infections may occur at the same time. The whole subject seems to be of the highest importance and difficult to elucidate. Therefore, I have added to this discussion of the topic the four cases of scarlet fever occurring in my recent operative work, though they establish nothing definitely.

Scarlet Fever Ten Days After Appendix Excision.

Case I.—Miss H. J. D., aged 27 years, a private patient; was admitted to the Polyclinic Hospital on February 22, 1909, with diagnosis of chronic appendicitis causing attacks of pain and intermittent diarrhea. She was an anemic woman

who had been treated by me ten months previously for obscure abdominal discomfort associated with neurasthenic symptoms. She had had measles, mumps and whooping cough, but never scarlet fever or, so far as she knew, diphtheria; though she had suffered from what she called ulcerated sore throat and tonsillitis. Her history, when she was under my care first at the hospital mentions three attacks of "typhoid fever" and the frequent occurrence of "malaria." The urine contained no albumen or sugar and her blood examination revealed 60 per cent. hemoglobin, 12,400 leucocytes, 4,400,000 erythrocytes.

I removed the appendix, which was long and adherent by the tip down in the pelvis. The tubes and ovaries were healthy. Convalescence was uneventful; the wound healed without pus, and she was about ready to go home in another State, when on the ninth or tenth day a rise of temperature with sore throat occurred. Two days later, March 5, an eruption was evident on neck, chest, arms and back. Dr. Jay F. Schamberg, diagnostician of the Municipal Hospital for Contagious Diseases, ordered isolation for twenty-four hours for observation. The temperature was about 102, pulse 128. The next day the rash was not quite so red, but a definite diagnosis of scarlatina was made by Dr. Schamberg and she was sent to the city's hospital for treatment. The patient remained in the scarlet fever pavilion for several weeks. Since that time, now several years, she has been greatly improved in health, apparently as the result of the appendix operation. This patient had been in a private room and therefore isolated from direct outside contact for about twelve days before the occurrence of throat symptoms and had very few visitors, none of them children. There was no scarlet fever in the Polyclinic Hospital at the time.

Scarlet Fever Two Days After Uranoplasty.

Case II.—Early in 1912, T. D., a healthy white boy of 5 years from northern Pennsylvania, was admitted to a private room in the Methodist Hospital with cleft palate and chronically inflamed tonsils. The fissure involved the soft and the posterior part of the hard palate. He had had also inflammation of the middle ear. The urine was negative. I excised the protruding portion of the tonsils and treated the oral inflammation for nearly two weeks, after which he returned to his home. He came back to the hospital for the cleft palate operation nine and a half months later, being in good condition and with normal urine. On November 4, 1912, the cleft in the palate was closed by a modified Langenbeck operation. Two days later, at 10 P. M., the temperature rose to nearly 104, the pulse 138. On the next day, November 7, a very red rash was seen, and a diagnosis of possible scarlet fever made. On the 8th of the month Dr. William M. Welch, diagnostician of the Municipal Hospital for Contagious Diseases, confirmed the diagnosis and the patient was removed to that hospital under his care and quarantine established at the Methodist Hospital. The child, after several weeks' treatment, recovered without any detri-

ment from the infectious fever to the uranoplastic flaps. The entire wound healed promptly and he has since grown and remained healthy.

There was an endemic of scarlet fever at another town on the same railroad in which the boy lived. His parents and I concluded that he might have come in contact with the virus of scarlet fever in the parlor car by which he reached Philadelphia. There was no scarlet fever in the hospital at the time, and the early development of the disease after he reached the hospital renders this quite probable.

Scarlatina Three Days After Harelip Operation.

Case III.—W. I. S., a white boy of 6 years, was admitted to the children's ward of the Polyclinic Hospital from Maryland on March 10, 1915. Some years before I had operated for cleft of the upper lip and palate. There was still a moderate defect in the palate and a slight dragging of the repaired upper lip at the edge of the scar when he laughed or talked. Under anesthesia I separated the lip from the underlying jaw and by incisions corrected the slight deformity. This was done a day or two after his admission. Three days subsequently a rash appeared which was decided to be scarlatina by the Department of Public Health, and the child sent to the Municipal Hospital for Contagious Diseases. The patient had a good deal of desquamation but recovered in the usual time; the lip healed by primary union.

No cases of scarlatina had been in the Polyclinic for a considerable time; but there were a number of diphtheria cases at various times during the winter, causing portions of the hospital to be quarantined.

Scarlatina Two Days After Uranoplasty.

Case IV.—George I. G., a white boy 2 years old, from New Jersey, was admitted to the Polyclinic Hospital Children's Ward on March 12, 1915, for a second operation on cleft palate. The harelip had been closed, but an attempt previously to close the entire palate had been only partly successful. On account of the case just mentioned (W. I. S.), the ward was quarantined for a time and this boy was not subjected to operation until April 3. Then as no additional evidence of scarlet fever had appeared among the children, I did a modified Langenbeck operation for closure of the palatal fissure. Two days later G. had a scarlet rash, which was declared by the Board of Health Examiner to be due to scarlet fever, and the child was sent to the Municipal Hospital for Contagious Diseases on April 6. The palatal flaps which were under considerable tension separated, and the operation was a failure, but the boy went through the usual course of scarlet fever with desquamation.

This case, it may be assumed, was contracted indirectly from the other boy, who was in the same ward, though the late appearance of symptoms would seem to indicate that it must have been due to some indirect association through attendants or articles which had been in contact with the first case. It will be observed that it

was twenty days after the boy S. had been removed from the ward that G. showed symptoms of the infection. These four cases are interesting, perhaps, in the study of the question of the real existence of surgical or wound scarlet fever, which is practically the question of the possibility of the scarlatinal virus entering through a surgical wound. The fact that they were all examined by skilled men constantly seeing cases of scarlet fever, and actually indeed treated under the supervision of Drs. Welch and Schamberg, makes the diagnosis irrefutable.

Dr. S. S. Woody, Chief Resident Physician of the Philadelphia Hospital for Contagious Diseases, reports to me as follows in regard to the cases reported above: T. D., scarlatina, no complications; W. I. T., scarlatina, rhinorrhea developed in hospital; G. I. G., scarlatina, no complications; H. D., scarlatina, no complications. He also tells me that there have been received at the hospital, from January 1, 1914, to October 11, 1915, 16 cases of scarlatina following burns, with 4 deaths; 1 following right mastoid operation; 2 cases following operation for suppurative appendicitis; 1 case following cleft palate operation, making 20 in all. These cases do not include my two cases admitted during the same period.

Pyorrhea Alveolaris and Magnesium Carbonate.

By CHAS. F. D'ARTOIS-FRANCIS, M.D.,
951 St. Marks Ave.,
BROOKLYN, N. Y.

The research commission of the National Dental Association claims emetine is not a specific in pyorrhea alveolaris, according to Dr. Hugh W. Macmillan, in the *Lancet Clinic*.

Most diseases of the teeth are of an acid nature. The mouth and teeth being kept alkaline, these diseases, when they are of local origin, can be prevented, as also the growth of bacteria that are the focus of local infection and may further infect the system generally, as is instanced in rheumatism.

Magnesium carbonate is the agent of choice, since it effectively inhibits the development of acid-producing bacteria in the mouth. For some fifteen years I have advised its use by my patients, who have thus saved many of their teeth; and, in some instances, beginning caries has been stopped. In some severe cases of pyorrhea alveolaris the teeth tightened up, and in others the disease was arrested.

Magnesium carbonate is a constituent of tooth structure, and is the natural antacid for their preservation against acid-bacterial invasion.

Magnesium hydroxide is not as efficacious in a dentrifice as is magnesium carbonate.

Double Sciatica, Post-Operative.

By JOHN M. SHALLER, M.D.,
CINCINNATI, OHIO.

A woman, aged about 55, was operated on for uterine fibroid. The operation lasted about two hours. The recovery was uninterrupted, and complete after the usual rest in bed.

Upon attempting to walk for the first time, she had severe pain in both sciatic nerves, which she had never experienced before the operation. At the same time the arches of both feet gave way, which was also followed by pain in the feet.

This woman was treated for sciatica, and for neuritis for a period of over two years. For six months she wore a plaster-of-paris jacket without receiving any benefit therefrom. Electricity of all types was tried for a year without diminishing the pain. Medicines were also used without improvement resulting.

When she came into my hands the woman was unable to sit in a chair with comfort, and was forced to carry an air cushion with her. She was fairly comfortable when lying in bed, flat on her back. Sleep was very much disturbed. Walking was extremely painful, on account of which she was compelled to remain in the house.

On examination of the spine great tenderness was found at the fourth and fifth lumbar vertebrae. The space between the fifth lumbar vertebra and the sacrum was exceedingly tender on pressure; there was also considerable pain in the upper part of both gluteal regions, as well as tenderness on pressure over both sciatic nerves.

Treatment.

The fourth lumbar vertebra was out of alignment. The spinous process was slightly turned to the right of the median line. Mechanical treatment was applied to the spine, chiefly by placing the patient over a roll about 6 inches in diameter. This roll was placed under the hips, with the patient lying on her face. One hand of the operator was placed over the sacrum, and the other on the upper thoracic region. Pressure was then made particularly on the sacrum, with the purpose in view of bending the spine posteriorly over the roll, and at the same time of stretching the spine and perhaps the fourth and fifth lumbar nerves.

The muscles on both sides of the spine in the lumbar region were tense, contracted and painful on movement. Another object of treatment was to stretch the painful and contracted muscles, as well as the capsular ligaments enclosing the articulations of the vertebrae. The vibrator was also applied wherever there was tenderness on pressure or spontaneous muscular pain. No medicine was prescribed. Treatment was applied daily.

When ten treatments had been given, the patient was able to sleep comfortably. The pain

in both sciatic nerves was considerably less; walking could be done with much more ease than previously. By the time thirty treatments had been given, the patient considered herself well and returned to her home. The fallen arches of the feet were also restored to their normal relations.

Letters received from this patient during a period of a year and a half spoke of continued improvement and freedom from pain, except at rare intervals, when the pain was slight, of short duration, and without inconvenience.

Value of Mechanical Treatment.

This patient comes under a class which is gradually increasing in numbers as a result of long and severe operations of various kinds in which the back is not supported at the lumbar region and therefore total relaxation of the muscles and ligaments occur that maintain the normal curves of the spine. This leads to displaced vertebræ with muscle tension and nerve pressure.

The probability is that such results as these following operations lasting one or two hours or more might be prevented by supporting the natural curve of the back by means of a well-fitting pad sufficiently hard to hold up the normal curve.

Bad Handling on the Operating Table.

It is unfortunate that women undergoing serious and long operations should have forced upon them such painful conditions as double sciatica, which is undoubtedly produced in consequence of the letting down of the natural anterior lumbar curve of the spine to the level of the operating table.

It can be readily understood why medicine, fixation or electricity fail to give relief in such conditions. The normal lumbar curve is destroyed, spinal bones are displaced, and in order to give relief these displacements must be remedied, and the muscles of the back strengthened by mechanical vibration treatment.

Subluxated vertebræ are produced by mechanical causes. They lead to various diseases, and not only to muscle and nerve pains.

The means used for the relief of such conditions must necessarily be mechanical in its nature. Medicine can not restore a subluxated vertebra, no matter how slight the displacement may be.

It should become the custom to carefully examine the spine of every patient who has sciatica, cervico-brachial or intercostal neuralgia. This act will often lead to the specific spinal nerve from which, or through which, the painful conditions originate. This will then lead to the vertebra that is faulted, and will later suggest the cure, which will be mechanical treatment applied to the vertebra that has lost its normal relations with its fellows.

Disseminated Sclerosis: Brief Analysis of Two Cases.

By HANSELL CRENSHAW, M.D.,
Neurologist to the Grady Hospital,
603 Candler Bldg.,
ATLANTA, GA.

The often curious likeness of the onset of disseminated sclerosis to apoplexy, and the necessity of being prepared for such likeness, is one of the chief reasons for preparing this paper. The similarity between multiple sclerosis and hysteria is not likely to mislead one, the writer believes, as some observers would have us think. Yet there is an interesting analogy here, too.

Data which the following case-reports furnish enable one to draw certain deductions and queries of interest.

Case One.

Case I was that of a paperhanger, 33 years old and unmarried. Five years previous to examination this patient contracted malaria in Cuba, and also what was thought to be amebic dysentery. The bowel complaint gave trouble during these years. Three weeks prior to examination he suddenly developed a staggering gait so similar to that due to alcohol that many persons, including a physician, thought the patient drunk.

The chief complaint at examination was the ataxia and the consequent mortification which it caused the patient. But in addition there was a disturbance of speech which obliged the patient to talk quite deliberately in order to avoid stumbling over syllables. Also there was a characteristic ataxia of the upper extremities, a coarse intention tremor, which made it difficult to pick up small objects and caused the drinking-glass to rattle against the patient's teeth when he drank. There was, however, no marked disturbance of sensation, nor of mind except a heightened emotional tone, which rendered the young man susceptible to suggestion. There was some difficulty in voiding urine. And the reflexes were as follows: The pupils reacted well to light, but sluggishly to accommodation; the knee-jerks were present, but diminished; and other reflexes were normal. The diminished knee-jerk and poor reaction of the pupil to accommodation were sufficiently suggestive to warrant the making of a Wassermann, which was negative. Likewise, a careful blood-count showed nothing abnormal, nor did the examination of the urine. The cerebro-spinal fluid was not examined. The systolic blood-pressure in this case was remarkably low, being only 90, and the pulse was somewhat accelerated. One of the most striking features of the case was nystagmus, particularly when the eyes were turned from side to side.

Family History.

Finally, the family history of Mr. C. was as follows: Father, quite senile at 70; mother, suf-

ferred from trifacial neuralgia; sister, neurasthenic.

The patient improved rapidly under potassium iodide, sodium cacodylate, and faradic electrical treatment; and got *apparently* well. In all probability, however, he is simply enjoying a remission.

The atypical features of this case were: (1) The diminished patellar reflex, which is usually exaggerated; (2) the disturbed pupillary reaction; (3) the absence of marked spasticity in the limbs, and (4) prompt improvement. The typical features were: (1) The sudden paraplegia, appearing like a stroke; (2) the cerebellar gait; (3) the scanning-speech; (4) the intention tremor; (5) the oscillation of the pupils, and (6) the emotional state. There was, also, a slight contraction of the visual field which is characteristic; and doubtless some optic atrophy, though an intraocular examination was not made.

Case Two.

Case II was that of a brickmason, 50 years old. His first trouble occurred two years prior to examination, when, as the result of an apopleciform attack he fell from a scaffold. He soon recovered, however, from the slight hemiplegia which resulted and went on for a year before the second pseudo-stroke occurred and left him with a spastic paraplegia, exaggerated knee-jerks, dancing pupils, disturbed speech and intention tremor. His family history and personal history were negative and his improvement under treatment was slight.

Differential Diagnosis.

Differential diagnosis of multiple, or disseminated, sclerosis is interesting and important. From apoplexy it is differentiated by absence of coma, vomiting and headache, and by presence of nystagmus and intention-tremor. From hysteria disseminated sclerosis differs by absence of areas of anesthesia and by presence of ataxia, scanning speech, and evidence of organic lesions, as, for example, optic atrophy. From Friedreich's ataxia the disease under discussion differs by presence of the knee-jerk, nystagmus, speech disturbance, optic atrophy, and by absence of an hereditary factor and of the characteristic foot contractures of Friedreich's ataxia. This form of sclerosis is not sufficiently similar to tabes to necessitate a discussion of differential features, I think, and differs from paralysis agitans in that the tremor is increased and not stopped by voluntary effort.

Etiological Data.

The following etiological data, collected by C. W. O. Bunker, are of interest:

"Among 70,000 neurological cases in America the percentage of multiple sclerosis was one in 266, or 0.085 per cent. In Scotland it is about 2 per cent.; in Berlin, .85 per cent., and in Hamburg, 1 per cent.

"It is a disease of early adult life, from 20 to

40, but it may occur in childhood and, perhaps, even in infancy. The cases occurring after 50 are doubtful or atypical. The following table represents American cases, but it makes the incidence of the disease too late. Practically, the cases occur between the fifteenth and thirty-fifth years.

AGE	NO. OF CASES
10.....	9
10-20.....	36
20-30.....	45
30-40.....	32
40-50.....	24
60-70.....	7
70-80.....	4

"The disease is twice as frequent in men as women—129 to 67. European statistics make the numbers about even. The disease is seen more frequently in foreigners, perhaps because our clinics in the large cities are so largely foreign in population."

Uniformity of Symptoms.

It is somewhat singular that in a disease like this, due, as its name implies, to sclerotic patches more or less irregularly scattered throughout the central nervous system, we should find such uniformity of symptoms as we do—so definite an entity. The ataxia, nystagmus, scanning-speech, and emotional disturbance together comprise a quite stable syndrome. The staggering ataxia is evidently attributable to cerebellar involvement, the nystagmus and speech difficulty probably to sub-cortical lesions, and the bladder and spastic symptoms to lesions in the cord.

Treatment.

Concerning treatment, most students of the disease are quite pessimistic. E. W. Taylor, for example, in his *Neurological Case-Histories*, says:

"In the present state of our knowledge the treatment is merely palliative. There are no methods at our disposal of combating the progress of the sclerosis."

Iodides and arsenic, however, coupled with two mightier measures, namely, encouragement and rest, are calculated to aid nature in arresting sclerotic processes and to bring into play vicarious neurones which are ever ready to take up the burdens of their degenerated fellow fibers.

A guarded and not too hopeful prognosis should be given to the family, but a brighter one to the sufferer himself.

Read in this issue—

on page 53, "The Psychology of Patronage: Another View of 'Crucifixion,'" a reply to Dr. Morris' Reply. Here is a human interest argument, a cry from the heart of the "Crucified."

Tuberculosis As We Should View It.

By ALBERT J. COLTON, M.D.,

27 Jewett Ave.,
BUFFALO, N. Y.

Visiting Physician, Sisters of Charity and
St. Mary's Hospitals.

I offer no excuse for bringing before you this old subject of tuberculosis other than to say this: With all the attention given it through publicity to laity, this disease is not being checked with any amount of rapidity, if at all; secondly, very few, if any, cured cases are coming from our open-air sanitariums, and even when they are sent back home much improved in health, and no bacilli in their sputum, it is only a matter of time until they relapse and are as bad as ever; third, the great majority of them can not remain away indefinitely, and then there is that class that can not go at all but must stay at home working as long as possible. As it is only natural that these patients, like other human beings, want to live as long as they can, what can we do for them?

Bringing the subject of tuberculosis down to simplified deductions, a few conclusions can be arrived at. In practically every case a history of tuberculosis is ascertainable in the family; therefore these patients are born with a susceptibility to the disease. In other words, they are like a house built on a sand foundation, a fort without proper protection, a battleship with defective armament. The enemy, and to these susceptibles the tubercle bacilli are the invaders, find but little to check their attack, rather they find an invitation to their onslaught.

The Diagnosis.

Speaking of the diagnosis, it is an undeniable fact that physicians rarely see these patients until considerable damage has resulted to lung tissue. Usually the first symptom considered of sufficient importance to seek medical advice is a hemorrhage, be this slight or severe. All coughs that hang on, in the face of well-known and tried remedies, should be considered as suspicious, and doubly so should these be looked upon as grave if they occur in patients having a tubercular history in the family as far back as the second generation. One other condition must be viewed with great suspicion, a true pleurisy, especially one that does not rapidly clear up permanently under appropriate treatment. Regard with the utmost suspicion a persistent cough following what was supposed to be a trivial cold, and especially so if the patient is showing any loss

of flesh, has a tubercular family history and there is a rise of evening temperature. Of course, the microscope should quickly clear the diagnosis. Don't let one examination suffice; bacilli are not always found at first.

Treatment.

Taking all things into consideration, the only thing that will stop the ravages of the great white plague is to stop bringing children into the world with a susceptibility to the disease. In other words, if from today no children were born of family stock having had tuberculosis, the disease would practically become extinct after the present generation of susceptibles had ceased to exist. But what can we do for the present generation? What can we do for those to come? for tuberculosis will never be wiped out; we will have it with us until the millennium.

Open-air treatment at sanitariums is not a complete success. A small percentage only can remain permanently at these camps. A very great majority can not go there or to a different climate; they must stay at home, must work until from exhaustion they take to their beds until the end comes. But they all want to live and stay among us as long as possible; they depend upon the doctor. What is the best he can offer?

This may be placed under three headings: first, hygiene for the patients and those around them; second, diet; third, support of the system against the army of invasion, or the *Bacillus tuberculosis*. Little may be said of the first; this is clear to all, made so by a propaganda that is world wide—fresh air day and night, suitable clothing, climate if possible; in fact, keep them in the best physical and mental condition attainable.

The diet should be of the most nutritious kind, easily digestible and plentiful; but above all and most important, the digestive apparatus must be capable of taking care of all food in as near a normal manner as possible.

Special Drug Treatment.

It would be a waste of time to enumerate the different drugs used in tuberculosis. One thing is sure, there is no specific. Possibly one of the most widely used and oldest remedies used, and which has given the best results in the prolongation of life, is cod-liver oil. We are all aware of the nauseating odor of this oil; so substitutes in the shape of other animal or vegetable fats have been presented, but none have been as effectual as the oil. The reason is simple: cod-liver oil contains one of the life-giving elements of all the cells, phosphorus; the others do not,

*Read at meeting of the Central N. Y. State Med. Soc., Rochester, N. Y., October 21, 1915.

and there is no doubt, excepting the slight benefit derived from the other elements in its composition, iodine, bromine and iron, phosphorus is *the* element that has made cod-liver oil famous in tuberculosis. I say element, because if we are to get results, we must use free phosphorus, and not a chemical compound, as hypophosphites, glycerophosphates, or phosphoric acid mixtures, all of which have been dealt with extensively of late in medical journals, with the one conclusion: "They give little or no free phosphorus." Phosphorus is a most peculiar drug, according to recognized authorities; phosphorus is only therapeutically obtainable in solution with absolute alcohol or certain fixed oils, or in the U. S. P. pill of phosphorus.

We are all aware of the importance of the nervous state in digestion and assimilation. Therefore it must be clear to us that to keep these functions in as normal a working condition as possible it is necessary that the nervous system be kept in the same condition. In practically every case of tuberculosis the nervous system is below normal. Phosphorus being the most powerful nerve food we have, as we are taught in physiology, it is an important constituent of every cell; we get a double action, not only on the nervous system, but on every cell of the lung tissue.

Case Records.

In substantiation of these facts, the two following cases are briefly given:

Case I.—J. B., aet. 73. This patient had been ailing for about a year; had been losing flesh, growing decidedly weak, only being able to attend to his labors at more or less irregular intervals. He had some cough, quite marked at times, but had never expectorated blood; he thought his condition was due to his age. Consultation revealed an evening temperature of 99½. No cavities were evident in the lungs, but there was a marked right apex involvement; he was quite emaciated; had been in bed for two weeks. A bacteriological examination was returned with: "Sample teeming with tubercle bacilli." This case looked quite hopeless; the family were notified, and a bad prognosis given as to his ever being able to return to work.

A non-aqueous mixture devised by Dr. Dowd, of Buffalo, and containing nux vomica, ignatia, cannabis indica and free phosphorus, was ordered, thirty minims in milk about one-half hour after meals. Strength was gradually regained; cough decidedly lessened; he gained some in weight, following a marked increase of appetite; in four weeks he had returned to his work, a clerk in the United States service. Over two years has passed; he has lost no time; feels fairly well, considering his condition.

Case II.—J. T., aet. 35. This man has been bothered with a cough he attributed to a cold he had contracted six or eight months previous.

A little blood was expectorated about a month before consultation. At this time he had lost about fifteen pounds in weight; was considerably below the normal in strength. A temperature of 99 1/5 was found in the morning. The right lung auscultation elicited many râles, but there was no evidence of any cavities. Examination of the sputum by the health department showed tuberculosis. He was immediately placed on the same treatment and advice was given that it would be a good case for Raybrook. Arrangements were made for his reception there, but he was advised to continue the phosphorus mixture. He remained there four months; says he took his medicine twice a day. It is nearly three years since he was first seen, and although he has not called during the last two years, he reports that he is seemingly perfectly well, as strong as ever and working every day. It may be mentioned here that about six weeks elapsed between his commencing the phosphorus mixture and his entrance into Raybrook. During this time he improved markedly in every way, and to such an extent that he questioned the advisability of going there.

Looking this subject squarely in the face, the following conclusions can be arrived at:

Tuberculosis will be present with us as long as humanity exists.

All we can expect from open-air sanitariums is an armistice, if I may use that word, for the time being.

Tubercular patients, if living in a climate not too damp and who will follow the same routine as in open-air sanitariums, receive practically the same benefit they would at these institutions.

There is no specific; but these individuals want to live as long as possible: many have to continue working as support to themselves or those dependent upon them and the doctor is their only hope of longevity.

Keep their systemic tone as near normal as possible, and for as long as possible, thus handicapping the enemy in its onslaught: phosphorus is the most powerful remedy we have today for this purpose.

See editorial reference to the use of phosphorus in this issue. Dr. Dowd's formula has some vogue in Western New York. We understand it may be made up of the tinctures of nux vomica, ignatia and cannabis indica, with a solution of phosphorus in absolute alcohol, the diluent being glycerine. It is not readily made off hand, and, we believe, is made up by one of the drug houses in his region. We saw it a few years ago, when phosphorus was a drug more commonly in use.—
EDITOR.

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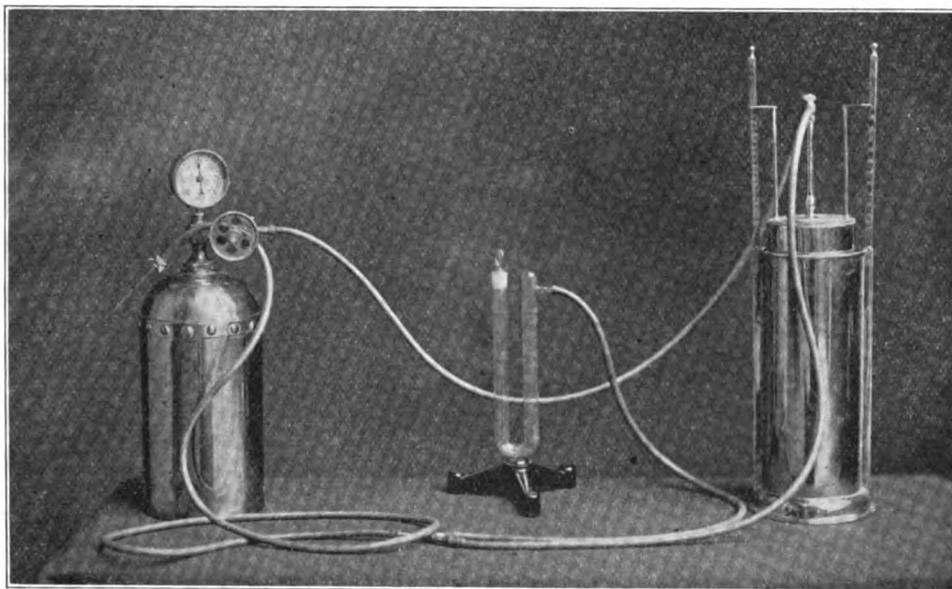
Description of Apparatus and Technique As to Its Use.

By GEORGE S. FOSTER, M.D.,
Surgeon and Pathologist to the Hospital Notre
Dame de Lourdes,
967 Elm St.
MANCHESTER, N. H.

In the October number of MEDICAL COUNCIL the author described the surgical treatment of incipient pulmonary tuberculosis. In this article the Murphy artificial pneumothorax apparatus was brought into play. As a supplement to this article, the Murphy apparatus is herein fully described and the technique carefully outlined.

Directly opposite each other on the sides of cylinder A are two oblong runways. These runways permit the carriage of two perpendicular metal tapes properly marked in cubic inches to indicate the cubical contents of cylinder B. From opposite sides of the surface of the drum of cylinder B project guides which keep this cylinder erect. At right angles from these guides are pointers to indicate the scale upon the metal tapes.

From the center of the drum of cylinder B projects the pipe of this cylinder. This pipe is surmounted by two horizontal valves, namely, A and B. Valve A of cylinder B is for the intake of the nitrogen gas from valve B of the tank. Valve



Description of the Apparatus.

The Murphy apparatus consists of a copper cylindrical tank containing nitrogen gas under high pressure. This tank has one common pipe exit with two valve terminations. One of these valve terminals (valve A) is connected directly to a gauge showing the amount of gas present in the tank at any given time. The remaining terminal is governed by a wheel valve (valve B), which manually controls the escape of the gas. This is unit No. 1 of the apparatus.

Unit No. 2 consists of a nickel-plated reservoir made up of two cylinders, one (cylinder B) placed within the other (cylinder A) so that there is ample space for free play between the two cylinders without friction. The top of cylinder A remains open while the bottom of cylinder B is also open. Thus air or any gas or fluid may escape or be displaced within cylinder B, permitting it to be raised or lowered *ad libitum* within cylinder A.

B of cylinder B permits the exit of the gas from this cylinder.

Unit No. 3 consists of a U-shaped glass manometer supported by an iron tripod base. One extremity of this U manometer is left open by a connecting tit. The other extremity is controlled by a glass stopper. The extremity which terminates in the connecting tit is scaled to indicate the positive or negative pressure at any moment during the injection of the gas.

Unit No. 4 consists of fine, very elastic rubber tubing divided by a metal Y. This rubber tubing thus takes the form of a large Y. One leg of this Y is joined to valve B of unit 2, cylinder B. Another leg is joined to the tit of the manometer unit 3. The terminal leg is attached to the puncture needle. A fourth piece of tubing of this unit connects valve B of unit 1 with valve A of cylinder B of unit 2.

By referring to the illustration the entire apparatus when assembled is seen to be very simple and compact.

Technique.

1. Preparation and assembling of the Murphy apparatus.

Each of the four units of the apparatus is carefully inspected and tested, to make sure they are in working order. Units Nos. 2, 3 and 4 are sterilized by boiling, with the exception of the manometer tripod stand. The injection needle is always boiled with the cannula in place, thus assuring a patulous lumen.

Valve B of unit 1 is carefully cleaned and antiseptized with alcohol and then protected with a sterile cotton pledget saturated with alcohol. After the units are properly sterilized, as per above, they are assembled under strict aseptic precautions. The unsterilized tripod manometer base is protected by sterile towels. All of the apparatus is as carefully handled as if the most serious operation was to be performed. The writer believes that strict asepsis plays quite as important a rôle here as in any surgical procedure.

In assembling the units great care should be taken in making the connections. Valve B of unit 1 is connected with valve A of unit 2 by rubber tubing. Valve B of unit 2 is connected with one of the short legs of the Y connecting tube unit 4. The other short leg of the Y connecting tube of unit 4 is connected with the tit of unit 3.

The long leg of the Y connecting tube of unit 4 is then attached to the puncture needle. Previous to making these connections, cylinder A of unit 2 is filled with sterile water, the parallel metal tape scales having been previously placed in the lateral runways made for them. With the valves of cylinder B open this cylinder is allowed to lower into cylinder A by its own weight. Thus the air in cylinder B is displaced by the water in cylinder A. After complete displacement has occurred the valves are closed by turning the petcocks perpendicular.

Unit 3 is then filled half-full of sterile water, permitting the level to be reached in both arms of the manometer. To allow of this equalization by atmospheric pressure the glass stopper is dispensed with. Immediately upon thus preparing units 2 and 3 the tubing of unit 4 is connected.

Following the making of these connections the petcock of valve A of unit 2 is opened. Valve B of unit 1 is then very gradually opened by turning the wheel. This later procedure is accomplished by an assistant not sterile, as this part of the apparatus is not surgically clean.

Immediately as the gas begins to escape from valve B of unit 1, cylinder B of unit 2 elevates as the water therein is displaced by the gas. When the indicator reaches the top of the tape scale valve B of unit 1 is closed by the assistant

at the wheel. At the same time valve A of unit 2 is also closed. This confines the gas to cylinder B of unit 2. All is then in readiness for the patient.

Preparation of the Patient.

The patient enters the hospital the morning of the operation and as a rule returns home the afternoon of the same day. The day previous to the entry the patient eats as usual and drinks a large amount of water at frequent intervals during the entire day. Stress is laid upon the proper mastication of all food and the free indulgence of water. That evening he takes a purgative in the form of castor oil or a salient draught, thus permitting the bowels to become well cleaned out. The morning of the operation the usual general breakfast is indulged in.

Upon entering the hospital he is given a hypodermic of morphine, gr. $\frac{1}{4}$, and scopolamine, gr. $\frac{1}{100}$. The entire chest on the side where the injection is to be made is carefully cleansed with soap and water and shaved if necessary. The field is then dried and protected with sterile gauze covering.

In the operating room he is seated upon a stool in front of which is placed a chair, so that he may lean forward on the back of the same. The head is protected by a sterile cap and the forearm of the proper side held in a flexed position over the head.

The field is then uncovered and all adjacent parts protected with a sterile sheet and towels. The field is then carefully painted with benzene, wiped dry with sterile gauze and finally thoroughly wiped with 70 per cent. alcohol. Occasionally, if the patient is nervous, he is given half an ounce of brandy at this time.

The special point selected for the needle puncture is then analgised with 2 per cent. novocain solution for a radius of 2 inches. Three minutes intermission is permitted for the absorption of the novocain solution and the part is then sprayed with ethyl chloride.

The petcock of valve B of unit 2 is then opened and the escape of the gas from the needle is given a final test under sterile water. This petcock is then closed and a quick thrust of the needle sends it home. Practice alone permits one to realize when the stylet opening of the needle is in the pleural cavity. Development of this special reaction sense of transmission is really the most important part of the entire procedure. Without it the operation is a failure. The gas will either escape into the lung tissue if the stylet of the needle pierces through both layers of the pleura or an emphysema will be produced should it not go far enough. Either of these occurrences, while not fatal in any sense, prove disagreeable to the patient.

Assured that the stylet of the puncture needle is *in situ*, the petcock of valve B of unit 2 is opened and the gas escapes into the pleural cavity. Proper, progressive, unobstructed flow of the gas is indicated by the lowering of cylinder B and indicators of unit 2.

Should there be any delay and you are sure that the stylet of the needle is *in situ*, ask the patient to take two or three slow, medium-full breaths. This will generally suffice to start the flow of the gas. One hundred cubic inches of the gas is given in average cases. During the injection of the gas the color and expression of the patient is carefully watched by an assistant. Should any distress or cyanosis occur the gas is temporarily shut off and after a moment's rest again allowed to flow.

The chest is lightly percussed and the typical hyperresonance of a pneumothorax gradually develops and spreads. The cardiac area is occasionally auscultated by an assistant. Every precaution is taken in behalf of and assisting comfort for the patient.

After the desired amount of gas is injected, all valves are closed, the needle quickly and abruptly withdrawn. Immediately firm pressure with a sterile gauze sponge is made over the point of injection and thus held firmly for two or three minutes. This prevents the escape of gas and resulting emphysema.

The aperture is then sealed with contractile collodion, a thick gauze pad superimposed and a swathe applied. This allows even pressure over the aperture for the next hour or two, merely as an extra precaution against the escape of gas.

The patient is returned to the room and allowed to rest in bed, either reclining or with a head rest for a few hours. He returns home in the afternoon and reports in one week for examination. General hygienic and dietetic principles are instituted.

Intestinal Drainage in Septic Peritonitis.

Arthur J. Nyulasy, L.R.C.P., M.R.C.S., Perth, Australia, in *The Lancet*, October 9, 1915, notes that in a large number of post-mortems upon cases of septic peritonitis, two types were found: (1) That in which there is abundance of fluid free in the abdomen but little actual peritonitis; and (2) that in which there is little or no free fluid but extensive peritonitis.

These findings naturally suggest intestinal drainage, preferably as a part of the primary operation, as through a rubber tube purse-strung into position. In six cases narrated no serious effort was made during cæcostomy to cleanse completely the abdomen of free fluid, as in post-operative septic peritonitis the patient, generally speaking, dies of the bowel rather than of the peritoneum.

Diseases of the Prostate and Adnexa.

By W. H. BALDWIN, M.D.,
15 West Chicago Street,
COLDWATER, MICHIGAN.

A brief mention of the anatomy of the prostate will serve to refresh the memory and introduce the subject.

The prostate is a musculo-glandular organ enveloped in a fibrous capsule. It is situated anterior to, and surrounds the neck of the bladder. It is about the size and shape of a horse chestnut, with its base directed toward the bladder. It lies upon the rectum, being separated therefrom only by loose fascia. Its transverse diameter at the base is one and one-half inches; its antero-posterior diameter is one and one-fourth inches; its depth, three-fourths inch. It consists of two lateral lobes of equal size. The urethra passes through the anterior third of the gland, and occasionally through the posterior.

The prostatic portion of the urethra is a very complicated and highly sensitive structure, and bears a most important relationship to the gland from a pathological viewpoint; it may rightfully be considered a part of the prostate itself.

In the center of the prostatic urethra, and lying longitudinally to it, is an eminence, the verumontanum, in front of the middle portion of which is a small cavity, the utricle, on each side of which is a small fossa, into which the ejaculatory and prostatic ducts open; and, anteriorly, the openings of Cowper's ducts.

The posterior urethra is the most sensitive of the genitourinary tract, and is considered the seat of the sexual orgasm. It is subject to pathological lesions more than any other portion of the urethral canal, owing to its complex structure and the fact that it receives the irritating secretions of prostate and seminal vesicles when these structures are diseased.

On either side of the prostate lie the seminal vesicles—the storehouse of the male element of reproduction—which are plainly felt, when diseased, as small bean-like eminences. Cowper's glands are situated posteriorly to the bulb of the urethra.

Beneath the fibrous capsule of the prostate is a firm band of unstriated muscular fibers surrounding the base of the organ. The same fibers radiate through the organ, in the form of trabeculae, forming meshes, through which the vessels and nerves ramify. Interposed between these meshes there are numerous follicles that secrete a milky alkaline fluid which passes out through the prostatic ducts upon the floor of the urethra.

The nerves supplying the prostate are numerous and sensitive. Those derived from the sympathetic system are supplied from the hypogastric and pelvic plexuses. A double chain of sympathetic fibers connect with the mesenteric, renal and solar plexuses, bringing the bowels, kidneys and stomach into intimate relationship with the prostate and other pelvic viscera.

The prostate is an important genital organ, possessing the triple function of expulsion of semen by means of the rhythmical contraction of the muscular fibers, of being the nerve center of the orgasm, and of secreting through its glandular structure a fluid essential as a vitalizing agent to the spermatic germ. It is in this gland that the pleasurable sensation of the orgasm is located, the sensation being synchronous with the expulsion of semen. It is by this gland that the physical impulse to gratify the animal nature is indirectly exerted through the sympathetic and cerebrospinal nerve centers; in fact, the gland has been called the seat of the sexual brain.

Prostatic Physiology.

In health, excessive mental exertion, as by close study or business cares, will lessen the sexual appetite, while grief, anxiety and fright will temporarily suspend it. Men are by nature more sensually inclined than women; so undesirable association, unnatural and excessive indulgence, and masturbation, may result in disease of the prostate, together with some form of mental disease.

Owing to the contiguous relationship the direct source of blood supply, and the intimate construction of the nerves of the prostate, bladder, seminal vesicles and rectum, disease of the prostate cannot exist for any length of time without causing either functional disturbance or organic disease of the other organs.

Etiology of Prostatic Disease.

Chief among the causes of disease of the prostate and adnexa is gonorrhoeal infection. Overall places the per cent. coming under that head at seventy-five. Lydston covers several pages with the opinions of eminent authorities as to the cause of hypertrophy in the aged. Relatively, the opinions varied, but gave specific infection first place, following with excessive sexual indulgence, engorgement by virtue of abstinence or physical continence, but gave mental incontinence, also, as a normal concomitant of old age. None of these seemed to prove out satisfactorily to the celebrated Chicago urologist, so he advanced no particular charges of his own.

Non-Specific Prostatitis.

If you will pardon me for a moment, I will be pleased to step outside the text-books and philosophize briefly upon some of Nature's preroga-

tives, with their application to this disease. I wish first to state that there is a possibility of an acute, simple prostatitis without a specific infection. I will concede that a man might have a permanently injured or damaged prostate that might become the seat of an hypertrophy, or that malignant disease might occur by metastasis or selection without the man ever having had a gonorrhoeal infection, but simple prostatitis, or traumatic injuries, like simple urethritis, are relatively easy to control, and do not produce a condition having a regular ratio of new growth; so, I am free to give it as my opinion that true hypertrophy is always of specific origin, granting an occasional exception for want of definite proof.

The Technique of Nature.

Nature, contrary to many preconceived opinions, expresses intellectuality in the execution of all her laws. All her laws are good, and promote no injury, when properly applied; when misapplied, disaster to our general well-being is a result which is interpreted in the terms of disease. Every law of Nature is subject to the evolutionary forces, or building-up principle. Whenever Nature tears down, she builds a more stately mansion instead. This is a universal law, and can readily be seen upon reflection, whether it is applied to moneron or man, a blade of grass or the constellation, to earth worm or seraphim. To retrograde her laws does not mean to retrogress, but to climb under difficulties; and these difficulties are the law's action, which brings to our attention their misapplication. The greater the principle involved, the more potent the law of cause and effect, the more potent a drug, the higher it stands in potential effect, and the greater its power for ill if misapplied.

While I do not wish to ascribe any sacredness to the reproductive act *per se*, as did the phallic worshipers of the fifteenth century, I do wish to ascribe to the creative intention and its results the highest and most sacred faculty of which mankind is capable, being the human avenue by which the union of the human and the divine, a body and soul is made possible. We must bestow upon it the title of man's highest physical endowment.

The original intention of the Great Creative Principle was that the sexual function should be used for the purpose of reproduction only. The perversion of that function has written many pages of our world's history—narratives of the downfall of powerful nations, great cities; and it has marked the ruin of the lives of great men. The fact that man has cultivated and woven into his anatomy a pleasurable sensation in connection with his indulgence, is because the Great Wisdom foresaw his decadent descendance from

spirituality, as set forth in the symbol of the "fall of man," so the law of creative supply forced within him an imperative demand, or appetite, that the propagation of the race might continue, but "in sorrow shall she bring forth."

The Propagation of Species.

Analogous to this is our personal appetite for food for the preservation of our body. Next to the preservation and perpetuation of the race is the propagation of our personality. How many of us "live to eat," instead of "eating to live?" Likewise the original intention of the Great Creative Principle before mentioned was food for the replenishment of our bodies only. How successfully we have perverted that faculty is well known to all, but especially to physicians. We now make eating a social function. The good wife panders to the appetite of her husband, that she may hold his deepest regard, the cognomen of a good cook. The church, the lodge, and all social functions must "eat" as an inducement for attendance. Thus, through the perversion of *this* function we have engrafted upon ourselves an appetite, a love for food for its *taste* only; so we eat food of many kinds, fixed in various forms, to pander, strengthen and develop the appetite to its utmost capacity; and the sacred object for which eating was instituted is completely lost sight of. But, reverting to the law which made this necessary, when man lost sight of his divinity and became engrossed in matter, an appetite became necessary, lest in his grasp for possession he forget to plant, harvest and also eat; but, in disease and suffering does he pay the penalty.

Perversions.

If these great perversions could be done away with, resulting in the elimination of the sexual diseases, whisky and tobacco, and the human animal "eat to live" only, we would live to be hundreds of years old in course of a few centuries; and then pass on because we *wanted to*, instead of because we *had to*.

Science informs us that the pearl in the oyster is caused by a grain of sand, or some foreign substance getting inside the shell and causing irritation, whereupon the chemical laboratory of the oyster throws out a protective substance for overcoming the invasion, for purposes of personal protection; and out of this substance the pearl is evolved, a thing of beauty and of great value. So, in the building of human character, the wounds and bruises are the result of personal contact with the evolutionary forces of character building, which is Nature's conception of her highest duty to man; so, she kicks him and cuffs him, but ever bearing him onward in the upward struggle toward that perfection, by the acquisition of which his period of usefulness really begins.

The Woes of the Old Man.

So the old man with his hypertrophied prostate, dribbling urine and wasting flesh, is a living monument to the perversion of a sacred function. "Innocent," you say; perhaps so, but fire burns the innocent babe as readily as it does him who understands the nature of fire. I venture the assertion that in ninety-nine cases out of a hundred, when the old man sits in the silent hall of reflection, no matter how straight his life, or loyal to the church for forty years he may have been, there will come forth from the archives of memory a vision of the vicissitude of youthful days, when heart and blood were warm; when the radiance of the star of Venus outshone the sunlight of wisdom, and the ever-present monitor, the still, small voice, speaking to him and him alone in tones unmistakable, "It was that dose of gonorrhoea I had when a boy that is the cause of all this; I know it." How many times have you heard these words: "If I had my life to live over again, I would do differently."

This is the grain of sand in the shell of character building, for this old man, with the fires of youth burned out, now sits in the chamber of reflection; his lessons have been dearly bought, but lessons once learned need seldom ever to be repeated, and his resolutions and desires are building for future lives, and his harrowing experiences are constructive of the "pearl of great price"—a perfect character.

Treatment.

No effort will be made here to outline all methods of treatment.

Where a true hypertrophy of the prostate exists, no form of treatment will produce any appreciable effect on the gland itself, except extirpation at the hands of the surgeon. Many times, however, the hypertrophy is accompanied by a degree of prostatitis; this can be reduced, and the patient relieved of a varying amount of his discomfort.

For prostatitis and vesiculitis, treatment by the galvanic current, by the cataphoric process, according to the system laid down by Overall, is the most satisfactory of any I have ever used. This, briefly, is: The introduction into the structures of aqueous extracts of thuja, ichthyol, or the albuminoid silver preparations, by means of suitable instruments especially devised for the purpose for use with the galvanic current, using them alternately in the rectum and urethra. In the hands of a competent electro-therapist with a good equipment, wonderful results can be obtained. This also massages the prostate and empties the seminal vesicles, reduces the vesiculitis, which is an extension of a prostatitis, and relieves the old man of the idea that he wants a young wife.

More important than this, I am in favor of the education of the young, as a prophylactic measure; for in education lies that permanent advancement which means extermination of the social evil, with its body-destroying consequences.

The abolition of the saloon and the brothel now looms up plainly on the social horizon; not the product of hundreds of years of preaching of right and wrong; but the product of an advancing civilization, to which the forces of both good and evil are equally contributory as educational features.

I also believe in personal prophylaxis, so far as is possible, as a protection to the innocent. If men will sin, let us lay aside maudlin sentiment, and teach him how to protect his undeveloped understanding to the best of our knowledge, by introducing him to the "Sanitary Tube."

Limitation of Offspring, or False Eugenics.

As if the race of Americans were not dying off fast enough, certain gentlemen, two being professors in institutions and one a private physician, are advocating the prevention of conception, a practice which if carried out may cause much trouble, be provocative of much mischief and further the extinction of the race.

If there were less selfishness and there were a more universal cultivation of love and brotherly feeling, there would be food for millions more.

If there be no God and no life beyond this, then the whole fabric falls to the ground, and the sooner man becomes extinct the better for him; but believing that there is a Supreme Being and another life, we become aware of a reason for the perpetuation of the species. Persons who advocate pernicious practices without regard to the welfare of humanity, must be devoid of religion and be unbelievers. It is useless to appeal to them.

But there are others who can appreciate the home and the family, who can see a reason for calling a halt upon those who would advise the prevention of conception. We must have been placed on earth with some object in view, and as we glance at the process of evolution through the past ages, and observe as each atom of life arises to more complex forms, we believe that the beings are here to gain experience and be fitted for a higher life where they can gain more knowledge and at last reach a state of perfection.

If this is all true, have we the right to limit our offspring or to broadly proclaim and teach to the uneducated the means of prevention? Perhaps we might bring them to a point of view wherein if it suits them they may be impure or resort to certain excesses, and perhaps finally even murder the undesirable child. It is a dangerous thing to place a weapon in the hands of the weak, the ignorant, or in the grasp of those who know not and who care not what damage is done, provided the end be attained.

Are a few individuals so tired of life that they desire all to die?

I do not contend that the propagation of issue should extend too far. There may be reasons in a given case against procreating at all. But until the masses are better educated in such matters and understand why smaller and better families are advisable, it is not wise to disseminate the idea of their unnatural limitation, especially since the otherwise well educated need to be urged to have more children in order to aid in the progress of the world.

It is true that the poor man has to struggle for his existence and his large family may be an incumbrance; but the State should aid the large family rather than let mankind drift to a lower sphere; and inherited viciousness, imbecility, idiocy, insanity, malignancy, tuberculosis, syphilis, and other causes for progeny being defective or the mother being unable to bear healthy children are reasons for the State regulating the matter, not the individual doing so. Children should not come into the world to be unfed, uneducated and brutalized in a handicapped race for life. But let families be large enough that the State be glorified and her battles won in every way. Let the family contain from four to six children, and let each go onward in life and praise the parents that gave them life. Let the State take care of the weak, illfed and oppressed, but let not limitation be the recourse of the selfish or without medical advice. Let people who do not desire children live a life of abstinence and purity.

The prevention of conception and the commission of abortion, especially in the hands of the ignorant, leads to untold misery and sexual diseases. Think of the careless use of remedies and appliances, and what the unprincipled would do with them.

J. G. B. BULLOCH, M.D.

Washington, D. C.

This is a clinical journal, and we do not have space for a general discussion of the ethics of sex, except in its distinctly clinical bearing; but the above paper expresses a sane view that needs expression in this day of sex-obsession. That it is not the whole view is admitted; but we print it as a protest voiced in the minds of hosts of doctors who refuse to be swept off their feet by an exclusively biologic view very strenuously upheld in a number of publications, lay and professional. —EDITOR.

Immunized Milk and Typhoid Fever.

Dr. Julius Rosenberg, New York, in an article in *Medical Record*, October 23, 1915, notes support to his theory of milk immunization, before referred to in MEDICAL COUNCIL. Yoshinaga, of Tokio, W. H. Park, of New York City, and others, have conducted researches which tend to support the contentions of Dr. Rosenberg.

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Pneumonia and Hyperemia.

With greatest interest I have read the article of Dr. Button, Holland, N. Y., in the November number of THE MEDICAL COUNCIL upon pneumonia and its real causes, and want to say a few words upon pneumonia from my own experience.

What Dr. Button says about the first stage of the sickness—toxemia and following hyperemia—covers absolutely my experience in such cases, and if I only could induce the physicians in this country to try the following experiment, I am convinced we could reduce the mortality in this, especially here so deadly sickness, in 50 per cent. of the cases and perhaps more.

My experience dates back to when the bacteriology was in its early development and we didn't know anything about pneumococci; at this time the bacillus tuberculosis was an unknown thing to the medical profession.

At the time I am speaking about, we had in Germany, on our farm, a man working, weighing about 220 pounds. The man was very healthy until he contracted pneumonia. The patient was suffering from dyspnea by the third day so badly that we called a relative of mine, a prominent physician, from a larger town. He took at once about one-half pint blood from him, and the patient was able to breathe freely right after the blood was taken. Late in the evening he felt worse and my father, as ordered by the physician, took an additional one and one-half pints blood, with the same refreshing result for the patient. At noon the next day he had a relapse, and then my father resorted again to venesection, taking, as far as I can remember, about one and one-half quarts. This was the last time the patient had dyspnea, and he recovered very quickly.

Now this one experience wouldn't count very much; but a few years afterwards I recognized that this was the best method of treatment for such a plethoric case. At this time my relative was confronted with a serious epidemic of pneumonia in his own town and, remembering the good services of the venesection, he started this treatment in 117 patients, including children of one year, and he had the satisfaction that not one of his patients died. If this doesn't speak for the cause, what else would speak?

As mentioned above, we could, without question, reduce the mortality from pneumonia very

much by venesection in full-blooded persons; we could relieve a great deal the awful dyspnea; and this procedure, called in German "Aderlass," is one of the old methods, nearly forgotten, but in some cases a thousand times better than many of our newer remedies and treatments.

DR. ROBERT UNZICKER.

1507, 5 N. Wabash Ave., Chicago, Ill.

A Quickly Fatal Case of Gonorrhoea.

Thinking perhaps it might be of interest to those physicians who are engaged in genitourinary practice, I desire to present for their perusal and consideration a case of gonorrhoea which, from the outset, exhibited the most intensely virulent characteristics, and which, in spite of the most heroic treatment, resulted fatally.

The patient was a woman of 55 years of age. Ten days subsequent to her second marriage she suddenly developed a severe cystitis with profuse vaginal discharge, accompanied by intense abdominal distress which grew so pronounced that she was obliged to remain in a recumbent position. Owing to the husband's indifference, no physician was called to see her for over a week, during which time she suffered increasing abdominal pain, and the discharge grew rapidly more profuse and she was unable to retain food or drink, even water being rejected.

Finally, on the eighth day, under duress from the patient and her relatives, he consented to medical aid being employed, as the right knee had become swollen to twice its natural size, and on the whole, the woman was in a most deplorable condition.

The husband denied any personal infection, but was a man of lascivious and intemperate habits, and seemed quite indifferent to his wife's condition.

Upon microscopical examination of the vaginal discharge, I found abundant pus cells, together with innumerable Gram-negative, intracellular diplococci, thereby proving conclusively the infection with the Neisserian organism. There was, of course, an allied infection with streptococci and staphylococci. Her temperature was 102; pulse 140; the abdomen was acutely painful and distended; the uterus enlarged, vaginal mucosa edematous and exuding the profuse

purulent discharge; and the right knee was extremely enlarged and causing agonizing pain on the slightest motion. The pain attendant upon the arthritis was not relieved either by hot fomentations or cold applications, and yielded only to narcotics administered by hypodermic. With a view to elimination, I administered a hydrargyrum cathartic, followed by hot magnesium sulphate, which resulted in active purgation. Locally to the knee I used lead and opium wash of varying temperature, and later applied a plaster-of-paris cast, which did not accomplish its purpose through immobilization, and two days later I was obliged to remove that. Aspiration of the joint afforded no respite from the pain, which had begun to tell on the nervous system of the patient.

Vaginally, 2-gallon hot douches twice a day, with 2 per cent. carbolated glycerine tampons inserted hot caused the discharge to clear up after it had resisted the various silver salts and potassium permanganate douches. Hydrotherapy was employed to reduce the temperature, and an exclusive milk diet was given, with copious amounts of alkaline water, to dilute the toxins and stimulate the emunctories. An autogenous vaccine was prepared and administered, in the hope that it would increase her leucocytosis, which had remained from 10,000 to 14,000 during this first six days of her treatment. No reaction developed nor did the leucocyte count show an appreciable increase; it was 14,500 twenty-four hours after the initial dose, and rose no higher than 16,000 during the illness. There was no change in the clinical picture, excepting that, perhaps, she grew slightly more restless; the pain in the knee had not diminished at all, and the patient began to lapse into momentary irrational periods. These periods of delirium lengthened in duration and the intervals grew shorter.

During these twelve days under my care, she had had no rest nor sleep, except that obtained from bromides, veronal, sulphonal, heroin, and later from morphine. The pain in the right knee had not diminished at all, and she had lost markedly in bodily weight. On this twelfth day she began to cry out with sharp pains in her head, and to complain of a constant and severe ache in the rational intervals. At the same time the nurse noticed in her care of the patient that, when she attempted to move her, she held her neck muscles very rigid. On examining her carefully, I elicited a well-developed Brudzinski and a Kernig's Sign. By the following day, opisthotonos was extreme, and the patient had been in profound coma for twelve hours, lying supine and moaning almost constantly.

She was a text-book picture of meningitis, and evidently of gonorrhoeal origin. I have searched the literature for a similar case, but so far have been unsuccessful in discovering an analogue.

During the course of her illness the arthritis did not spread from the right knee; it remained monarticular, and her heart's action remained remarkably good until the last twenty-four hours of her life.

I would remark in closing, that it was a case of unusual interest in my practice, insofar as I have never seen a meningitis follow a gonorrhoeal infection. I have rarely noted that so virulent an infection, with so low a resistance, would limit the arthritis to one joint; I have seldom observed so rapidly progressive a course, and have never recorded a death without endocardial involvement. Please note that the local infection cleared up entirely, but the clinical constitutional symptoms progressed to a fatal termination.

Kenosha, Wis.

J. B. SPALDING, M.D.

The Rational Treatment of Pneumonia.

Your abstract of an article in the *Medical Record* for August 15, 1915, on the "Rational Treatment of Pneumonia," by Dr. Edward E. Cornwall, was timely; but I feel that this mere abstract hardly does the doctor and his treatment full justice, for the reason that it does not mention a drug which, in my opinion, is a very important factor in the medicinal treatment, viz., calcium chloride. I would advise those who are interested to read the whole article. I have used the treatment with most excellent results and recommend it with confidence.

The following chart, which I have prepared for the convenience of the nurse, may be of interest and will show the general treatment very well:

8 A. M.—Give 7 ounces of milk and barley-water (5 ounces milk, 2 barley-water) with 5 gr. sodium chloride. Buttermilk, peptonized milk, barley-water alone, or rice-water may be substituted for the milk and barley.

10 A. M.—Same.

12 A. M.—Same.

2 P. M.—Same.

4 P. M.—Same.

6 P. M.—Same.

8 P. M.—Same.

11 A. M.—Orangeade (made with the juice of one orange, strained, and 1 ounce milk-sugar).

3 P. M.—Same.

11.45 P. M.—Same. (Water alone may be given in place of the orangeade.)

8.30 A. M.—10 grains calcium chloride in 5 ounces water.

12.30 P. M.—Same.

4.30 P. M.—Same.

8.30 P. M.—Same.

11.30 P. M.—Same.

Northport, N. Y.

JOHN P. HEYEN, M.D.

Mercury in Brain Syphilis.

Dr. E. R. Posner, Des Moines, in *Jour. Iowa State Med. Socy.*, October, 1915, contends that intensive mercurialization in brain syphilis is superior in effect to the newer arsenic preparations; but it must be intensive and preferably by injection.

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The Therapeutics of Passiflora Incarnata.

Before presuming to suggest to the profession the wider use of *passiflora incarnata* as a sedative and hypnotic, the clinical observer must make special effort to oust the personal equation from his conclusions. For, when expert pharmacologists and recognized text-book authorities are silent on the subject, and proprietary manufacturers speak only in a whisper, the lack of exact scientific basis for observation entails a distinct risk.

Even the most critical of observers, however, may be willing to grant to this plant drug an honorable though limited field of usefulness. For he who has striven for hypnosis in a variety of patients, and in the presence of a wide range of conditions, has observed the use of opium, followed by reflex irritability, gastric disturbance or habit formation, and has noted the administration of hydrocarbon hypnotics succeeded by undesirable and even dangerous depression. Not that it follows that our favorite sleep-producing drugs should be cast out because of various side actions, nor that *passiflora incarnata* is a full-time substitute for morphine, chloral hydrate, etc., but to one who has ever felt the need of a mild and safe cerebral depressant, a word in favor of *passiflora incarnata* is hereby offered.

In the presence of insomnia or pain which is not too severe, and in which functional nervous debility is probably a causal factor, the tincture of *passiflora incarnata*, in one- or two-drachm doses, is often a most pleasing hypnotic and sedative. It is to be granted that in this class of cases the psychic influence has to be especially guarded against; but, as in the case of any drug administration, if the physician prescribes with this factor in mind, he can draw uncontaminated conclusions easily.

After observing satisfactory results in headache, neuralgia, post-partum pains, insomnia from various causes, etc., an attempt was made to determine the action of the drug on the respective body processes, with the negative result that no change was noted in respiratory rate, blood-pressure, pulse rate, temperature, superficial vaso-motor control, pupils or alimentary function. In particular, in spite of a statement in advertising literature to the contrary, no change in blood-pressure or pulse rate could be noted in a healthy individual who was put to sleep in the middle of the day by rather large doses cautiously administered.

It seems probable that the inexpensive, easily-standardized preparations of *passiflora incarnata* warrant more attention on the part of the medical profession than has been accorded them hitherto.

WARREN WOODEN, M.D.

150 Lake Ave., Rochester, N. Y.

Read in this issue—

Our Legal Handicaps.

on page 57. It should make every one of us sit up and think.

Balsam of Peru.

In the November, 1915, issue of THE MEDICAL COUNCIL, page 30, Dr. Douglas H. Stewart gives as "a good formula" a mixture of one-third balsam Peru and two-thirds castor oil, and states "That it stimulates granulation. . . . But it does not seem to be very active in controlling the production of pus."

As demonstrated by my late chief, Professor William W. Van Arsdale, when 10 per cent. or more of balsam Peru is added to castor oil as a surgical dressing it causes painful burning when applied, irritates the exposed surface, and stimulates the excessive formation of fibrous tissue (granulations) which pours out the excessive pus formed, and later causes the painful contractions and distortion so often seen after severe burns, etc.

Today, no surgeon wishes for "granulation" tissue to form, but seeks by early healing and non-irritating dressings to avoid contractures and all the disagreeable sequelæ following delayed union or grafting.

Van Arsdale's mixture of one part of balsam Peru in sixteen of castor oil, when applied to raw surfaces, acts as a moist sponge, absorbing all secretion, cleans and dries the surface, freeing it from moisture and pus, thereby minimizing the formation of fibrous tissue (granulations) and, if the dressing be changed not oftener than every third day, healing will result in one-third the time required under so-called "stimulating" dressings. Thus, if we give nature a little help, and avoid too frequent dressings, we secure early healing, and avoid unpleasant sequelæ.

A. ERNEST GALLANT, M.D.

616 Madison avenue, New York City.

Dysmenorrhea With Headache.

EDITOR MEDICAL COUNCIL:

I have a patient with the following history: Female, age 32; been married a number of years. Never been pregnant. General health good all her life, began to have dysmenorrhea ten or twelve years ago, and gradually grew worse. One or two hypodermics of ordinary dose of morphine would always relieve the dysmenorrhea, but before the menstrual period would pass she would be seized with a violent headache. This headache began to develop five or six years ago, and grew worse. For the past year she has occasionally had these headaches between the menstrual periods. They continue for two or three days, and nothing but repeated hypodermics of opiates ever gave any relief. The coal-tar products and antispasmodics never gave any relief to either the dysmenorrhea or the headaches.

Last June she was operated on for the dysmenorrhea. Her appendix was removed, and a portion of each ovary (found to be cirrhotic) was removed. She menstruated in July without pain or headache. In August she did not menstruate, and had no headache during the month. In September she menstruated without pain, but

suffered from intense headache, beginning about the third day of menstruation. In October she menstruated without pain, but on the third day she began to have violent headache and suffered intensely for three days.

Now what shall I do for this patient? Please help me and the patient, if possible.

I had neglected to say that there is no history of any specific trouble whatever.

A. L. GOATCHER, M.D.

Plumerville, Ark.

Unique Manner of Contracting Typhoid Fever.

EDITOR MEDICAL COUNCIL:

In autumn of the year 1890 the writer of this article was called to see a minister and his wife, who were taken ill while visiting relatives in this vicinity. Their home was in Duncansville, Pa. Their disease was diagnosed typhoid fever, which diagnosis was proved to be correct. The disease, which was of moderate severity, ran a course of about twenty-one days, and then began to subside, and both made a good recovery. It appears the only unsatisfactory thing about the case, especially to the reverend himself, was that he could not find out where he contracted the disease, and he appeared ever after to be seeking its origin. A few days ago I met him, and his first salutation was as follows: "Twenty-five years ago you attended by wife and I when we had typhoid fever, and only the other day I found out where we got it. We found out that a short time previous to our sickness we moved into a house and used water from a well on the premises. The water was raised from this well by an old-fashioned suction pump, and I found out that the sucker of the pump had, a short time previously, needed new leather on the valves, and the needed leather was secured from a pair of boots, and I also learned that the person who had worn these boots last had died of typhoid fever. (Perhaps!—Ed.)

L. M. HOUSER, M.D.

Pennsylvania Furnace, Huntingdon Co., Pa.

Quinine and Urea Hydrochloride.

EDITOR MEDICAL COUNCIL:

Dr. L. F. Murray, of Santa Fe, described in October issue, page 37, his case of bad result from quinine and urea hydrochloride and, as well, one that came into my hands. A brother physician across the street had used it to extract the point of a needle; sloughing ensued and they left him and came to me for treatment. Talked very strongly of malpractice and *all that*, they would not go back to him, so I had to care for the finger. All the palmar surface down to the bone sloughed off and the distal end was numb; but I believed it was alive. Used local dressings plentifully, and after three months was rejoiced to see that finger almost as good as new. It was a whole lot better than none, and the patient was rejoiced at having it healed up, although it was a slow procedure. I did not know what caused

it, nor why it should result in gangrene; nor did I think the physician who used it know why it did; but there was no suit for malpractice, although they refused to pay his bill. I was glad to read Dr. Murray's view of the reason for the sloughing.

DR. J. F. ROEMER.

Waukegan, Ill.

Tartar Emetic in Pneumonia.

EDITOR MEDICAL COUNCIL:

The article, page 28, November COUNCIL, on pneumonia, by the late Dr. C. A. Button, of Holland, N. Y., and your comment thereon, prompt me to send you this.

The older Flint, the great protagonist of therapeutic nihilism, was one of my teachers; but the following of his injunctions seemed to lead to too many funerals. They are not so frequent now. Stille quoted Grissolle without favorable comment. He probably inserted it as a curiosity in medical literature.

The doctor, when he is called to a case of pneumonia, should ask himself this question: Is the present treatment of pneumonia satisfactory and scientific? And then he should ask himself: If this patient shall die, what, in all probability, will be the condition of the circulation in the chest, and particularly in the right side of the heart, before and at that time? Is there any means by which this condition may be prevented or relieved after it occurs? If he will then take a bird's-eye view of the portal circulation, it might occur to him that depletion of this, the portal circulation, might relieve the heart of this overload. Tartar emetic does this more effectually than anything I know. Given in small doses, frequently repeated, and in a large quantity of water, the hydrogogue effect will be obtained with but little nausea or vomiting.

C. T. GRINSTEAD, M.D.

Glasgow, Ky.

Intestinal Stasis and Intoxications.

Dr. Paul G. Woolley, Cincinnati, Ohio, in *The Jour. of Laboratory and Clinical Medicine*, October, 1915, does not agree with the ultra-surgical view regarding these conditions, and he says that absorption of poisonous materials from a healthy bowel has not been shown to produce symptoms of disease; but that absorption of bacteria and other substances from an unhealthy bowel may produce serious symptoms. A surgical operation for intestinal stasis must be viewed as a last resort; it is seldom more successful than medical and hygienic measures. Indeed, many cases in which symptoms are attributed to intestinal stasis are suffering from focal infectious entirely outside the intestinal tract; such as pyorrhea, infected tonsils and sinus or antrum troubles.

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<p><i>While we, as physicians, desire to be scientific students and practitioners of medicine, and that is the primary purpose for which this journal is published;</i></p>	<h1 style="margin: 0;">THE BUSINESS SIDE</h1> <h2 style="margin: 0;">of Medical Practice</h2>	<p><i>yet, for the welfare of our dependent ones and our standing in the community, we must secure a fair compensation for the services we render our fellowmen.</i></p>
<p>"The laborer is worthy of his hire."</p>		

Financing Modern Medicine: Does It Hurt the Individual Doctor?

NEW ENGLAND, in a recent week in which we were there, was hospitably entertaining two national church conventions, a State bar association and the Clinical Congress of Surgeons of North America. The ecclesiastics among the preachers were industriously opposing modernism and modern tendencies, contending for "the faith once delivered to the saints"—of their denominations; whereas the practical men were deploring the fact that the average preacher was compelled to live upon so small a salary that some way would have to be found to endow the work.

The lawyers deplored the fact that precedent ruled altogether too much in law; that the lawyer and the legal profession failed in enlisting public confidence and co-operation; that legal procedure seriously needed to be modernized; that too much legislation was enacted; that it is increasingly difficult for the young lawyer to make his living; that the bar association needed to learn from the medical men, who were getting millions for hospitals and colleges and who were gaining the confidence of the people because of modern sanitation and medical charity work.

The Congress of Surgeons deplored nothing but ignorance, fee-splitting, inefficiency, quackery, bad hospital management and poor medical legislation. And they passed the hat for money to help build a medical museum and library, collecting upwards of \$100,000 to add to previous collections of four times that amount.

A Comparison.

Now, here were three classes of men, representing the three ancient and honorable learned professions. The preachers divide into sects galore, have no sort of legal "recognition," don't object at all to an immense preponderance of Class C theological seminaries and ignorant preachers who graduate therefrom, regulate their affairs to suit the majorities in their councils and conferences, have no awful "trust" to dominate them and no official organ to "dictate" to them, and do as nearly as they jolly please in either an

ignorant way or a scholarly way as any class of men in America. And yet, despite the fact that they are constantly before the public and magnifying their office, the great majority of them are so under-paid that it is becoming a serious problem.

The lawyers have depended upon politics and political appointments to push them to the fore, seeking nothing from the people at large except votes; but the mere fact that there were no free legal clinics and public-serving organizations of the lawyers, took their work out of public interest and placed it in individual interest. Of recent individualistic control of law may be mentioned the large legal firm with a head not necessarily a lawyer, but who employs the very best of legal talent, making mere clerks of highly educated men working for small wages. Then, too, the trust companies, large corporations and some of the "trusts" have gone into the wholesale practice of law, making it all but impossible for the private attorney to compete.

Thus far, modern medicine seems to be giving the private practitioner a better outlook than is medieval theology or tradition-ridden law. But mind this: it is *modern* medicine alone that is doing so; back-number medicine is not. Now why is this?

A Material Basis.

Within the last score of years nearly all the surviving medical schools in the United States have been given new buildings and equipment; and so marked is this tendency that, when one visits one of our great universities, he expects to find its medical school and hospital buildings the most up-to-date ones on the campus. Harvard University is a striking instance of this, though its group of medical buildings is not on the same tract with the academic departments. All over this country, except in the far West, where the institutions are newer, medical schools are rapidly occupying plants that are the envy of the other departments of our colleges. This has taken a great deal of money; but it has been

forthcoming because modern medicine is serving the public interest in no uncertain way. But the divinity schools are in old barns of buildings, to a great extent; and the law schools, while better off, are in structures vastly inferior to the buildings housing the modern medical colleges. Many of our best and most representative Eastern colleges have physical laboratories half filled with junk, unless they have engineering department; or they have chemical laboratories poorly equipped, unless they have a medical department. The engineer and the doctor *do things*, and the necessities for learning how to do things are forthcoming. It is the same in research laboratories, medicine having the cream of them; and endowments are more and more for medicine and hospitals.

Financing Big Medicine.

There is no denying the fact that millions of money from wealthy men and large interests are flowing into the coffers of big medicine; and the European war is simply accentuating this tendency. Medicine and sanitation is the only constructive agency left to prevent modern warfare from engulfing a nation. Medicine and sanitation are the two factors making tropical exploitation possible and profitable, making the congested city an economic and sanitary possibility, and making international trade reasonably safe. Therefore the flow of millions from the financial into the medical institutions is an economic necessity of our times, and it will continue. The thing for the profession to do is not to try to stop this manifest and necessary tendency, but to see to it that the liberties and material interests of the individual doctor are preserved.

Where the Individual Doctor Gains.

Really there is a tremendous opening in the United States for the thoroughly qualified practitioner of modern medicine; for the practitioner who takes a post-graduate course yearly, industriously develops a specialty, is keen and alert, is constantly in contact with his peers and with the institutions advancing medicine and surgery, and who is individually financed to the point necessary to follow up medicine and medical practice in the strictly modern way. Financing modern medicine makes this man a possible product of his age. That he finds the practice of his profession profitable is predicated upon the blunt fact that the times demand just such as him and provide the funds to make more like him, just as they provide the funds to make soldiers, the principal difference being that it costs less to make a doctor than a soldier, as a medical college spends \$460 per year to teach a student, and West Point spends \$5,000 per year to educate a soldier, and so the science of saving

life has a long way to go to be so financially subsidized as is the science of killing. But everything now demands efficiency, and efficiency is gained partly by training and partly by having enough money to use the training to professional or commercial advantage. Even farming now takes adequate capital simply to begin it. So does modern medical practice. The trained doctor with enough capital is really helped by what some call "subsidized medicine."

Where the Individual Doctor Loses.

But what of the other man? It may seem hard to have to admit it, but the tendency of *any* highly financed institution or profession is to crowd out the inefficient. Now inefficiency may be actual or relative. Many poorly educated doctors are actually inefficient from lack of training, but have it in them to become relatively efficient in direct proportion to the additions they make to that training. Then, too, there are men actually efficient but relatively inefficient from lack of capital to develop business along modern lines.

Now these men simply face a business situation, just as do their fellows in trade. By some means or other the inefficient medical practitioner must be braced up if it is in him. And it does not have to come in a day. Perhaps buying a few books will make the start. A six weeks' post-graduate course may have a wonderful effect. Perhaps borrowing five hundred dollars for new equipment may be necessary. But whatever is necessary must be faced sincerely. For the man with nerve and energy to do this financing, modern medicine may help and not hinder him.

But the man who is hopelessly inefficient from the standpoint of modern medicine because he is *content* to remain so, or because he is so stubborn as to be blind to modern views, can expect to get some dreadfully hard raps within the next few years. The world won't stop to suit him.

Individual Liberty.

We have seen how the preacher and the lawyer are losing out financially from failure to secure modern financing for far-from-modern professional standards. If they buck up like the medical profession has done, throwing overboard the medieval and the traditional, they will get financial support also. We are not afraid of the modern doctor losing his individual liberty so long as he truly serves the public; but if he begins to serve the classes in place of the masses there will be a different story to tell. Our biggest trust-endowed colleges are asserting academic liberty in no uncertain way. So will the medical institutions serving the great rank and file of the people. Let the colleges and the doctors remember these principles and all will be well with them.

The Psychology of Patronage.

Another View of "Crucifixion."

By RALPH C. FISH, M.D.,
WORCESTER, MASS.

Here is a human-interest argument, a cry from the heart of the "crucified."—
EDITOR.

Having read the reply written by Dr. Morris, of New York City, to "Psychology of Patronage," may I be permitted to ask if it is not assuming responsibilities to ask, as Dr. Morris does, that we may merit crucifixion?

Perhaps the doctor has not as yet been compelled to realize the meaning of being placed upon the altar of sacrifice.

Why should one or two men in a city do the work of looking out for the remainder of the profession?

Are we not all aware that we are taught to believe that we are subservient to laws and their enactment, to the same citizenship as our fellows, and yet permit me to again point out very plainly that men in the same profession do *not* have the same rights and privileges of citizenship.

Professional Inequalities.

Why this unequal form of franchise? Where is liberty and freedom, when three or half a dozen men in the same profession have not the same rights and privileges? For instance, there are many men in our cities who would like to take up special work, but are debarred from entrance even though they pay taxes equal to other men in the same line of work to many of our public hospitals. Why? Because the appointees are selected by the trustee's favoritism, etc.

Why not have a merit system, that is, an examination, and the best chosen? This would eliminate a great deal of dissatisfaction and jealousy. Trustees of all public institutions should be elected, just as we would elect an alderman or councilman. What a blessing it would be.

Inconsistencies in Government.

Let us think for a moment of the terrific inconsistencies of State government, relative to medical affairs. Are these not a disgrace to the medical profession, as well as to the capacity of our Legislatures? What sensible man could not see again and again the infamy of past legislative negligence?

Again, let us look a little further, that is, a governor or a legislature will elect or appoint a "Board of Examiners of Medicine and Surgery" Why? To examine men who are new graduates

to see if they are fit to practice their chosen profession; to see if they are capable therapists, so that they may administer drugs of the materia medica to their patients safely.

Oftentimes many of them, after four or five years' study in a medical college preparing for their life's work, are thrown down. Why? Because in the judgment of the Board of Examiners they were not properly fitted for their chosen work, to prescribe intelligently for the sick; yet, the same Board of Examiners will sit supremely upon their high pedestal and watch with the greatest indifference all the dangerous concoctions of quackdom, proprietary or otherwise, with myriads of ingredients, which no man would dare to properly estimate, dumped splendidly upon the public, irrespective of examination or consideration whatever and absolutely free of charge for licensure.

One cannot say that this is anything but an inglorious tribute to the pastmasters of legislative construction!

And yet Dr. Morris believes that the best must submit to crucifixion.

It is indeed a happy frame of mind to be in that one may see things so differently. Therefore, what value may we attach to any individual's way of seeing things when they are but the sight of one person?

What Scientific Crucifixion Means.

Those who have been crucified know, perhaps, what it is to be asked by their wives for money and yet be unable to grant the request. Such questions put up to those who believe in persecution and crucifixion, would cure them very readily.

I know of no better way to get rid of any sort of injustice than to put those through the same experience who are responsible for them. I wonder what the Doctor would think and feel, if he has not already experienced it, to see his own children compelled to wear shoes that the average laymen's children would not look at.

Are these the attributes necessary for crucifixion? To my way of looking at it, it is rot—ignorance.

Merit ought at least to have appreciation—appreciation usually pays bills. The man who does his work well deserves his reward, and the best boost possible for himself is his pecuniary remuneration.

The twelve medical Apostles, found in many cities, do not believe it. Why? Because the shekels would not flow so easily to themselves.

I say this because one of the twelve medical Apostles of the city of Worcester does surgical work for the insurance companies at twenty-five cents a head or office call. This is done to get all, and deny others in the profession from getting along.

Perhaps they have a fund where all is put therein, whereby all help themselves to the spoils. This is not practicing medicine or surgery; it is raising the standard of professional piracy. Is this not the method of crucifixion?

To deny some the right to live and properly provide for their wives and children because the twelve Apostles' work is so well thought of, and because they are objects of worship, is only suggestive of that form of low-bred diplomacy intended only to deceive. Is it not the equivalent of a human life stolen, the robbing of the sweetest years of a young man's life, if he is married, another added, to regret the happiness that *might have been theirs*?

Unfortunately this crucifixion business has usually fallen upon a certain class of young men in the profession, but at present many more are now being prevented from coming to our shores because of war. Some one must have told of *their* crucifixion. Shall we ever get any more? Bigness of men counts but little after death, and no one has as yet proven whether we are going.

Stealing Professional Life and Living.

Therefore let us take count of our mental stock as well as a full consideration of its intellectual worth. We may be certain that to rob us of the best of that which we are as citizens entitled to may be something different from the stealing of a life for the benefit of others in the profession of medicine. Others in the profession have and hold; therefore, is it any wonder, under such unequal circumstances, that there is war?

Is crucifixion the appreciation of merit? No! It is the price of the Shylock's grind.

The co-operative influence of the profession in general ought to be big enough and strong enough to eliminate those whom we term Shylocks, whether they are public or private ones.

Tonsils and Cervical Adenitis.

H. Gardiner, M.S., F.R.C.S., London, in *The Lancet*, October 2, 1915, contends that in 80 per cent. of chronic cervical adenitis cases the tonsils are the source of infection, and that the size of the tonsil makes little difference. The number of cases of the glandular involvement being tuberculous is relatively small, many cases so considered being in reality chronic septic glands.

This author favors complete enucleation of deeply infected cervical glands, with, of course, proper attention to diseased tonsils.

Growing Ginseng and Golden Seal.

EDITOR MEDICAL COUNCIL:

I want to put you, brother doctors, next to a paying as well as a healthful business, and that is the cultivation of ginseng, the roots of which you know sell anywhere from \$5 to \$8 per pound. If you have a small piece of woodland near your home where you can watch it, send and get a \$10 supply to start with, and follow directions and you will soon have seed enough to plant more each year, and if you are lucky enough to get one acre in ginseng you can quit practicing medicine, as one acre is worth a cool \$25,000.

Golden seal is another herb that is valuable, and, like ginseng, is easily grown. Neither requires much labor. All you have to do is keep the weeds out and be sure to plant in good, rich, loose soil. Decomposed leaves are the best fertilizer for either ginseng or yellow root. Yellow root is not worth as much as ginseng, but it will pay. I write this hoping it will help some brother who would like out-door work and wants to make some preparation for old age. You will surely make a success if you have the nerve to stick to it and study it like you would a bad case of sickness.

D. C. LONG, M.D.

Monterey, Ken.

We wonder if Dr. Long ever made \$1,000 from the cultivation of either crop. It is perfectly true that a number of people have made a fair profit from the business; but it is equally true that more have lost money in the venture, which is far from a simple one. These crops require elaborate preparation of the ground and careful cultivation. It is very hard to get the plantings of golden seal established.

If interested in this matter, purchase "Ginseng: Its Cultivation, Harvesting and Marketing," by Kains; and "Ginseng and Other Medicinal Plants," by A. R. Harding. The latter tells all about golden seal. The books cost 50 cents and \$1 respectively, and may be procured from Orange Judd Company, Ashland Building, Fourth avenue, New York City. Don't expect to start upon \$10 or even with several times that amount, unless you merely want to experiment.—EDITOR.

Injections of Whole Blood.

Dr. J. Spencer Davis, Dallas, Texas., in *Boston Med. and Surg. Jour.*, November 4, 1915, commenting upon the injection of blood serum in various conditions, suggests the use of whole blood injected from a donor into the loose tissue of the abdominal wall of the recipient, never using over three or four ounces. Even if the blood clots in the syringe, no harm results. It is not even necessary to mix it with normal saline.

These injections result in leucocyte increase and have been used in pneumonia, empyema, sciatica, multiple arthritis and anemia.

CONSTRUCTIVE REFORM

For the Practical Benefit of the General Practitioner

Arsenic :

The Drug that Came Back.

PRACTITIONERS don't like iconoclasm. A drug once esteemed holds on in professional favor despite much condemnation, even condemnation by the trained pharmacologist. But the pharmacologist is not always an iconoclast, as witness the fact that he has brought arsenic back; and he has opened up a hitherto unthought-of field for its employment, as well as rationalized much of its old and erstwhile losing-out field. Even today the pharmacology of arsenic is not fully understood; but it will be profitable here to consider what is known regarding it.

The metal arsenic passes practically unchanged through the alimentary canal; its pharmacologic action being developed on the dissociation of the negative ion, AsO_3 , which combined with three molecules of hydrogen makes arsenious acid. Any limitation of the dissociation, as in the arsenites and cacodylates, reduces toxicity, while slow dissociation, as in the aromatic organic compounds, keeps the negative ion sufficiently long in the system to be toxic towards parasites while only slightly so toward the host. This characteristic of arsenic made salvarsan possible.

The Organic Compounds.

These organic compounds are of interest. Arsonic acid replaces one hydroxyl atom with an organic radical. Arsenic acid displaces two hydroxyls and replaces them with two organic radicals, *e. g.*, cacodylic acid. Then, too, there is an arsonate of an aromatic order known as arylarsonate. But, strictly speaking, cacodylic acid is an oxidation product capable of forming many salts slowly undergoing ionic dissociation in the body.

The aromatic organic products are the most important and are compounds of arsenic with the benzene ring-nucleus. Atoxyl was the first one of importance pharmacologically; it is an alilin arsenate. Here Ehrlich took it up, as he was interested in the anilins; he made acetyl-atoxyl, which is less toxic than atoxyl. Salvarsan is a transition from atoxyl by reduction with a sodium amalgam and sodium sulphide, the whole process being very complex. And the list of aromatic organic compounds of arsenic is increasing.

Pharmacology of Arsenic.

A typical form of arsenic is arsenious oxide, or anhydride, the arsenous acid or white arsenic

of the U. S. P., and which enters into Fowler's solution. This form of arsenic rapidly undergoes dissociation in solution in the fluids of the body and hence is very toxic, while the cacodylate class dissociate slowly and are relatively non-toxic. Mercury and its salts act in much the same way, Atoxyl is forty times less toxic than white arsenic.

Parasites.

Here a remarkable fact must be recorded: certain algae and the parasites of syphilis and sleeping sickness possess a power to decompose or cause dissociation of the atoxyl group, thus setting free small quantities of arsenic in ionic form, with fatal results to themselves and yet with the liberation of too little ionic arsenic to be pharmacologically dangerous to the host, or man.

This remarkable fact is a triumph of demonstration in laboratory pharmacology. The spirillum of relapsing fever in mice and the spirillosis of fowls was studied by Hata and others, and the Ehrlich-Hata investigations made the link with syphilis in the study of the organic arsenic products, 606 substances being tried out before ending the series summated in salvarsan. We had "57 kinds" to start the war in America; but a German tried out 606 kinds of warfare upon syphilis before he was satisfied, and, had he lived, neo-salvarsan, the six hundred and seventh (though really, I believe, the nine hundredth and more) would not have ended it. Salvarsan kills the spirochetes, after a proper series of injections, and the dead organisms liberate a protein which stimulates the formation of a syphilitic antibody. Here is an instance of a chemical substance indirectly acting as a bacterial vaccine. What a field in bio-chemistry this opens up! Perhaps our therapeutics will be reconstructed along these lines and many other drugs come back. Who knows?

External Actions.

Arsenic is a powerful irritant and caustic and is a protozoacide, as well as a weak antiseptic in a strength of solution tolerated by the tissues; it does not precipitate protein material, as does bichloride of mercury. In weak solution it promotes the action of ferments. It has no effect upon the unbroken skin except as it is dissolved

in sebaceous secretions. Even though the specific necrotic action of arsenic is most marked upon unhealthy tissues, it has no specific action upon cancer cells.

The Digestive System.

Small doses stimulate appetite due to a slight irritant action; but if too long continued induce a form of salivation and diarrhea. Arsenic has a specific inflammatory and hemorrhage-inducing action upon the intestinal mucosa. Its use in stimulating digestion and in irritative dyspepsia and gastralgia, and in gastroenteritis in children, is not altogether empiric; but it should be used with great care.

The Blood.

In the blood arsenic is carried principally by the polynuclear leucocytes, from which it finally reaches the liver. It is thought arsenic increases the erythrocytes, but this has no clinical significance as the erythroblasts are not increased, according to Greig. Nor are they increased in number in the bone marrow, although the number of leucoblastic cells are increased, which is merely a protective action upon the part of Nature. Therefore, in pernicious anemia Stockman believes the influence of arsenic is due to its antidotal effect on the causal agency and not upon the blood itself. But arsenic has the power of increasing the absorption of iron, and it is useful in combination with it. Lymphadenoma or Hodgkin's disease seems really to be cured by arsenic at times. Its influence upon chronic malaria seems to be established.

Metabolism.

Arsenic induces a diminished oxidizing power of the tissues, and it is well known that a reduction of oxygen pressure increases metabolism. This action of the drug is limited strictly to small dosage. Theoretically arsenic would be indicated in the treatment of diabetes, but practically it does not work out, probably due to the fact that the small-dose stimulation of tissues is varying with the several tissues and it is a difficult matter to adjust dosage, since just a little too much arsenic does harm to metabolic-process adjustment. Chronic rheumatoid arthritis seems to prosper under very small dosage long continued, more especially when administered in the form of steam baths at arsenic springs.

Circulation.

Therapeutic doses do not affect the circulation, and we are not here discussing toxicology. Long administered in circulatory disorders, there is no scientific data to justify it in this field.

Respiration.

In so far as arsenic has power to reduce the oxygen consumption of the tissues it has an effect upon respiration, but in therapeutic dosage this is all it does. There is little evidence of value in

the treatment of tuberculosis as urged by Chavant; but it is indubitable that arsenic is of value in spasmodic asthma of a neurotic type, which is due to its action upon nervous, not respiratory, tissue.

The Nervous System.

The neuro-pharmacology of arsenic is not at all defined so far as the therapeutic dose is concerned, and the toxicology upon nerve tissue is hard to determine, since the man dies before the nerve changes develop. Sometimes peripheral neuritis is developed by large dosage. So, then, the therapeutic usage of arsenic in chorea, epilepsy, functional neuroses and hysteria is upon a purely empiric basis.

Glands, Mucous Membranes and Skin.

What was said under metabolism applies here. Arsenic is excreted by the skin and sweat glands and is soluble in the sebaceous secretion. Hence the specific action of arsenic upon skin and glandular tissues is readily understood, more especially as regards certain parasitic diseases. The field of arsenic in chronic and subacute skin diseases is established; but the drug is used in many skin lesions in which it is not at all indicated.

General Considerations.

This is not a paper upon the use of salvarsan in syphilis and other diseases, nor yet upon the toxicology of arsenic; these are each large subjects so commonly discussed in medical literature that they are readily understood. The effort is here made to show that arsenic is a drug that came back purely as a result of modern research. Empirically it was used correctly in several directions; but empiric therapeutics led us astray in so many directions that arsenic was rapidly losing out in professional esteem. Empiricism never taught us its wonderful effect upon certain parasites; this was a revelation of pharmacologic research. Perhaps, despite much iconoclasm, pharmacology will bring back many other drugs with which we are now groping in the dark, but which we realize are potent in many cases. Let us have more and more light!

Care With Pituitary Extract.

Only one-third to one-half of an ampoule at the first injection sufficiently increases uterine contraction in labor, says Dr. Samuel Wyllis Bandler, in *New York Medical Journal*, October 30, 1915, since a full ampoule may do much harm, especially in an unrecognized malposition. Even rupture of the uterus may result, and minor troubles are frequent from over-dosage.

Carefully trying out the first dose, and using judgment with succeeding ones, pituitrin, if one has diagnostic ability, is an exceedingly potent and useful drug in labor. Dr. Bandler has given as high as twenty injections in cases wherein he desired to avoid a forceps delivery, and with most happy results.

Our Legal Handicaps.

Reprehensible State Laws Concerning the Medical Profession.

By J. W. KENNEDY, M.D.,
The Joseph Price Hospital,
PHILADELPHIA, PA.

"Tomorrow and tomorrow and tomorrow take their slow course from day to day to the last interval of recorded time; and all our yesterdays we've been but leading fools the dusty way to death." This article is about the new tomorrow, when that sort of thing shall stop.—
EDITOR.

All members of our profession who have to do with urgent conditions know that, from the standpoint of surgery or medicine, one's death-rate is in due proportion to the early or late hour in which the condition presents itself. Surgically, appendicitis or extra-uterine pregnancy, and medically the diphtheritic patient and like lesions, practically have no mortality when coming early to the attention of the competent profession. The present mortality in these conditions are familiar to all. It takes the best part of any operator's or competent internist's life to explain away the shortcoming which emanate from tardy therapeutics, medical or surgical. It too often becomes necessary to tell an unworthy lie to protect a derelict member of our profession. We are living in a scientific age; much that is positive can be taught, yet we are blind to the most flagrant human errors. Our eagerness to find the cause and treatment of disease has closed our practical eyes to many preventable causes of death. Let us stop and take invoice of our knowledge.

Is our mortality in due proportion to our surgical and medical knowledge and privileges? If not, it must be evident, any mortality is a human error and only humane to correct. Without this useless logic, what are the real conditions?

Mortality vs. Legislation.

In going over the records of the Joseph Price Hospital, I found that 45 per cent. of the deaths were due to errors of the State Legislature. In this per cent. of cases there was some record of the patient being treated by a non-professional means until the undertaker's era.

It is bad enough that we do not know the cause or the positive cure for cancer, but a thousand times worse and more reprehensible to know that a recognized and legal body is making laws which in many instances doubles our mortality. This is what I call a preventable human error and rings out with ignorance, commercialism and murder. If we are the guardians of health and life, is it intelligent, much less human, that a

body of legislators must take from us our privileges? It is certainly not inconsistent with reason to say: what is the use of regulating medical colleges; also, how useless is our Medical State Board, if a body of non-medical men are to make laws which prevent us from the early recognition of disease by putting in competition with us men without scientific attainment? If you will but think for a second, our high standards of medical education which become the day are a farce, when you realize that those of no medical qualifications are permitted to pass upon and treat disease.

Human Errors and Mortality.

It must be apparent to any medical man that our next great step in the profession is not necessarily to find something new, but to better practice the knowledge we share. To better confirm this point, I find that 95 per cent. of the deaths which occur in an institution like the Joseph Price Hospital, which deals with acute and urgent conditions, are due to human errors. This horrifies one when you think that a large per cent. of this mortality may be due to the assininity of State laws.

There is but a single solution of this question, and that is so simple that one grows indignant at the gross injustice of man's inhumanity which has for its foundation ignorance, commercialism and indifference to health and human life.

One Educational Standard.

My solution from a professional standpoint is this: there must be but one standard of medicine, and that the highest in the gift of science. All the non-medical advocates of treatment of disease, which includes all those persons who are attempting treatment by manipulative efforts, mental suggestion, Christian Science, etc., must be legislated out of commission. These cults have murdered dozens of patients for me, so it is not a question of opinion but the statement of facts which would more become the land of barbarism than the enlightened Commonwealth of Pennsylvania. I am willing to admit that I am mentally vicious towards that means or source which gives me the patient doomed by the ravages of cancer or rotten from the neglect of an acute infectious disease, and I am righteously indignant because I realize it is the State Legislature which controls my rights.

It is such a betrayal of all that is ignorant to exact standards of medicine, and in the same act prevent us from the execution of such wisdom, by putting in competition with the profession those individuals without scientific attainment.

This is altogether the most momentous question before the profession.

Patent-Medicine Mortality.

Coming back to the discussion of the single high standard of medicine, this means that every bottle and package of patent medicine must go from the shelves of the drug stores. Every such package or bottle which haunts the shelves of a commercialized house has within it a potential death. Is a painkiller in the hands of a layman meeting with the requirement of the practice of medicine? If you will take the harmful medical influence of dollars and cents from the community, you will lower any abdominal surgeon's mortality by half.

Surgical Handicaps.

I dealt in the beginning of this publication with the non-medical or layman's mortality because it is a handicap of at least 50 per cent. of the death rate of any competent abdominal surgeon who is dealing with acute urgent conditions of the abdominal cavity. Indeed, I could actually point out a very much larger mortality which is in no way due to the shortcomings of our crippled profession. It should not be necessary for any member of our profession to waste his time by discussing this unscientific cause of death. We want and welcome the standardization of our profession, but we do not want any classification of standards which robs that standard of its noble quality. I repeat, that a single high standard of scientific attainment with all non-medical followers, Christian and mental science, as well as all commercialized remedies, must be legislated out of existence.

If the laity will do this for us we will save nineteen out of twenty lives which are lost in the urgent conditions of abdominal surgery. I speak particularly of abdominal conditions because my work is largely in this line, yet to somewhat less extent the same discussion may be applied to medical and other general surgical conditions.

Christian Science Mortality.

I view the progress of Christian Science with the greatest apprehension and profound regret. It will double the mortality of every man who operates or practices medicine during the next quarter of a century. A citizen may be entitled to freedom of thought, but he is not entitled to force perverted judgment upon an innocent child and execute the infant with his ignorance. There is not a man who practices medicine extensively who has not seen innumerable deaths which just as directly can be laid at the doors of State Legislatures, as though a fatal toxine had been injected into the deceased's veins by that legislative body.

Be this misunderstanding between the legislative authorities and our profession legitimate on

account of their ignorance of the real condition of affairs, or vicious through commercialism or corrupt politics, the fact exists that, with the continuance of the present state of affairs, more people will lose their lives from ignorant Legislatures than have or will die from the great plagues that threaten us. I know that our profession is losing control of the people and the causes are perfectly apparent.

Quacks and Mortality.

If medicine was an exact science the quack would be an impossibility, but the fact that probably 90 per cent. of diseases will recover in spite of improper treatment or no treatment at all, makes the quack a possibility. In other words, he can have a large following irrespective of what he does for or against his patient.

Humanity likes attention and entertainment. The charlatan knows and takes advantage of it, and his remedy which is either body manipulation or mental pacification impresses the medically ignorant patient; in this lies the greatest future harm to the profession.

The Ignorant Wise Man.

There is no example in the professional or lay world in which ignorance is so eloquently demonstrated as in that control which an ignorant man (a quack) has over an individual who may be an intellectual giant in all things not pertaining to our profession. You can not explain to a layman that all forms of manipulation or mental suggestive treatment are best known to our profession and are practiced through the intervention of the nurse, masseur, or the proper mental support for the patient. It has always been unknown to our profession just why men of all other callings are willing to and do express positive opinions about medical subjects of which we, as technically trained men, have little knowledge. It is said of Newton, when he discovered the law of falling bodies, he excited the scientific envy of the world; but when he wrote a work on biblical prophecy, his scientific friends got even with him. The fertile brain of Bernard Shaw blots the page with his facile pen when he discusses medical subjects. The most intellectual non-medical masters have insulted their brains when they carelessly wandered into the discussion of medical science. It is this peculiarly inconsistent yet inherent tendency which the layman has to dictate medical matters from which we have much to fear.

Publicity.

The ethics of our profession are such that we are illy prepared to combat the open discussions of laymen through the public press. The dignity of our profession requires that we ignore public attacks upon our members, yet we know nothing can be so destructive to our cause as the public

newspaper. It would be a very unusual thing for a medical man in high standing to pay any attention to the public literature which comes from a charlatan or some one who was ignorant enough to take treatment from the same and also coward enough to attack a profession whose traditions were too sacred to use like arms.

Lay Attacks.

A layman never more thoroughly outrages his rights as a citizen than when he uses his prominence to attack the principles of a profession whose ablest members are constantly humiliated by unconquered medical subjects. It is ignorance personified for the State Legislature composed of non-medical men to pass in judgment upon medical subjects. Taxation without representation is not more inconsistent with good government. To obtain execution on these matters is the greatest of our problems. The legal profession dominates the heads of nearly all departments of government, irrespective of quality of knowledge required in that department. The medical man is not an office seeker and cares for little that is external to his profession.

Our Individual Responsibilities.

We as medical men are not assuming individual responsibility for life and death to the extent we should; therefore we do not personally hold the proper authorities responsible for such death. Professional etiquette demands that we close up in our shells and expose no one; therefore the laity remains in ignorance of our real necessities. We do not resort to the press, the mightiest of all agents, to expose our transgressors; there is organized opposition against us which will resort to anything to win. It is a question of dignity and professional ethics against organized politics, backed by that mighty agent, the press.

Little to Obtain From the State.

I do not feel we can obtain recognition from the State Legislature. Never was their legal sagacity at so low an ebb as when they pass judgment upon the necessity of the formation of a medical State board of examiners for each State. Is the quality of health required of any one State different from that of any other?

Nationalizing Medicine.

The inconsistencies of law as applied to health regulation are as far from good statesmanship as are the prattling of a new-born infant from true philosophy. We must go to the fountain head for help. We must have a representative in the Cabinet. We must have a national board of medical men to pass upon all State laws concerning all medical subjects. We must have a single national board of examiners to determine the fitness of all who enter our profession. This will give us a single high standard of medicine

and do away with all quacks, hyphenated members of our profession, mental healers, patent medicines, etc. If this is done for us, then only will the rules of the common fitness of things have been executed. We can then show you a profession which is truly life-saving, and in my specialty of abdominal surgery can save nineteen out of twenty who now die from human errors.

A Dreadful Indictment.

At this hour I am in a position to say that, if we are protected and permitted to exercise our medical and surgical privileges, the mortality will be less than one-third of 1 per cent. in abdominal surgery. The mortality in abdominal surgery throughout our country ranges from 2 to 10 per cent. This disparity is due to human errors, and the State Legislatures are largely responsible.

The slothful practitioner who gives us an occasional death is our own fight, and we can bring him into the civilization of more progressive thinking. I most bitterly resent the laws of our State which legalize and countenance the most perverted and inconsistent ruling, when it comes to making laws which deal with health. I resent the fact that I have a knowledge which is definitely life-saving and am governed by a legislative body which endorses those means which prevent me from executing my professional rights. I repeat, the law has no right to exact a standard of me and then place in competition with me those individuals who have not qualified as practitioners of medicine and who are the means of keeping the patient from me until the undertaker's era.

Give us a professional monopoly which can only be obtained by men of the highest ideals and standards of scientific attainments, and then we will have a monopoly which has a soul and will be truly life-saving to the extent of scientific qualification and attainment which is becoming to the era in which we live.

I resent this state of affairs most of all because a lamentable number of my profession have sacrificed their lives to advance our calling to this enlightened age and then are ruled by a body of misinformed men which prevents us from executing a magnificent progress which those distinguished deceased gave us. It may not be a comfort to the weary practitioner or the fatigued specialist to know that we are only an unimportant rear guard to those mighty men who are at the front and are the true heretics in the progress of our profession, but it is to these leaders our professional hat must be ever raised. Therefore, to sum up the first great cause of death-rate as I have seen it, is, that 45 per cent. of our deaths are due to human non-professional errors which come from an unjust Legislature which demands ideals and in the next act takes from us the opportunity to attain those ideals.

Draws a Vivid Picture of Fraud.

Postal Savings Bank Director Describes the Misery Attending Financial Swindles.

His years of experience as a post office inspector whose duty it was to run to earth various financial frauds that used the mails to enmesh victims eminently fitted Carter M. Keane, now director of our Postal Savings Bank system, to tell the investment bankers, as he did at their banquet, of the almost incalculable losses the people have sustained through the wiles of our many Wallingfords. Of their suffering he drew a very vivid picture when he said:

"The picture that comes to my eye to-night is a sad one. I have seen homes lost in a twinkling of an eye; I have seen the opulent made poor; I have seen the aged and the infirm driven back to the fields and the shops through the heartless and merciless. Oh, that heartless conspiracy of those who have the venality, but not the courage, to carry into effect—those people who employ a two-cent postage stamp to do their mission of crime. I take my hat off to men who in their code have set their force and face against such men."

Only through actual contact with the visible results from get-rich-quick operations is it possible to obtain a full appreciation of what a wide waste of ruin it leaves behind in its track. It was this knowledge secured by seeing such destruction and hearing the miserable tales of grief and penury from the lips of the victims that *The Financial World* has so often been prompted to employ unadorned English in exposing these schemes. It felt that by so doing it would succeed finally in awakening the honest and conservative investment banker to use his influence to combat an evil that was not only impoverishing the great middle classes, but eating its way into the healthy blood of our economic life. Incidents relating detached losses could not alone bring an awakening to the need of quarantining this financial pestilence. It was only when a far-seeing Postmaster General declared as a warning that our people every year were throwing more than \$150,000,000 to \$200,000,000 into this cesspool of fraud that there came a bestirring of effort among the influential organizations to stamp out of the mails, out of the newspaper advertising columns and out of their communities this bund of robbers.

Mr. Keane thought the postal savings banks have proven something of an antidote. We are disinclined to accept this view. Postal savings banks have accomplished a great deal of good; they have provided the timid with a depository for their savings. Of those there are many, especially among the ignorant foreigners whose experience with bankers of their own tongue has been disastrous. According to Mr. Keane, the total deposits in the postal savings banks amount to over \$68,000,000—not large, when it is known that more than \$3,000,000,000 is paid in wages every year. The get-rich-quick man does not count among his victims many of those from

whom these banks draw their revenues, as the interest they pay is no inducement to them.

Those who become entangled in the get-rich-quick spider's web are the men and women who have succeeded in saving a few hundred or thousands of dollars and are eager to make them grow fast. Four and five per cent. income appears to them a rather tame return. What they are eager to see is that their small fortunes shall double and triple quickly, and the glib-tongued, suave, well-dressed financial swindler tells them he can do it in absolute safety—and they thereupon fall prey to his wiles.—*The Financial World*.

The American Riviera Association.

Some years ago a number of Philadelphia gentlemen purchased a tract of land on the Pinellas Peninsula, near St. Petersburg, Florida, and offered subdivisions for sale. The project languished and comparatively little development work was done, owing to lack of money and bad transportation facilities.

Recently a group of impressive names is connected with the revived project, and these gentlemen aim to make a new health-resort colony of their holdings. They are enlisting the interest of physicians in the project and soliciting investment therein.

This tract is on the peninsula opposite Tampa, and St. Petersburg has enjoyed a great development. Whether the new colony will be as successful depends upon many factors. We hope it will succeed and become a profitable investment for all interested; but we would advise caution upon the part of physicians desirous of investing therein. Southern Florida is all right for people who adjust themselves to the environment, but many others find the climate most trying to them. If a physician wants to live there, and he likes the country after trial, land investment is just as good as it is in any other State; but to the non-resident, Florida investments have no magic productive of profit any more than has Maine or Colorado. Better see this colony before investing. Nevertheless, we hope this colony may succeed, as fundamentally the idea is a good one. The trouble is to secure enough capital to make a business success of such a venture in a remote district, and such an amount of money is seldom secured by widespread sales of stock or building lots.

Don't be swept off your feet by Florida or California promotion literature. We have seen a lot of both States, some of which is all that is claimed in promotion literature, but the great proportion is not. The best districts are filled up and are not being boosted, and to get land therein demands much outlay. Never buy land anywhere, for any purpose, or on any terms, without personally seeing it yourself.

Premature Separation of the Placenta.

J. Whitridge Williams, M.D., F.A.C.S., Baltimore, in *Surgery, Gynecology and Obstetrics*, November, 1915, contends that premature separation of the normally implanted placenta is frequent and, if not extreme, may give rise to only trifling symptoms; but, on the other hand, may jeopardize life. The same toxemia provocative of the albuminuric train of troubles may be responsible for the separation.

Fortunately, the so-called utero-placental apoplexy is commonly manifested by external hemorrhage. The practitioner should be on his guard against concealed hemorrhage, which causes intense abdominal pain, pallor and a uterus of ligenous consistency, with considerable shock.

Expectant treatment should be inaugurated, but always maintaining caution. In a series of reported cases, one-half terminated favorably under expectant treatment.

When this plan fails, then one can resort to the forceps, version, the introduction of the Champetier de Ribes' balloon, or Cæsarean section, as may be indicated. Dr. Williams expresses very conservative views as regards the latter, but, when used, prefers the abdominal section.

Even after delivery, in cases of separation, grave danger from hemorrhage may impend, which may be met by hot intra-uterine douches, ergot, pituitrin and gauze packing. Sometimes in persistent cases the uterus must be removed *in toto*.

The paper is pessimistic regarding these hemorrhages, viewing the involved uterus as a seriously damaged organ, and the details of the paper show histologic changes in the organ justifying this view. In concealed hemorrhage Cæsarean section is the operation of choice. The atonic, infarcted uterus is shown to be a real peril.

Irrigation and Drainage With Bandages.

Col. Sir Almroth E. Wright, M.D., F.R.S., C.B., in *The British Med. Jour.*, October 16, 1915, narrates a number of experiments which show that by means of ordinary bandages used as wicks, a wound may be slowly irrigated and the effluent carried away into a vessel containing water, in which depends the distal bandage. By careful arrangement the bed is kept dry. Then, too, like a siphon, a bandage may be used to drain a wound, the dependent end torn into tails which are slightly immersed in a vessel of water at the side of the bed. The various arrangements are ingenious, but cannot be shown without the numerous illustrations accompanying the article. Gelatin solution containing formalin (1/10 of formalin solution) is used to make protective dams around the wound. Any ingenious surgeon can work out the arrangement of the bandage wicks to suit the exigencies of a case.

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Best Current Medical Thought

Pellagra as a Disease of Insufficient Nutrition.

In *The Lancet*, October 23, 1915, F. M. Sandwith, M.D., F.R.C.P., of London, reviews the theories of the etiology of pellagra. He rejects the theory of its being insect-borne. The argillaceous soil theory will not fit many districts, as, for instance, Egypt, where drinking water contains little silica, and yet he has seen much pellagra there among the poorer people. He found the same classes suffering in Italy. Many experiments were conducted with maize, and he gives good grain a clean bill of health.

Beri-beri, which is caused by a one-sided rice diet, he believes to be very similar to pellagra, both being caused not by what one eats, but by what he fails to eat, and even beri-beri being caused by any one-sided diet devoid of vitamins. Indeed, rickets, scurvy, "epidemic dropsy," beri-beri, polyneuritis of birds, and pellagra are all deficiency-in-diet diseases.

The Government's reports and other American researches are discussed at length and highly commended; and English experience, also discussed at length, is confirmatory of the one-sided diet theory. The strong evidence in the paper is the narration of feeding experiments with guinea pigs, the exclusively carbohydrate-fed (as near as may be exclusively) animals all died within twenty-four days.

Continuous Oxygenation in Sepsis.

W. Atkinson Wood, M.D., M.S., Melbourne, Australia, in *The British Med. Jour.*, October 2, 1915, describes a method for continuous oxygenation of a wounded limb. A rubber bag was constructed, open at both ends and provided with sleeves extending a short distance. In the middle of the bag entrance and exit tubes were attached, of rubber. The device is slipped on like a stocking or sleeve, and the two sleeves banded to make a tight fit. An oxygen cylinder, at three or four pounds' pressure, admitted the gas through the entrance tube, and it finds its exit through the other tube to a vessel under the bed, and the exit so controlled as to keep the bag inflated.

It is used only after proper surgical attention, when it keeps the tissues in an atmosphere of oxygen.

The device saves in dressings, is easily sterilized, serves to collect discharges, irrigations can be made through it and *in situ*, there is no "pus poultice," and the pain of repeated dressings is saved.

Results have been good.

The Hypertonic Permanganate Treatment of Cholera.

Sir Leonard Rogers, K. C. I. E., M.D., F. R. C. P., Calcutta, in *The Lancet*, July 31, 1915, after treating one thousand cases of cholera by this method, reports:

"I venture to think that the large number of cases which have been treated in the cholera wards of the Calcutta Medical College Hospital during the last eight years with steadily improving results, and the confirmation of my methods from various countries, now suffice to place them on a firm basis, and that it may fairly be claimed that the mortality of this terrible disease can be reduced to about 20 per cent., or one-third of the former rate, and still lower in patients under 50 years of age, whenever the circumstances allow of the simple operation of transfusion being carried out. Only those who have practical acquaintance with the disease can fully realize what this advance really means, for in the endemic areas cholera is dreaded more than other diseases, even by Europeans. The immediate relief afforded by the injections to the terrible cramps and restlessness of the collapse stage must be seen to be appreciated, while even in the few cases where life is not saved the sufferings are vastly alleviated. Now that the danger of uræmia can be so largely prevented in cases coming under observation within the first day or two, cholera has certainly been robbed of three-fourths of its terrors; and all this has been accomplished by prolonged research (extending over ten years) on physiological lines without the aid of any specific bacterial or medicinal agent.

Actinomyces in Man.

This disease, which most American health boards have listed among the reportable affections, is the subject of an illuminating clinical study by V. Zachary Cope, of London, in *The British Journal of Surgery*, July, 1915.

The disease is not rare in man, but it is not diagnosed, being commonly thought to be septic or syphilitic infection or sarcoma.

The infecting agent is a streptothrix, a form of fungus. It is parasitic on certain cereals and grasses, and man may get the infection from them, just as the lower animals do. It is far from true that man always contracts the disease from an animal, although he may do so rarely. The infection is usually in the mouth, but it may be in the respiratory or alimentary passages. Carious teeth are often the entrance point.

Fruit and vegetables packed in grass or straw may carry the fungus. Straw-chewing and grass-eating is liable to involve infection. Gardeners and stablemen, warehousemen and packers, are liable to be infected.

There are two types of lesions, the hard and soft. The pus of the abscess contains typical granules visible to the naked eye (illustrated in color in the paper). The only certain diagnosis is by examination of the pus or of a section of

the lesion. Actinomycosis should always be considered in the diagnosis in the case of any newly-formed subacute or chronic swelling in the region of the mouth, face, neck, thorax, or right abdomen.

Treatment is with iodides, vaccines and surgical measures.

Typhoid and Stock Vaccines.

Drs. H. W. Wiltshire and A. R. N. MacGillycuddy, of London, in *The Lancet*, September 25, 1915, present an elaborate study of this subject in which they contend that stock vaccines, on account of being immediately available, serve the practical uses of most physicians and serve the patient also as a prophylactic agent and as a direct antagonist to the typhoid infection. These writers also regard vaccine as a powerful prophylactic agent against secondary infections, which find their opportunity in the lowered resistance of the body caused by the typhoid toxemia.

Marked reactions from vaccine should be avoided, but an initial dose of 250,000,000 is usually harmless. Intervals of three days should be observed between doses. Great care in vaccine dosage is necessary if secondary infections of the lungs are present. Doses should, ordinarily, be continued for ten days after the temperature is normal.

Hemorrhagic Disease of the New-Born.

In *Boston Medical and Surgical Journal*, June 10, 1915, Dr. J. C. Hubbard, Boston, makes the following admirable points:

In hemorrhagic disease of the new-born, we know that subcutaneous injections of rabbit serum are of definite benefit. Recently come reports that subcutaneous injection of human blood will bring about cures. By these two methods some substances which the baby lacks are provided in small amounts. These substances are absorbed and the hemorrhages cease.

It has been shown clinically so many times that human blood given to the baby by transfusion is the best treatment, that there is no longer any discussion on this point. Transfusion has saved some babies when other methods have apparently failed. I do not know whether transfusion of human blood is the best treatment because the dosage is larger or because the substances are different. Clinically it does not seem to me that the difference in the effect of an injection of rabbit serum and a transfusion is due to the rapidity of absorption, though, of course, by the latter method the lacking substances are mixed with the blood at once.

We all appreciate the difficulty in the technic of transfusion in the new-born because of the small size and delicacy of the baby's veins. To transfuse a baby light anesthesia is necessary to keep the baby quiet and care must be taken not to give the blood too rapidly or in too large a dose.

The suggestion I wish to make, and I make it before I have been able to carry it out myself, because it may be some time before I see a proper case, is that the blood be put free into the abdominal cavity of the baby. If Kimpton's tube

were used, a hole in the abdominal wall only large enough to admit the cannula would be necessary. The blood could be run in rapidly and there would be less danger of an over-dose. The hole could be closed with a stitch or two. The whole operation on the baby would require but a few moments. Less anesthesia would be necessary. The necessary exposure and the operation itself would cause certainly no greater shock than a dissection of the jugular vein, and I believe absorption from the abdominal cavity would be sufficiently rapid to cure. It certainly would be as rapid as the absorption of rabbit serum from under the skin, which in the milder cases is curative.

The Placental Stage of Labor.

John Osborn Polak, M.D., M.Sc., F.A.C.S., Brooklyn, N. Y., in *Surgery, Gynecology and Obstetrics*, November, 1915, contends:

That the placenta separates spontaneously if the normal mechanism is allowed to obtain; that manipulation of the uterus may disturb this mechanism; that partial detachment, the result of manipulation, predisposes to bleeding; that the placenta may safely be retained for hours, provided it is attached or completely detached; that an undisturbed placental retention does not induce sepsis, this being caused by manual or instrumental entrance of the womb; that manual extraction is only admissible in partial separation with hemorrhage.

Dr. Polak goes so far as to prefer placental extraction by suprapubic extraperitoneal hysterotomy over invasion of the uterus via the vagina, and says that the Credé method should be used only under surgical anesthesia.

Careless Examinations in Tuberculosis.

Dr. A. Howard Ross, Lebanon, Oregon, in *Medical Sentinel*, November, 1915, on the basis of chest examinations, sputum examinations and temperature records—all absolutely necessary factors in the diagnosis of tuberculosis—quotes some startling statistics.

Lavenson, in 66 cases of pulmonary tuberculosis, found only 12 so diagnosed by the patients' physicians. In 13.8 per cent. of the cases none of the necessary examinations was made. In 52.7 per cent. a physical examination alone was made, usually over the clothing. In 12.8 per cent. no sputum examination, but temperature and physical. In 8.3 per cent. temperature alone. In only one case were all three examinations made.

Ford, recording 1,000 cases that consulted 1,940 physicians, found in 55.1 per cent. physical examination alone, 15 being over clothing; 0.7 per cent. temperature only; ditto sputum; 20 per cent. chest and sputum; 6 per cent. chest and temperature only; 7 per cent. made all three necessary examinations; 10.2 per cent. made no examination of any kind.

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The COUNTY MEDICAL MAP

A Forum for the Problems
of the County Medical Societies

The County Map aims to co-operate with the National and State Societies in promoting a wider interest in the County Societies, in increasing their effectiveness and in the interchange of plans successfully employed to effect these ends.

Members of County Medical Societies are invited to contribute to this department such matters as are of general and widespread interest.

County Societies publishing Bulletins will confer a favor by placing - The Medical Council - on their mailing lists.

Now for the Winter.

Summer is over, vacation is past, and all of our men are back on the job again ready for work. Ready for more work and better work, we trust, than ever before. No man can do highly efficient work in any avocation unless he keeps fully abreast of the times, fully posted upon all of the improvements and developments in his particular line. The same rule holds good in our business, and the doctor, wherever he may be, that does not keep himself fully posted upon the progress that has been made of recent years, both in medicine and surgery, will soon find himself bringing up the rear of the procession, with the band playing away up in front, so far in front that he can hardly distinguish a single note of the stirring martial music.

One of the best agencies that is presented to the average country doctor in his search after the latest methods in the healing art, is membership and active participation in the monthly meetings of his county society. At every meeting the program contains something of practical value to everyone in attendance. The wide range of subjects, embracing all departments of medicine, is taken up at the several meetings, papers or lectures are presented, followed by discussions that cannot help but prove useful in the daily life of the practitioner who is earnestly striving after greater efficiency.

Winter is at the door, the time for recreation is past, the time for good hard earnest work is at hand, and the officers of your county medical society extend to you an invitation to work through us and with us to our mutual benefit. If you have been a regular attendant, be sure your interest has been appreciated, and we earnestly hope that during the coming season nothing will happen to mar your splendid record. If you have in the past attended only occasionally, will you not try to improve your record by attending every meeting this winter? If you are numbered among those who never come, permit us to say that you are not doing justice to yourself or your patients until you seek every known means to

added to your store of knowledge that you will so sorely need at some bedside in the near future.—*The Madison County Doctor.*

The Family Physician and Operations.

The presence of the family physician at all major operations is very desirable from several viewpoints. Very frequently the operating surgeon desires to ask some question during the operation as to the family history, physical findings of some past disease, last menstrual period or the like, and the correct answer to this question frequently determines the further steps of the operation.

The surgeon should request of the family that the family physician be present, and the family physician should render to that family a reasonable bill for his services.

This not only serves the interest of the patient, but from another viewpoint may adjust some of the ill-feeling which exists between the family physician and the surgeon or surgical specialist.

This would help to adjust some of the lack of equal remuneration which is thought to exist and the best interests of all parties thereby served with honor, honesty and dignity.—*Weekly Bulletin, Allegheny Co. Med. Soc'y.*

Another Resolution.

WHEREAS, It has become common practice of newspapers, when publishing articles concerning accidents to, and illness of, or operations upon individuals, to publish the name of the doctor or doctors associated with the case, and believing this to be bad practice and contrary to the ethics and the high ideals of our profession, therefore be it

Resolved, That we, the Fayette County Medical Society, respectfully petition the various newspapers of Fayette County to desist from publishing the names of doctors in any article concerning any illness, accident to, or operation upon any individual, in the future editions of their various publications, and further, be it

Resolved, That a copy of these resolutions be spread upon the minutes of the Society and a copy be sent to each publishing concern in Fayette County.—*Bul. Westmoreland Co. Med. Soc'y.*

Cheap Vaccinating.

Don't rob yourself on the vaccinations which will soon begin. If you charge one dollar for vaccination, with the privilege of a second trial if the first fails to inoculate, you charge the customary fee. If you get fifty cents for taking the responsibility of vaccination, and then do the second trial for nothing—Say! How would you like to employ a doctor like that to vaccinate you? Two tubes of virus cost 30 cents; a twenty-cent doctor uses just twenty cents' worth of asepsis. For the third trial charge one dollar, as usual. (Chorus: "Why, I always do!")—*Blair Co. Med. Bulletin.*

The Family Physician.

Twenty-five per cent. and more of our school children have defective and dirty teeth. A great many are anemic, poorly nourished and have enlarged glands. Many more are languid, tired and listless.

These youngsters are of the better class by a large majority. We all know that these children are more easily attacked by tuberculosis than the strong, hardy and robust ones, and, in fact, may even now be tuberculous.

This, to my mind, is entirely due to lack of paternal supervision. But who is responsible for the lack of paternal intelligence? Is it the State? Is it the county? Is it the family physician? I think all are, in a way, responsible; but particularly the family physician. We do not make our patients' interests and health our interests.

I believe that if a physician goes into a house and sees dirty teeth, lack of cleanliness, poor ventilation or any other predisposing cause of disease, he should at once speak out and tell the family about it, and not be afraid of hurting their feelings; they will respect him all the more, later.

Advise all your patients against the patent medicine evil. Point out to them that every disease should be diagnosed thoroughly and treated accordingly, and then do as you preach, and in this way prove by action that you are better than some backache cure or digestive elixir.

When a patient comes to consult you, explain to him what he wants to know; tell him the morbid anatomy, prognosis, etc., so that he will understand his own condition better and can intelligently help you in the treatment. Take a little time with him and don't limit yourself to a mere mechanical pill peddling procedure.

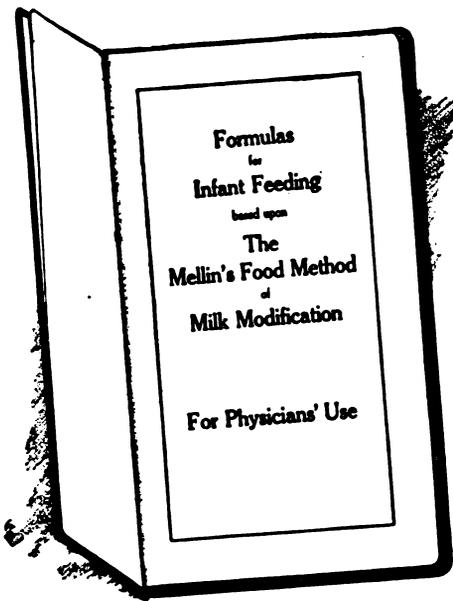
When the mother of a young lady who is about to enter into her menstrual life consults you, don't say, "Oh, that will be all right." That is the time you should lay out a definite routine for her to follow and give her advice as to sexual hygiene that will perhaps avoid many years of suffering later on.

When the young, bashful man comes in and tells you his ills, both real and imaginary, don't gruffly ha ha and make him feel like a fool; instead settle down and tell him some good, sound common sense that will overcome the gutter knowledge he already has, and in this way you will make him a better citizen and father when he shall have arrived at that period of his life.

I believe if we would all take our patients into our confidence they would have more confidence in us, and we could help them so that they could avoid much suffering and misery. In the long run we would have as much work and we would feel a lot better and have many more friends.

I believe that a wealth of friends would be better by far than many dollars.—*Blair Co. Med. Bulletin.*

(County Medical Map continued one leaf over.)



A method of infant feeding that appeals to the doctor who prefers simple mixtures—
 A method that is suited to the physician who desires to know every detail of percentages and calories—
 Is contained in this book of sixty-two pages.
 We offer this book free of charge—an opportunity of securing a most serviceable work, made possible only by many years of close attention to all matters pertaining to infant feeding.

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Are you prepared

for that emergency call late to-night—mayhap 'way out in the country, or if in town, after drug store hours? In either event—and in most "hurry" medical cases—there is nothing quite so immediately useful as a good hypodermic syringe that "always works and never leaks" and some real hypodermic tablets—ours, for instance. \$2.60 worth of that kind of "preparedness"—that's the price of our Aseptic Hypodermic Outfit through your druggist—equips you with a good syringe and six kinds of emergency tablets in a handsome aluminum case that will fit your pocket without bulging—a neat, compact, aseptic emergency outfit.

Are you prepared?

SHARP & DOHME

The hypodermic tablet people
 since 1882

Purveyors to the medical profession since 1860

The County Medical Map

Nostrum Swindles.

That the laity is now in close sympathy with the medical profession on the evils of the drug nostrum swindle is shown by the uniformity with which convictions are now obtained in Philadelphia. Another drug fakir, on October 8th, received the full penalty of the law in the U. S. District Court here for getting out such a cure. Accompanying each bottle of the "remedy" was a mass of "literature" which represented the tablets as a cure for paralysis, locomotor ataxia, Bright's disease and many other ailments. During the trial of the case experts testified that the cure, instead of alleviating certain ailments, would aggravate the condition of the patient to such an extent that death might result.—*The Weekly Roster, Philadelphia.*

A Live Interest.

Now for the "last lap" of society work of this year. Let's come under the wire a winner. The most important element in society work is a live interest on the part of each member. This element is becoming manifest more and more in Butler County. There is a marked change being noted by the "program getter" in the attitude of men toward the success of the meetings. This is a sure sign of a progressive medical society, and we hail the signs of advancement with a great deal of satisfaction. We hope that this is but the beginning of much larger things.—*Bulletin, Butler Co. (O.) Med. Soc'y.*

Resolution Upon the Short Drug Supply.
To the Hon. Robert W. Lansing, Secretary of State, Washington, D. C.

DEAR SIR:

WHEREAS, Owing to the present condition due to the inability to import drugs and chemicals necessary in the treatment of the sick and injured, by reason of which the price has so advanced that in many instances it becomes prohibitive and in others absolutely impossible to obtain them; and

WHEREAS, This condition imposes a great hardship upon physicians and patients, and in many instances endangers the life and health of the people;

Therefore, we exceedingly deplore this condition and pray that you will use your best efforts to speedily relieve the same.

DR. L. F. SCHMAUSS,
DR. I. N. TRENT,
DR. G. REYNARD,
Committee.

Adopted at the annual meeting of the Indiana Eighth District Medical Society, at Muncie, Ind., October 21, 1915.

(Signed) DR. FRED MCK. RUBY, Pres.
DR. H. D. FAIR, Sec'y.

Copies of the above were also sent to President Wilson, Senator Kern, Senator Shively and Representative Adair, of Indiana.

(Book Reviews Continued one leaf over.)

LISTERINE

A safe, non-poisonous, unirritating antiseptic solution

LISTERINE embodies a two-fold antiseptic effect, in that after the evaporation of its volatile constituents—thyme, eucalyptus, mentha, gaultheria and ethyl alcohol—a film of boracic and benzoic acids remains upon the surface to which Listerine has been applied, affording more prolonged antiseptic protection.

LISTERINE is a trustworthy surgical dressing; it has no injurious effect upon the tissues in which the healing process is going on.

LISTERINE in proper dilution is useful in the treatment of abnormal conditions of the mucosa and forms a suitable wash gargle or douche in catarrhal conditions of the nose and throat.

LISTERINE in teaspoonful doses will often afford relief in fermentative dyspepsia and is largely prescribed, with excellent results, in the various forms of diarrhoea occurring in infants and adults.

LISTERINE literature, including special pamphlets upon *Disorders of Digestion* and *Respiratory Diseases*, may be had, by physicians, upon application to

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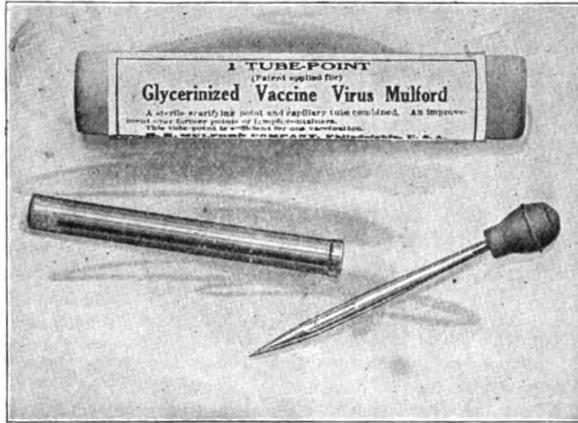
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Glycerinized Vaccine Mulford

In the Mulford Tube-Point Container

A Distinct Advance over Older Methods of Supplying Vaccine Virus

Since the introduction by Jenner, in 1789, of inoculation with cowpox for the prevention of smallpox, many efforts have been made to secure and market a virus of vaccinia uncontaminated with other microorganisms. At first the vaccine virus was transferred from arm to arm. This practice was severely criticised on account of the danger of transmitting other diseases. The next step was the propagating of the vaccine virus on animals, calves usually being employed for the purpose. This vaccine was always contaminated, but with the application of the process of glycerinization and bacteriologic control, pathogenic bacteria were excluded and a satisfactory product secured.



Tube-Point Package of Glycerinized Vaccine Virus Mulford, a sterile point and hermetically sealed container combined.

The Mulford Tube-Point is the ideal container for glycerinized vaccine virus. It combines a hermetically sealed capillary chamber, which protects the vaccine from contamination, and a sterile scarifying point ready for use.

The Mulford tube-point container is unexcelled as a safe way of furnishing vaccine virus.

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(Pure Living Cultures of the Bulgarian Lactic Acid Bacillus)

For the treatment of intestinal putrefactive fermentation and toxemia and chronic intestinal disturbances of children and adults. Useful in local infections.

Three points are essential in prescribing:

1. The cultures must contain the true Bulgarian Bacillus.
2. The cultures must be free from other living bacteria.
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To secure these three essentials, specify **Bulgarian Bacillus Mulford**. It is prepared in a complete and modern biological laboratory, and is the true living **Bulgarian Bacillus**. Its production is safely guarded by the same precautions taken in the preparation of the Mulford Serums and Bacterins, and the purity of each lot is made certain by careful bacteriological tests before releasing from the laboratory.

Bulgarian Bacillus Mulford is supplied in packages containing 20 tubes (20 doses), each package stamped with an expiration date to insure active, living cultures. It must be kept in a cold place.

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Book Reviews

Physiological Chemistry.

By Albert P. Mathews, Ph.D., Professor of Physiological Chemistry, University of Chicago. New York, 1915. William Wood & Company, 51 Fifth Avenue. Cloth, illustrated, 1,040 pages. Price, \$4.25, net.

Especially designed for the student, this work covers theory in detail and laboratory estimations and tests *in extenso*. The prefatory statement of the author that the development of physiological chemistry is in its infancy and that the great discoveries are yet to come, prepares one throughout the book to find many questions suggested that stimulate interest and make of this chemical treatise one far from being a volume of purely academic appeal. Indeed, the physician, more especially in the elaborate chapters upon digestion, the blood, the nervous system, and the body excretions, will find much of distinct practical and clinical application. But it is in the sections upon practical work and methods, especially in urinalysis, that he will find great guidance.

The reason why is definitely stated throughout the work. For instance, this reviewer has long used Hay's test for bile salts in the urine, but never knew why it is effective, though not specifically so, in determining their presence; but this work explains it in the simple statement that "bile salts, like soaps, have the property of greatly lowering the surface tension of water."

And so it is throughout the text; everything is made rational.

Of more academic treatment are the opening chapters upon protoplasm; but this is necessary to an understanding of the elaborate discussion of carbohydrates, fats and oils, and the proteins. In the sections upon the physical chemistry of protoplasm and animal heat a logical basis is offered for much of modern therapy, and it is well worth the practitioner's time to read up in these things.

The volume carries an extended bibliography and a comprehensive index, making it very useful for reference by the practitioner; but, primarily, it will be most in use as a college textbook, for which it is admirably adapted.

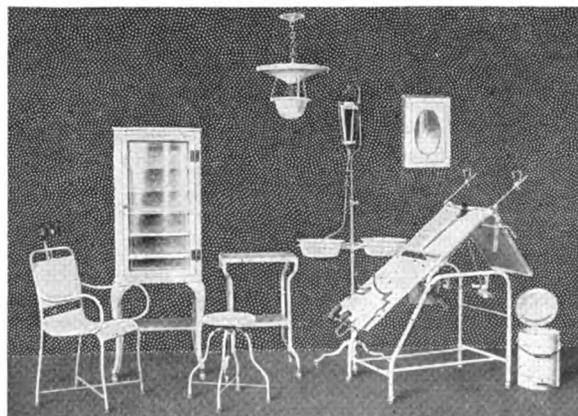
The Health-Care of the Growing Child.

By Louis Fischer, M.D., Attending Physician Babies' Ward of Sydenham Hospital, and to the Willard Parker and Riverside Hospitals. Cloth, 354 pages, illustrated. Funk & Wagnalls Company, New York City. Price, \$1.25 net; by mail, \$1.37.

A book for the intelligent mother. More detailed than most works of this character, the text is sufficiently explicit to enable emergencies to be met and to guide the reader in isolated sections; but especially comprehensive are the chapters upon hygiene and disease prevention. Without being marred by any fad-exploitation, this well-balanced volume is such as to be safe to recommend to the mother. It is one of the best of its class.

(Book Reviews continued one leaf over.)

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The Successful Doctor

does more than feel the pulse, take the temperature, glance at the tongue of his patient, write a prescription and hurry away.

He takes ample time to study each case from every angle. He is then in position to prescribe such remedies as his scientific training and professional experience suggest, together with the proper hygienic measures to be observed.

The successful Doctor also looks to the patient's dietary.

Many physicians who have had experience with

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save time and add to their success by prescribing this well-known, nourishing, cell-building food, which is ready to serve with cream, and is always the same in composition, essential nutritive percentages, and appetizing qualities.

Made of whole wheat and malted barley, Grape-Nuts supplies the most perfect cereal food yet offered the people. Its uniform excellence is due to unceasing care and loyalty to a high commercial as well as scientific standard, which have been characteristic of its manufacture for nearly a score of years—since the first package was placed on the market.

Physicians well know that the methods employed in making flour "white" lessen its nutritive value. Grape-Nuts represents the full quota of protein, carbohydrates and "vital" phosphates grown in the grain; hence its increasing popularity with the medical profession.

The *Clinical Record*, for Physician's bedside use, together with samples of Grape-Nuts, Instant Postum and Post Toasties for personal and clinical examination, will be sent on request to any Physician who has not yet received them.

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Book Reviews

Diseases of Infants and Children.

By Henry Dwight Chapin, A.M., M.D., Professor of Diseases of Children, New York Post-Graduate Medical School and Hospital; Staff Member to several hospitals; and Godfrey Roger Pisek, M.D., Sc.D., Professor of Diseases of Children to the New York Post-Graduate Medical School and Hospital and to the University of Vermont Medical College; Pediatricist to several hospitals. Third revised edition, with 179 cuts and 12 colored plates. Cloth, 578 pages. New York, 1915. William Wood & Company, 51 Fifth Avenue. Price, \$3.75 net.

A quite complete revision of the former edition and the incorporation of the newest data upon infant feeding, brings this thorough-going book to the fore as fully representative of the best thought in pediatrics.

The work is distinctly practical and is addressed to the practitioner rather than to the under-graduate student. Laboratory methods are dwelt upon more fully than is common in works upon this subject, but there is no neglect of physical diagnosis; thus the work is balanced. The chapter upon general therapeutics and its incorporated table of doses is admirable and illustrates the modern tendency towards therapeutic technic and away from empiricism. A scheme for diagnosis is presented, and it should work out well in the practice of the man not hurried in his work. This is a modern book in

every sense of the term and shows careful preparation.

Ellingwood's Materia Medica.

Dr. Finley Ellingwood, a well-known Eclectic writer, of Chicago, has completed a new edition of Ellingwood's New America Materia Medica, Therapeutics and Pharmacognosy. A distinctly practical work, the data being derived from writings of all reputable schools of medicine, this edition eliminates the outworn and presents much of interest to all physicians, and more especially to the Eclectics. The price is \$5.00. Address Ellingwood's Therapist, 32 N. State Street, Chicago.

The Journal of Laboratory and Clinical Medicine.

A new monthly medical journal has appeared and is devoted to the laboratory in its relation of medicine and surgery. Dr. Victor C. Vaughan, Ann Arbor, Mich., is the Editor-in-chief, and is assisted by a corps of distinguished specialists from over the United States. Judged by the first number, this journal will present much of immense value to the careful clinician, as the articles are as practical and usable as the nature of the field exploited will permit.

This new journal is printed by the C. V. Mosby Company, St. Louis, and is sent at a subscription price of \$3.00 per annum.

We welcome into the journalistic field this new venture, and express the hope that it will succeed in interesting a great number of readers.

(Helpful Points continued one leaf over.)

Jan. 1, 1916

Doctor:

We extend the season's greetings and once more call your attention to the efficacy of **VENARSEN** in the treatment of **Syphilis**.

The war in Europe has at least brought us *this* reliable and superior American product.

We specialize in the manufacture of Sterile Solutions in Ampoules for **Intravenous**, Hypodermic and Intramuscular administration.

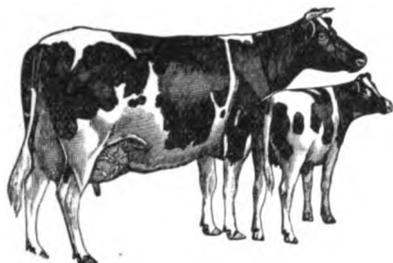
Have you read our 64-page book on "Direct Medication"? It will be sent **free** on request.

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Holstein Cows' Milk in Tuberculosis Cases

A prominent physician of Howell, Mich., says—
“There is one class of cases for which I consider
Holstein milk especially adapted, and that is
tuberculosis cases. These patients have weak
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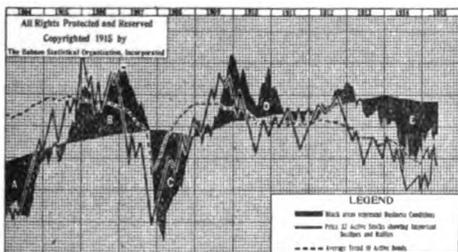
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Philadelphia, Pa.

No. 2

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Medical Council

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THOS. S. BLAIR, M.D. }
EDITOR

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The Place of Caesarean Section.

OBSTETRIC SURGERY has recently made great advances, some surgeons going so far as to assert that all obstetrics should be in surgical hands; but this will not be. But even as some cases of gastroenteric disease need major operations, so do some cases of obstetrics; and it is incumbent upon the general practitioner obstetrician to inform himself upon the obstetric indications for surgery, so that he may, by early and correct diagnosis, save many women in desperate situations.

Cæsarean section, once a desperate operation for otherwise hopeless cases, is now relatively safe by reason of advances in technic. So safe is it that some men of surgical bent overdo the matter, even performing Cæsarean section in preference to delivering the placenta by manual means. Placental delivery by Cæsarean section impresses us as an ultra-surgical proposition verging on the ridiculous.

It is very natural that the conservative and experienced general practitioner obstetrician should hesitate over a Cæsarean section: we have done so ourself. Knowing the stress of this operation as it was, we have done difficult podalic version, and even craniotomy, in quite a number of cases in preference to submitting the woman to the knife. But conditions have changed, and now, if a good surgeon is available, craniotomy is rarely justified, and should rarely be done. Looking back over a long obstetrical practice, we fairly shudder over some of the craniotomies we have done, even if the women did finally recover, as they all did.

Right here it is proper to say that manual dexterity in the involved processes of difficult delivery were developed by such men as Smellie, Simpson and Tarnier, to a point unknown by the surgeon obstetrician of this day, who does not learn it because he does not have to do it so: and it is far from probable that the mechanism of involved labor will ever be again as well understood as it formerly was. And such men as these taught much which should not be forgotten. Also we should not forget that Cæsarean section should not be the operation of choice simply be-

cause it is the easiest for the operator. The old manual methods are worthy the skill of the most accomplished surgeon, and they require just as high attainment—yes, even greater attainment—than does an abdominal section.

Indications.

Pelvic contraction is the one generally recognized indication for Cæsarean section. It is wise to deliver a living child if possible by section and impossible by other means. Do not judge too closely by external measurements whether section is necessary. An internal measurement with an index below eight centimeters seems to be one suggesting the advisability of section, though even here a high forceps operation should be considered. With a primipara it is well to be conservative, since we have had no previous experience as to what Nature can do in her case.

If there is reason to believe that a living child may not be the reward of a section, then there must be resort to other means, considered most carefully, before subjecting the woman to a section. Certainly, if podalic version will deliver, it is, in experienced hands, preferable to a section. Be assured of your estimate of exact conditions before resorting to a section; but if it must be, don't let the case hang on, but do a Cæsarean section before the woman's strength has ebbed away.

When to Wait.

In a primipara the case often seems hopeless until after the membranes have ruptured, when one is surprised by the head promptly engaging. It is well to wait in these cases; only *don't pass a finger within the membranes or the os after rupture*. If one has avoided this possible entrance of infection, and the head fails to engage, then a section may proceed the same as if the membranes were not ruptured. It must ever be borne in mind that infection after a Cæsarean section very probably is the result of vaginal examinations either before rupture of the membranes or after this event, although the greater danger is after rupture; so, after rupture, it is better to judge of descent of the head by external

palpation rather than by any sort of vaginal examination.

Another factor causing one to hesitate or wait is a rapid pulse, exhaustion not from pains, or even very slight fever. These things suggest antepartum infection; when, if a section is done, the woman stands a good chance of death. It is a terrible thing to find evidences of infection a few hours after an ill-advised section.

Yet another instance in which we should wait is when a mal-position of the on-coming head makes it necessary to give Nature time to adjust matters, or the ordinary obstetrical manipulations may adjust it.

Birth-Canal Tumors.

We have spent some very worried hours over such cases, and usually the obstetrician knows nothing of the condition until after labor is due or even begun. He is then up against a hard situation. We don't feel surgically competent to lay down a line of procedure here: circumstances alter the case too much. But this we do know: If we encounter any more such cases, and the consulting surgeon wants to do a section, he may go right a head without a word of protest from us, and it makes little difference what kind of tumor or cyst it is. It seems to be our destiny for women in this condition to engage us to attend after labor has already begun.

Eclampsia.

But we certainly would strenuously object if a consulting surgeon were to suggest section in the case of a woman with a normal pelvis but having eclampsia. Of course labor must be promptly terminated in eclampsia; but the fact that a woman has a toxemia does not justify a surgical operation when it is not otherwise indicated.

And placenta praevia, of itself, is not a legitimate indication for Cæsarean section; but, when a placenta praevia exists in conjunction with one of several factors which may handicap the treatment of the placenta praevia, such as marked cervical rigidity, what are we to do? We had a patient bleed so that she remained blind for three days when we delivered a placenta-praevia case with a rigid os. Next time such a case is met, we don't know what we will do; but if it is possible to operate *immediately*, we *do* know. Theoretical objection to section will have to stand aside.

Foolish Operating.

Some surgeons with little obstetrical experience are obsessed with the idea that Cæsarean section is *the* resource whenever an obstetrical case in their incompetent obstetrical hands strikes a snag. They are foolish, as well as incompetent. A surgical training does not give one obstetrical judgment. We say this advisedly, and from see-

ing competent surgeons go into a blue funk over a slight obstetrical complication. Many obstetricians need to brush up on surgery; but just as many surgeons need to take a brace on obstetrics and get wise to the fact that many country doctors can show them a hundred things about obstetrics of which they never dreamed.

Some Cases.

Holmes, of Chicago, who takes most sensible views, narrates, in *Surgery, Gynecology and Obstetrics*, November, 1915, two cases, as follows:

"Within the last few days, a physician, in all seriousness, stated he was about to do a Cæsarean (and he did it a day or two later) on a woman, seven months pregnant, with a pyelitis, his defense being that the vulva was contaminated by the colon bacilli which were the etiologic factors of the kidney disease, she having a badly torn perineum. The baby died promptly. Not so long ago a surgeon did a section on a woman who had been in labor from Monday to Friday evening. As the head was deeply in the pelvis he perforce did a symphysiotomy to withdraw it. The most miraculous thing of all, the mother and baby survived."

The Surgical Scar.

Once a Cæsarean always a Cæsarean is what the woman has to face, and this for various reasons, chief among which is that the Cæsarean scar ruptures so often in a subsequent labor that it is not safe to allow labor to go on, and another section must be done. Don't forget this little fact when estimating a case; and when called to a multipara with the marks of an abdominal incision, make careful inquiry about the conduct of the previous labor.

Nevertheless, the technic of Cæsarean section is now so safe that physicians may properly recommend the operation more frequently than they formerly did. But permit this closing advice: In a bad case of contracted pelvis, a case with a tumor in the birth canal, or a nasty case of placenta praevia, call a surgeon in consultation. And to the surgical specialist who is called to an occasional obstetrical case we wish to say: Call an experienced obstetrician in consultation before doing a section.

Potassium Chlorate in Throat Diseases.

Clinical experience of some years ago was not at fault in ascribing activity to potassium chlorate in septic throat diseases. Part of the ingested chlorate is excreted in the saliva, thus supplying an antiseptic for hours. Then, too, the presence of septic matter reduces the chlorate, liberating nascent oxygen.

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Carrel vs. Wright

In the Great Antiseptic Case.

Sir Almroth Wright, rather early in the European war, laid emphasis upon the action of serum in clearing a wound of infecting organisms, claiming that such dressing as promoted a free outflow of serum from a wound received in battle usually did quite as much good as the usual antiseptic applications. Probably he was correct in the matter so far as the *usual* antiseptics is concerned. But he has not been content to let the matter rest there, and has cast doubt upon antiseptics generally, presenting an indictment that caused consternation among American surgeons, who probably took him more seriously than he intended should be done. Americans can't understand the English kick any better than the English understand the American joke.

And now comes Dr. Carrel, fondly claimed by us as American, but really quite a true Cosmopolitan, who says it is as easy to cleanse a wound with a gauze swab as it is to cleanse a greasy bottle in the same way, which is quite graphic, and emphasizes his belief that chemical rather than physical means are needed in combating infection in wounds. And now we breathe easier.

Carrel, Dakin and Fraser, realizing that there is something wrong with antiseptics in war surgery, worked out a new hypochlorite solution somewhat along the lines of procedure in water-purification plants. Omitting complexities, it is made as follows:

Crystallized washing soda, 400 grams, is dissolved in 10 litres of tap water; chlorinated lime, 200 grams, is added, and the mixture shaken; after half an hour siphon off the clear solution, rejecting the sediment of calcium carbonate; filter through a plug of cotton and add 40 grams of boric acid, and the solution is ready for use and will keep for about a week, precipitating slightly.

Abortive Disinfection.

Carrel's idea is to abort infection by getting all of the germs while there are as yet but few of them, for they proliferate with wonderful rapidity, soon contaminating all parts of the wound and the surrounding tissues. He says that during the first few hours it is easy to sterilize a wound.

He cites the analogy of appendicitis, in which it is well known that operation within twelve hours is the ideal of surgery. In the ordinary wound he claims that the liquid described above can be used freely and be allowed to permeate all parts and then remain there for a length of time sufficient to sterilize the parts. But it is necessary that this be done early, not awaiting bacillary proliferation, which will make sterilization difficult.

Antiseptics are warmly upheld by Carrel, but they should be used more intelligently than they have been in the past. After iodine disinfection of the skin, the solution of hypochlorite is used freely and repeatedly, being only slightly irritating in comparison with other effective antiseptics.

The Technic.

Open up the wound well and remove all foreign bodies carefully without mopping, brushing or curetting; arrest all hemorrhage; then use the hypochlorite solution freely, which may be applied several times daily for weeks on gauze dressings wetted with it or in irrigations. Its antiseptic action is great but of short duration, so the solution must be renewed frequently. Even continuous irrigation through rubber drainage may be maintained.

Carrel contends that infected wounds can be made sterile in from three to five days, and then be treated as sterile wounds usually are; but every part of the wound must be reached by the solution.

While Wright and Carrel differ appreciably in their attitude regarding antiseptics, there may be truth in both of their contentions; but it must be said that Carrel's method is of most practical significance in private surgical practice.

Considerable difference of opinion has arisen regarding the hypochlorite solution; but it is easy for hundreds of surgeons to try it out and report. Just a few suggestions in making it up: If the *dry* sodium carbonate is used in place of the crystallized salt (washing soda), use only 140 grams. Use good quality chlorinated lime from a freshly opened package. Do not add the boric acid until after filtering the siphoned-off liquid. Do not keep the solution over one week. The water used need not be sterile or distilled. It is best to keep the solution well corked.

Inorganic Salts in Infancy.

During the first year of life large quantities of inorganic salts are needed, and especially potassium, sodium and calcium. But the relative proportions should be as near to that of human milk as is possible. In grams per litre human milk contains of Na_2O , 0.35; of K_2O , 0.88; and of CaO , 0.37. Cow's milk is relatively stronger in the last two ingredients. But the infant's kidneys are not capable of excreting much excess of these salts. Especially is much common salt a tax upon them.

Announcements for March Issue

The recent epidemic has prompted the preparation of a leading editorial upon "Vaccine Treatment of Colds and Influenza," in which the English point of view will be reflected.

Dr. William H. Deaderick has contributed an able paper upon "Functional Tests of the Kidneys," showing just how to apply the reliable ones and emphasizing the diagnostic value of these tests.

"Furuncles" will be ably discussed by Dr. J. Leverett, who gives many practical points on treatment.

"New Methods of Antisepsis," by Dr. L. K. Hirshberg, will present studies evolved from reports received from the European war. The profession will have to study antiseptics and antisepsis over again, for the war is teaching some sharp lessons.

"The Rational Handling of Narcotic Addictions" will be presented by Dr. Ernest S. Bishop, who is one of the leading exponents of the view that a drug addict has a disease, not a mere habit. The paper is a forceful one.

"The Rational Treatment of Traumatic Corneal Ulcers," by Dr. M. R. Dinkelspiel, is a paper every general practitioner should read, as it is most practical and based upon a large experience.

"Diagnosis in Every-Day Cases," by Dr. B. W. Stearns, will interest you, since the data and conclusions are based upon the work of the doctor in the small town.

"Hemophilia and Its Treatment" is a practical paper by Dr. Douglass Hayes. Its point especially consists in calling attention to the newer therapy of this distressing condition.

THE NEWER DRUGS

March will carry the Quarterly Supplement upon the newer drugs. Some very helpful material is on hand, Dr. Douglass H. Stewart opening the Supplement with a paper upon "Scars and Their Newer Treatment."

These Supplements merit your careful study, as they are pro-you, not pro-manufacturer; and they tell the truth.

THE BUSINESS SIDE

Will carry a paper upon "Our Armamentarium From a Business Viewpoint" and other matters of profit and interest.

CONSTRUCTIVE REFORM

began in January a series upon the constructive work of the pharmacologist. March will continue this with a paper entitled "Cod-Liver Oil as a Food and Drug." This paper will "say things" you ought to read.

Objection is sometimes made to the so-called "Practical Journal" and its lack of discrimination. Our motto is SCIENTIFIC BUT PRACTICAL.

While aiming to be practical and helpful, this journal rigidly edits its every page, so as to maintain scientific exactitude as well as a practical atmosphere. Look over this issue, or the coming one announced above, and see if this is not true.

MEDICAL COUNCIL is a journal of dependable scientific accuracy; but far more than that it is a journal of real practical help in your every-day problems.

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Therapeutic Notes.

Look out for syphilis in localized stiffness of the spine.

It takes large and repeated doses of chologogues to effect the drunken man.

In Dallas, Texas, the generous diet treatment of pellagra, and without any medication, was tried with excellent results.

Frauenthal recommends in treating gout the application of galvanism with the sponge electrodes saturated with fluidextract colchicum, reversing current frequently.

Hatcher and Eggleston believe that infusion of digitalis represents the leaf practically in its entirety, but it is so often poorly made or deteriorated that the tincture is generally to be preferred.

Since the Wassermann reaction is available to check results, the one-time very popular treatment of syphilis by injection of mercury salicylate does not show any advantage over mercury as ordinarily used by simpler methods.

Both lime-water and sodium bicarbonate internally, and alkaline washes externally, have been recommended in the treatment of X-ray dermatitis. When the lesion is not too chronic or advanced, especially when the cellular disintegration produces an acidosis, alkalies are of some value.

Lycopus Virginica is asserted to slow the heart. We have been trying it out, giving it alone and in selected cases. In the doses recommended we procured absolutely no response from fluidextracts or the Eclectic preparations. In quite large doses, from one to two drachms of the fluidextract, it did slow the heart, and it was also somewhat narcotic, which latter action probably accounts for its effect upon the pulse-rate.

Owing to chemical disintegration, or the urine being kept alkaline by various bacilli, few of the urinary antiseptics are effective, even hexamethylenamina failing in a large proportion of cases. The relative efficiency of methylene blue renders it probable that the ultimate urinary antiseptic will be one of the anilin dyes. Hexa-ethyl violet in strength of 1 : 20,000 is asserted to be effective but not yet worked out.

Will You

kindly bear in mind that YOU may have just as valuable clinical points to record as has any physician contributing to these pages? Doctor, let us have them for publication. Reports from the field are especially desirable; just so they are reasonable, rational and workable.

The following papers are contributed exclusively to this journal. Republication is permitted if credited as follows: **MEDICAL COUNCIL, Philadelphia.**

ORIGINAL ARTICLES

Sentences, like sunbeams, burn deepest when most condensed.

We are not responsible for the views expressed by contributors: but every effort is made to eliminate errors by careful editing, thus helping the reader.

Acute Pancreatitis.

By HARVEY F. SMITH, M.D.,
Surgical Staff, Harrisburg Hospital,
HARRISBURG, PA.

There is no doubt that the pancreas is more frequently diseased than is generally recognized. It is also certain that we do not have accurate knowledge of the causes of the various types of acute and chronic inflammation of the pancreas. It does seem to be proved, however, that all the acute inflammations and most of the chronic ones are the result of infection. Just how this infection occurs is not easy to determine.

When one considers the anatomical location of the pancreas, which makes both physical and surgical examination difficult; its double function of supplying external secretions essential to intestinal digestion, and internal secretions which seem to control sugar metabolism, and the fact that pancreatic disease does not usually exist alone, it is easy to understand why a positive diagnosis is so difficult. Some of these difficulties in the way of accurate diagnosis are gradually being dispelled by pathological information acquired in the operating room and the checking up of this information with the pre-existing clinical picture.

The Relations of the Pancreas.

It will greatly assist in diagnosis if a clear mental picture is present of the relations existing between the pancreas and the stomach, duodenum, transverse colon, gall-bladder and its ducts, and the general peritoneal cavity. It is not my purpose to discuss this relation. Neither is it my purpose to discuss either the pathology or the various theories of methods of infection. Much experimental work has been done along the line of injecting the digestive ferments, separately and combined, and bacteria and various chemical agents, into the pancreatic duct; but the results of this work have been neither uniform nor definite. Whether or not pancreatitis is caused by an infection whose origin is in the gall-bladder, the duodenum, the appendix, or by some constitutional disease, like typhoid fever, mumps, or syphilis; whether or not the pancreas is invaded by way of the common and pancreatic ducts or by way of the lymphatics, as taught by Deaver, or by the way of the circulation, as would seem

probable if the cause is a diseased appendix or a constitutional toxemia; whether or not pancreatitis is the result of duct obstruction plus infection from one of the various sources named—and this seems to explain the etiology of many cases; one fact is positive: there is a frequent association between diseases of the gall-bladder and diseases of the pancreas.

Clinical Findings.

The Mayo clinic reports that 86 per cent. of all cases of pancreatic disease seen at operation had gall stones. This same clinic reports that about 7 per cent. of all gall-bladder and 27 per cent. of common-duct cases have some form of pancreatitis. Deaver's observations show a considerably higher percentage. Statistics and personal observations may differ, but there is no doubt that a positive relation exists between gall-bladder infections and acute and chronic inflammatory diseases of the pancreas. It is this involvement of other organs that produces a composite clinical picture without a regular definite association or sequence of symptoms. Thus, we may have the diagnosis made difficult by co-existing lesions in the liver—an ulcer in the stomach or duodenum—or digestive disturbances secondary to a gastro-intestinal or blood toxemia.

Outstanding Symptoms.

On the other hand, the pancreas may be the seat of the primary lesion, yet the outstanding symptoms may come from the organ secondarily involved. Thus, a chronic pancreatitis may develop without symptoms to such an extent that pressure on the duodenum will cause a partial intestinal obstruction, this being the first evidence of any trouble. Cancer of the head of the pancreas may have jaundice and a palpable gall-bladder the most prominent symptoms. Two cases of above types came under my observation during the past year. The pathological process in the pancreas can be and often is slow. The stomach, intestinal and liver secretions partly digest the proteins, starches and fats, so that the influence of an impaired pancreatic secretion may not perceptibly influence body metabolism. This fact impairs the value of laboratory examinations of urine and stools as a positive diagnostic aid.

Diagnosis.

Except in the hands of some few experts, a fair estimate of the present status of pancreatic diagnosis is as follows: A few cases are diagnosed with certainty, the diagnosis is suggested in others, guessed at in some and missed entirely in the majority of cases. Except for the very acute type of cases there is no definite picture to outline. A familiarity with the various physical signs and symptoms of upper abdominal lesions, and a persistent effort to train oneself in the correct interpretation of epigastric pain and tenderness in all its various phases and relations, to learn the meaning of chronic indigestion, nausea and vomiting and emaciation, and to know pressure symptoms and other physical characteristics of the epigastric tumor—these will assist in reaching a diagnosis by exclusion.

Probably one-third of pancreatic diseases are of the acute or sub-acute variety. The clinical picture varies in intensity, according to the grade of infection and certain predisposing individual causes. The very acute type ends fatally with great rapidity. The pain is sudden, violent, agonizing, more or less persistent, and located in the epigastrium; vomiting immediately follows, is recurrent and can not be controlled. The vomited material may contain blood; at no time is it fecal. Shock and collapse with associated depressed circulation and cyanosis of an exceedingly grave character is present from the beginning and continues to the end. There is positive persistent epigastric tenderness and there is some rigidity limited to the upper abdomen. Some epigastric distention occurs within the first twelve to twenty-four hours, which develops rapidly and becomes general in the second twenty-four hours. This tympanitic distention with partial inhibition of peristalsis sometimes leads to the diagnosis of acute intestinal obstruction. The pulse and temperature is that of grave shock. The patient looks extremely ill, shows evidences of a profound toxemia. There is at this time no palpable tumor-mass, and gangrene and necrosis are terminal stages. Death occurs within two to five days. Early drainage of the pancreas has saved a few of this type, but it is always a grave question to decide, whether or not the patient is any kind of a surgical risk.

An Illustrative Case.

One of the cases of this type to come under my observation occurred two years after cholecystectomy for gall stones. At the time of the gall-bladder operation, about seven years ago, the pancreas was hard, nodular and moderately enlarged at the head; there was some involvement of the lymphatic glands along the common duct, which was otherwise apparently patulous and normal. For two years this patient was free

from pain and digestive disturbances and retained her weight of 210 pounds. Some time during the third year after her operation she again came under observation in a ward of the Harrisburg Hospital. She was then beginning her fourth day of a very acute type of pancreatitis, and died three hours after admission. Autopsy verified the diagnosis, which our previous surgical acquaintance made rather easy. This case shows that removal of the offending infected gall-bladder does not eliminate the possibility of acute pancreatitis. It does seem as though an acute hemorrhage or inflammation when it occurs is frequently grafted onto a chronic pancreatitis.

The Sub-Acute Type.

The clinical picture of the sub-acute type is not so wicked and fulminating. It is serious enough and differs in degree and intensity of infection rather than of kind. All the symptoms of the acute type are present, but in variously modified degrees. The pain is acute and severe but not so prostrating. Vomiting is not persistent and shock and collapse are only moderate. The early epigastric distention and tenderness is present, followed within the first week, in many cases, by a firm, tender, painful swelling. This epigastric tumor, which consists of blood and pancreatic secretion in the lesser peritoneal cavity, is fairly sharp in outline, is more or less fixed and transmits a non-expansile impulse. The air inflation of the stomach will differentiate it from a tumor of the liver. As a good many of the patients are fat, and the belly wall is somewhat rigid, the diagnosis is usually difficult. Temporary improvement after the acute attack may cover a period of several weeks or months, and in some cases spontaneous cures occur. Persisting epigastric tenderness with temperature, leucocytosis and marked loss of flesh and strength would signify an abscess. The diagnosis is more often made at this stage; the abscess is drained and recovery follows in about fifty per cent. of cases.

In making a diagnosis the possibility of acute perforation of a gastric or duodenal ulcer must be remembered. A careful history of previous digestive disturbances will be helpful here. In ruptured ulcer the evidences of shock and collapse will begin to clear in several hours after the first acute pain, and are followed by evidences of a general abdominal rigidity of a positive and boardlike character, which in twelve hours is associated with the picture of a general peritonitis.

Treatment.

In the final analysis, prompt abdominal surgery is the treatment in every case, so it is a mistake to delay simply for the sake of an accurate diagnosis.

The Mechanical Aids in Uterine Displacements

Or Pelvic Mechano-Therapy

By FRANCES A. HARPER, M.D.,
PITTSBURG, KAN.

At the Clinical Congress of Surgeons of North America last year, Dr. John B. Murphy, of Chicago, said that the accomplishments of internal medicine during the next quarter of a century would be enormously greater than those of surgery, and that if he were to start over again in the study of medicine he would unhesitatingly take up internal medicine in preference to surgery.

The great gynecologist, W. A. Freund, of Strassburg, Germany, who made the first abdominal hysterectomy for cancer in 1878, arraigns most mercilessly unnecessary surgery by proclaiming in his autobiography: "Every organ removed by operation is a weighty proof of the inefficiency of our art." This leads up to the introduction of my subject, "*Pelvic Mechano-Therapy.*"

For the sake of argument, let us exclude from the work of the practitioner of medicine the feminine portion of humanity; how much is there left to him? And yet, there is no class of cases oftener brought to the attention of the physician, none which so taxes his ingenuity to treat successfully, none which he treats more lightly and dislikes more heartily, none which requires more thorough examination and close observation in arriving at a correct diagnosis, and careful thought and keen judgment in selecting a line of corrective treatment, none in which so many "snap-shot" diagnoses are made, nor in which so much "guessing" is done, and so little really intelligent treatment is given, than the various pelvic disorders of women.

Obviously the normal state of any organ or system of organs is that in which they are enabled to perform their peculiar functions with the least possible friction or disturbance, either to themselves or adjacent structures; any marked deviation from this normal condition, from whatever cause, obstructs the circulation, produces undue congestion, thus interfering with proper function.

Exciting Causes of Uterine Deviations.

In considering the exciting causes (which are legion) of the deviations of the pelvic organs, we might say that any condition which increases the specific gravity of the uterus causes relaxation of its ligaments; disturbs, and may destroy its equilibrium; or the primary cause may have been a fall or other traumatism. From such disturbances of the circulation the uterus and

adnexa thus displaced are often congested and edematous, with resulting tissue changes. The ovaries—those long-suffering little organs, often most blamed and abused when properly functioning and at their best—the ovaries, displaced by distortions and displacements of the uterus, become swollen and hyperemic through venous stasis. Intense hyperemia occurs from torsion of the ovarian pedicle, and in the adult more or less hypertrophy results from increased nourishment to the ovarian tissue induced by these disturbances of the circulation, and various inflammatory processes. Chronic oöphoritis occurs as an interstitial and parenchymatous hypertrophy and hyperplasia of the ovary, mostly resulting from long-standing and frequently recurring venous stasis. Given such a case for examination, diagnosis and treatment, what, as a rule, would be the treatment advised? An eminent surgeon has remarked: "*My office boy can remove ovaries, but it takes a smart man to institute such measures as will make that procedure unnecessary.*"

The Object of Treatment.

As the primary object of all medication and treatment should be to remove all obstructions to Nature's workings, so our first and paramount thought should be to correct the existing deformity or displacement, overcome venous stasis, until by improved circulation and free drainage Nature gradually but surely overcomes the various abnormalities; thus *ease*, instead of *dis-ease* results.

I here desire to make a strong plea for the conservation of womanhood; for the intelligent application of all those measures which will aid Nature in a return to normal, be they surgical or non-surgical means. The proper application of pelvic massage or manipulation to overcome deformities and displacements is essential; the use of supportive and corrective aids, such as properly applied tampons and pessaries, to assist in holding the parts in proper position, just as we are obliged to apply bandages and splints *after replacement* of dislocated or fractured bones until by relieved stasis improved circulation and reconstructive changes abnormalities are overcome; vibratory massage, electricity, special postural and deep breathing exercises, prolonged and frequent vaginal douches, and various other hygienic measures (all improving the general circulation, relieving local hyperemia and inducing free drainage, and *applied to suit individual needs and conditions*) will reduce pelvic surgery

to a minimum, and make uncalled for many mutilating operations which have become so common. The unintelligent and haphazard use—abuse—of such measures is often worse than no treatment at all, and may result in absolute harm; if nothing worse results, symptoms may be masked for a time, producing only a tolerance of conditions, which simply puts off the inevitable day of reckoning.

How to Treat the Case.

Let us not deceive ourselves, nor our patients. Absolutely, there is but one way in which to treat intelligently and scientifically, and that is by first diagnosing properly; and we can never diagnose correctly unless we examine thoroughly and observe closely every case brought to our attention and care.

Whenever approached by those who consider an examination unnecessary, who "only want something for nervousness," I always tell them that "I am a miserably poor *guesser*." With conditions properly recognized, and abnormalities rectified, the "nervousness" usually subsides. Will we never cease to simply treat symptoms instead of the disease itself?

What per cent. of practitioners, with their "guessing" at cases, and their hasty and superficial examinations, really obtain any intelligent idea of existing conditions? Such being true, is it any wonder that their treatment fails to do anything more than discourage the patient, and prove (?) that *operative measures are the only means of relief*? One of our conservative surgeons said recently: "*I wish the doctors would bring to me only really operative cases.*"

Before crying down either surgical or non-surgical measures in these many and varied pelvic cases, let us be very sure that conditions are properly recognized and verified by examination; and in treating, let us be exceedingly careful to make use of only those measures which will tend to overcome abnormalities rather than aggravate or induce them.

Illustrative Cases.

About the middle of last January a party of five entered my office, coming from an adjoining State; a young man, bringing his wife, and accompanied by his two sisters and the mother of his wife. All seemed very solicitous about the young woman, who appeared to be suffering considerably; and taking my office girl aside they inquired very confidentially, *if I could cure appendicitis without an operation*. She answered evasively, and said that I would be able to see them soon. The history I obtained was briefly as follows: Young woman, 20 years of age; married about four months; irregular and painful menstrual periods from young girlhood, having complained, at times, for years of a "pulling pain" in right side, which had been pronounced

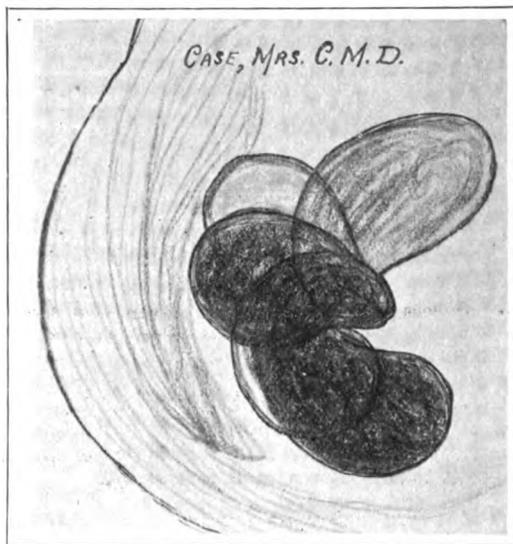
"*chronic appendicitis.*" This information from the mother. Present trouble dated back about three months, when she was treated by local physician for "kidney trouble," "appendicitis," etc. Getting no better, two other physicians were consulted at different times, who examined and treated the case variously. Conditions grew progressively worse, however, and an operation was insisted upon as the only relief. They put her onto the train and brought her to Pittsburg. Palpation elicited considerable abdominal tenderness and gaseous distention; vaginal examination revealed a markedly enlarged and congested, anteverted and flexed uterus, drawn to left side (left-side contracture), and making painful tension from right side attachments. I explained the situation to the husband as I examined, and told him that his wife was probably two or three months pregnant. Reposition of the uterus by manipulation, and a soft medicated packing of lamb's wool, relieved the tension, and after resting for a time she was taken home, to return in a few days. Four to six treatments, given as indicated, straightened up this case and a good elastic abdominal supporter held the rapidly developing uterus well up, and I heard no more from her, excepting an occasional request by mail for some light laxative, until about two months ago a card announced the arrival of an 8-pound girl.

Another case from a near-by town. Aborted at about two months nearly a year ago, since which time she had been "doctored" almost continually, with little relief. Without any pelvic examination having been made, operation was suggested, but refused. Physician finally examined, verifying necessity for an operation, and diagnosing retrodisplacement, with uterus immovable and adherent. Again operation was insisted upon, but patient still demurred. He then told her he would try a few treatments, but did not believe any one could do her any permanent good without an operation. *He then proceeded to prove to her that treatment was of no avail*, and it did not take long. The next day after he had given her the third treatment she got onto the car and came to me for examination and advice, with last "*tamponade*" still placed where it could do the least good. (*This is why MOST TAMPONADE IS A FAILURE.*) Uterus large, hard and retrodisplaced and flexed, with a hard mass of cotton crammed back against it, "*to hold it there,*" presumably. A somewhat superfluous precaution, however, as it had shown no marked disposition to rise from its displaced position of its own accord. After removing the wad of cotton, patient was placed in the knee-chest position, and by careful but firm manipulation the uterus was carried well forward; a corrective and supportive packing was placed, allowing Nature to again take up the tangled threads. As I was going on a ten-days' vacation in a few days, at her next call I placed a spiral spring soft rubber pessary to act as a crutch, and permit of frequent and copious douches being taken. She was back again on the first day of my re-

turn, feeling much better but needed some attention. Treatment was resumed, twice a week. At this writing she has had seven treatments, and is now coming in at intervals of a week or ten days, and will soon be out from under treatment, excepting for a little supervision, to keep her "on the mend." At her second treatment this patient brought in her sister-in-law, another operative case: She, in turn, brought in her sister-in-law, still another operative case. The first two were retroversio-flexions, the third an anteversio-flexion, probably two months pregnant. All have responded well to treatment, being well under way toward recovery.

Mrs. C. M. D., a slender girl-woman, age 22; married four years. Marked dysmenorrhea from time of puberty. Persistent backache, constipation and greatly exaggerated symptoms for some time before case came under my observation, dysmenorrhea having become intolerable. Examination revealed, about an inch above anus, a large, hard, pulsating mass or "tumor," which proved *not* to be a fecal impaction, but an unduly enlarged and retroflexed fundus, immovable and "adherent" within the sacral curve, and exceedingly sensitive to touch. A possible pregnancy was considered, but no periods having been missed this was tentatively excluded until other symptoms might develop. Examination with speculum revealed a rather normal looking cervix, although markedly congested, but perfectly free from erosion or other irritation. My diagnosis was a *developmental defect*, the organ probably having developed in malposition, in consequence of which the undeveloped posterior ligaments or attachments held it fixed within the sacral curve, simulating "adhesions," with the possibility of a complicating pregnancy. In any case, the first indication was to place the uterus, if possible, in the anatomical position, which, with existing conditions was practically impossible at the time. However, by placing patient in the knee-chest position, and using rather gentle but firm manipulation, the weight was raised somewhat, and a soft medicated packing placed, relieving the situation slightly; after which the introduction of a spiral spring soft rubber supporter or pessary served as a firmer support or "crutch," which made some slight pressure or traction against the posterior ligaments—just enough to put them on the stretch. At each succeeding treatment the same maneuvers were repeated, fundus gradually softening and being carried higher each time, the soft supporter holding the position gained, as the flexure gradually became less and less. Menstruation came on in a week or ten days, with considerably ameliorated symptoms, and bowels were acting easily and well. At its cessation treatments were resumed, occasionally leaving out packing and using the supporter only, in order to permit of the use of the copious and prolonged douches between treatments, which aided materially in relaxing and softening up the parts. The next menstrual period came on more copiously than usual and with shorter paroxysms of pain. From April 14, 1915, up to the 2d of June this

patient had been given thirteen treatments; fundus was well up, flexion disappeared, but still enlarged and very globular in shape, simulating some sort of growth, physiological or pathological. Cervix was softened, puffy and congested looking, but no erosion or other indication of irritation. Leaving the soft supporter in place, with instructions as to care, etc., I left her in charge of a brother practitioner, and went away for a month's vacation. During this time patient menstruated very profusely, suffered intense cramping, and failing to locate Dr. B., in whose care she had been left, another physician was called in, who pronounced it a probable abortion, although noth-



ing definite could be determined. From the condition of the uterus an operation was advised—*complete hysterectomy*. Another physician was consulted; a "shortening-of-the-round-ligament" operation was advised, the consensus of opinion being that any other treatment than operation was an utter waste of time and especially of money.

Some time after my return patient 'phoned me that she was feeling pretty well, but that she had decided not to take any more treatments just then, but would come in later. On August 27 she returned for an examination and treatment, informing me that she had been getting along very well, and that the last period had been practically painless and otherwise normal. She had gained flesh and was looking well. Her husband having secured a business location in Oklahoma, she expected to go down to him in a few days. Examination at this time revealed the uterus still considerably enlarged, retroverted but not flexed; all the tissues had softened perceptibly and tension relieved; healthy looking cervix, but the yet undeveloped posterior ligaments still held the organ back. Treatment carried the uterus fairly well over, and supporter was again placed in position, to be worn indefinitely, patient removing it occasionally to admit of a more thor-

ough cleansing than the douche would permit. (Pessaries might be called "necessary evils." However, if properly applied and kept properly clean, they may be the means of much good.)

About the middle of last month (September) a communication from this lady announced that she had gone to housekeeping and was getting along fine. This, to me, is an ideal case, although an extreme one, for the application of pelvic mechanotherapy, and I regret exceedingly that I am not able to follow it up still further with treatment. Before dismissing it, let me give a prognosis: If she continues her care, each recurring menstrual epoch will be a developmental period, gradually bringing about reconstructive changes; should a pregnancy take place, extreme care, postural exercises, a few properly applied treatments, aiding and guiding the enlarging organ upward and out from its pelvic environments, thus removing obstructions to Nature's working, will bring these undeveloped posterior ligaments up to their proper state, and make of this rather unformed girl a fully developed woman—and mother. If, instead of this gradual evolution toward a happy ending, the enlarging gravid uterus is permitted to gradually gravitate lower and lower into the sacral curve, abortion will inevitably ensue, and this process may be repeated again and again. Should this case fall into the hands of one who has never taken a similar case through, an operation will probably be done, and *the woman UN-DONE!* I would like to know the doctors who are located in the town where this patient lives. I want the right thing done for this case, should the need arise; it is a vital one to me.

Overdoing Surgery.

The cases cited are but very common types of those met with in an everyday office practice, and in which pelvic mechanotherapy is doing wonders; they get well, and what is more, they stay well.

Through pelvic mechanotherapy is opened up one of the largest fields in medicine today, which will place pelvic surgery where it belongs by making it what it should be, a *part of treatment* accorded, when definitely indicated.

It is coming, gentlemen; it's here—the *non-surgical era in treating the pelvic disorders of women!* The women themselves are beginning to ask *WHY* they must be operated upon; and we must be able to answer that "*WHY?*" The appendix and ovaries have served as excuses for so long as to have become almost a joke; yes, quite a joke. Then there are the round ligaments, which will *almost always* bear some little shortening. But again, I ask *WHY?*

By way of illustration: You may be driving "old Dobbin" to the shay. The well-trained animal, under perfect control, starts off at a good, easy gait. Various small obstructions in the road perhaps may cause an occasional tightening of the reins, which are gradually slackened

as obstructions are crossed. Suddenly Dobbin shies and makes a sudden plunge to one side, as a rabbit springs across the road in front of him. The quickly tightened rein brings him back into the beaten track, and he settles down into his easy jog again, somewhat more alert, perhaps, from his recent little tilt, but with the lines gradually slackening and gently slapping his flanks. Now we approach a deep gully or ravine, made deeper and more treacherous by recent heavy rains. "*Whoa, Boy! Easy—easy—easy now! Ah, we're over safely! Go on, Boy, and step lively or the undertaker will get there before we do.*" As you drive up to the home of your first patient on the route, the reins are thrown lightly over the hitching post, hanging loosely while Dobbin browses contentedly about. Gentlemen, suppose, when Dobbin stopped at the hitching post, instead of allowing the lines to hang loosely, you had forcibly pulled him up and actually hanged him by the reins. Can you imagine the situation? And still the "*hanging*" goes on!

Solutions of Phenol.

Warming phenol solutions very markedly increases its antiseptic action. A 5 per cent. phenol solution containing 4 per cent. sodium chloride is vastly more antiseptic than is the phenol alone: warm this solution and one has an effective agent. Fats, oils, alcohol and glycerine reduce the germicidal and antiseptic effects very markedly. For this reason the old proprietary products of phenol and phenol compounds in oil or glycerine are weak and relatively inefficient compared to the warm solution in water containing salt.

Allen recommends dilute nitro-muriatic acid in 10 to 15 drop doses after meals in the treatment of boils. He believes that, unless a small boil points, it would better not be opened; that its incision accomplishes nothing useful, but really prolongs the duration of the case and adds to the violence of the inflammatory reaction. It may be stated that there are many who agree with Allen.

The Psychology of Patronage.

"A Reply to Dr. Fish," by Robt. T. Morris.

Dr. Morris is a very forceful, interesting writer. You will find this well worth reading. It is on page 53 of *this issue*.

Doctor, this is a subject of close interest to us all. Perhaps you have some opinions you would like to put forward.

MEDICAL COUNCIL readers will be glad to hear them.

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Hemiplegia ;

and Its Complications.

By EDWARD LIVINGSTON HUNT, M.D.,
Assistant Professor of Clinical Neurology,
Columbia University.
NEW YORK CITY.

Hemiplegia, by reason of its frequent occurrence, receives but scant study and observation; it will, therefore, prove of value and interest to review its many complications and sequelæ.

The motor disturbance is the prevailing symptom. This may vary from a slight weakness of the entire affected side to one of complete paralysis. It should never be forgotten that there is an involvement of the muscles of the trunk as well as of those of the extremities. A paralytic may show few signs of his infirmity, and yet constantly lean in his chair, tending to fall over to one particular side when dressing or persistently lie, when in bed, upon or on top of the paralyzed side. He adopts a peculiar position which can best be described as one of huddling upon the affected side.

This involvement of the trunk muscles is evident when the patient takes a deep breath. Close observation always shows the expansion of the paralyzed side of the chest to be slower and less pronounced than is that of the well side. Forced inspiration causes the affected side to lag, and the apex of the chest to rise to a far less degree than does the normal side. In quiet inspiration the reverse occurs. To Hughlings Jackson's close observation is due this additional sign.

Careful inspection will also show a certain amount of wasting in the trunk muscles of the paralyzed side.

Differences in Degree in Upper and Lower Extremities.

The leg is much less affected than the arm. The recovery of the leg, therefore, is greater and more rapid than is that of the arm. This is not, as is often supposed, due to the fact that the leg receives more treatment and more involuntary exercise than the arm, but because the leg is represented on both sides of the brain to a greater extent than is the arm, and the lesions causing hemiplegia are so situated as to affect to a greater extent the arm centers than those of the leg. This holds true whether the lesion is in the cortex, the white substance or in the internal capsule. Complete abolition of the function of the arm is not uncommon; of the leg, rare. The vast majority of hemiplegics manage to walk, but not many have good use of both arms.

The Face.

The face is less affected in the upper third than in the lower two-thirds. There will rarely be noticeable great disparity in the wrinkling of

the forehead or in the closing of the eyes, whereas, on the contrary, an attempt to laugh, display the teeth or protrude the tongue will invariably display a marked asymmetry. This is due to the fact that the upper part of the face is represented to a greater degree on both sides of the brain. This sign is of great value in making a differential diagnosis between hemiplegia and Bell's palsy.

Motor Features.

Many motor complications may develop. Tremor is not infrequent. It is always course. It may, however, be of the intention type and only evident upon the patient's making an effort, or it may be constant. From the fact that it is distributed to only one part of the body, it may lead astray the observer who is unable to dismiss from his mind paralysis agitans. This is especially frequent if one bears in mind that the tremor of the latter disease usually involves part of the body before it extends to the entire form. When, therefore, the tremor has reached the stage of being unilateral in distribution it is difficult to differentiate hemiplegia from paralysis agitans.

Ataxia is somewhat rarer. When present it involves the arm more than the leg.

Choreiform movements are still more infrequent. They are sudden, quick and jerky. Their distribution is to the entire paralyzed side. They neither resemble the movements characteristic of Huntington's chorea, nor those seen in simple chorea; rather do they simulate the contraction seen in muscles following an electric stimulus. These choreiform movements may, however, vary from a very slight twitch to a distinct and severe spasm. To the onlooker their occurrence in the face is painful and ludicrous, producing as they do a series of unilateral grimaces. To the patient they do not seem nearly so annoying. It is only when the right arm is much involved that they seem to give the latter any discomfort, as in that event there occurs great difficulty in eating and writing.

Tic involving one-half of the face is a motor complication which, although rare, I have seen. It is probably akin to the choreiform movements.

Athetoid movements are decidedly more common than either of the other two, and are especially frequent in infantile hemiplegia. Athetoid movements consist of a definite set of movements on the part of the patient—thus he may begin with flexion, then go to extension and pronation and conclude with supination, only to begin the cycle anew. Their most common distribution is to the hand and arm, but they may also involve the foot, the lower part of the leg or even the shoulder, neck and face. I have seen cases in which the muscles of the face display athetoid

movements. The lips and forehead are in constant motion, causing grotesque but regular grimaces. These athetoid movements are more frequent in the infantile cases, and more rare among the older people. In many instances the strength of some of these movements is so great as to cause much discomfort and damage to the patient; the nails may injure the skin, or persistent contraction may cause pain and deformity.

The occurrence of these motor complications is proof of the existence of a condition of irritation rather than one of complete destruction. The lesion is found to be in the region of the basal ganglia, especially in the optic thalamus.

Sensory Factors.

Sensory disturbances are frequent. If the lesion is cortical, they are of the milder type, such as tingling, paresthesia or mere blunting. They may involve only the sense of touch to a mild degree, or they may bring about the well-known symptom of astereognosis. If the lesion is in the sensory paths, they are much more pronounced, so that there appears a well-defined hemi-anesthesia, which may vary in degree, but usually is pronounced and well defined. The patient can, in most cases, indicate exactly the line of demarcation dividing the body exactly into halves. The degree of the anesthesia varies in the different parts of the body, being more pronounced in the distal portions and in irregular areas rather than in the circular distribution so characteristic of hysteria, or in the wedge-shaped areas found in tabes.

If the lesion is in the optic thalamus or in the immediate neighborhood of it, there may develop hyperesthesia. I have under observation a case of hemiplegia, in which the well side is free from any sensory disturbance, whereas the paralyzed side is exquisitely sensitive, the slightest touch on that side causing acute pain. This patient can indicate the exact line of demarcation which divides his body into symmetrical halves.

The course of these sensory disorders is much like that of the motor, one in which there is a tendency to improve but never to disappear.

Vasomotor Symptoms.

Vasomotor and trophic symptoms are very frequent in hemiplegia, the former even more so than the latter. The paralyzed limbs are cold, blue, and edematous. The sweat secretions on that side are increased. Some observers have noted a diminution of the blood pressure and there is, of course, a tendency to the formation of bed-sores and ulcers on the affected side. Brissaud speaks of having seen a case in which the hair has turned gray on one side.

Contractures.

Contractures are common in hemiplegia. These are of two kinds, the early and late: the early

affect the entire paralyzed side, both the flexor and extensor set of muscles being involved. They are more in the nature of a general rigidity, and, according to Oppenheim, are caused by irritation of the pyramidal fibers. This rigidity is of short duration, giving way after a few days to the late rigidity or permanent contractures. These contractures develop anywhere from the fourth to the twelfth week. Dejerine says not before the sixth week, but I think this places the time rather late. These permanent contractures need no description here, as it is to them more than to any other symptom that the name hemiplegia has been applied. The theories as to their causation are numerous. The arm is always more involved than the leg, the face scarcely at all.

Speech Disturbances.

Speech disturbances in hemiplegia are frequent. If the lesion is not on the side of the speech centre, there will at first be a disturbance of speech due to the paralysis of the muscles of the tongue, face, lips, etc. This will completely disappear in a few days. If, however, the lesion is situated on the side in which is the speech centre, there may develop any of the different varieties of aphasia, alexia and agraphia.

The complication of the eye is hemianopsia.

Mental Symptoms.

Mental symptoms are constant in hemiplegia. They may precede the attack, accompany it, or develop afterwards. They may appear in all three ways. Such mental disturbances as precede the attack are usually irritability, dizziness, impairment of thinking or remembering and confusion. The patient may complain of a sense of fullness in the head or evince great and unusual excitement.

The symptoms which follow an attack of hemiplegia are usually those resulting from the destruction of brain-tissue; they may, however, be the result of irritation. These vary anywhere from slight emotional disturbances to marked violence. Some of these patients have frequent attacks of crying, others of attacks of laughing; in many the cerebration is greatly impaired; in others there exists a state of bewilderment and confusion, which gradually progresses to childishness. Some become suspicious, some forgetful. Some pass on to a form of delusional insanity.

The Gait.

The gait is one of the most characteristic features of hemiplegia, one of the most lasting in its sequelæ and of all the symptoms the one which is the most neglected by the student and teacher. The hemiplegic gait is one of those in which but one leg is affected. The others are the steppage gait and the gait of hysteric hemiplegia. The hemiplegic gait is characterized by the very word to which it owes its name. Hemiplegia means

the paralysis of one-half and in the hemiplegic gait is evident the symptoms, the physical signs, and the characteristics of a paralysis of one-half of the body. The affected leg is rigid. It moves wholly with the body, and not as an independent member. It rotates outward, swinging in a semi-circle first from and then towards the trunk. The shoes are worn on the outer side. The affected half of the body is rigid, weak, and paralyzed, so that the patient leans toward the affected side. The arm is held in a characteristic position of semiflexion and rigidity. There is evident a slight asymmetry of the lower two-thirds of the face, with an expression of anxiety and distress. This gait is best described by the word semi-circular, or swinging.

It is accompanied by exaggerated reflexes and steps which are regular and uncertain. The toe and whole side of the foot scrape along the floor. The patient often limps. At a distance he presents a twofold appearance of one who is lame, and one who is walking in an uneven way, or, rather, in a one-sided way. As in the ataxic gait, the sufferer from the hemiplegic walk can be heard before he is seen. The noise is regular, rhythmic and grating. The principal features of the hemiplegic gait are rigidity and the side-wheel motion. Other names for the hemiplegic gait are the paralytic and the apoplectic. The conditions in which the hemiplegic gait occur are:

- I. Apoplexy, embolus, thrombosis or hemorrhage.
- II. Tumor in any motor area.
- III. General paralysis.
- IV. Paralysis agitans.

The Reflexes.

The reflexes of hemiplegia are exaggerated, all save one, the abdominal reflex, which on the paralyzed side is absent. It is also absent in multiple sclerosis, brain tumor and in epidemic cerebro-spinal meningitis.

Complications.

The complication to which the paralytic is subject is aphasia. There are two varieties, motor and sensory. Just as there are two ways of expressing an act, by writing and by speaking, so are there two kinds of motor aphasia; and just as there are two ways of receiving an impression, namely, by seeing and by hearing, so there are two kinds of sensory aphasia. In addition to aphasia, a certain amount of speech disturbance occurs, in hemiplegia, as a result of the mechanical difficulty arising from the paralysis of the muscles of speech. This gives rise to a peculiar form of speech, which is best described as thick and indistinct. The speech of hemiplegia is often involved. The character of the defects differ according to the location of the lesion. If the

paralysis is on the right side, the lesion is on the left side; the speech centre is involved, and there may result one of the many forms of aphasia, apraxia or alexia. If, on the other hand, the paralysis is on the left, the lesion is on the right; there is no involvement of the speech centre. The difficulty is one of articulation rather than of speech. In this instance the voice is thick and indistinct; the linguals are improperly pronounced, and, from the physical interference which the paralyzed half of the tongue, lips and cheek-muscles causes, the enunciation is slurring, indistinct and thick. It should always be borne in mind that this condition of affairs may be completely reversed, as in left-handed persons the speech centre is on the right-side of the brain.

41 E. 63d St.,

New Starvation Method of Treating Diabetes.

By LEONARD K. HIRSHBERG, M.A., M.D.,
1937 Madison Avenue,
BALTIMORE, MD.

The new treatment for diabetes developed by Dr. Frederick M. Allen, of the Rockefeller Institute for Medical Research, has won the indorsement of a number of prominent physicians in this and other cities, where it has been tested at hospitals. It is known in the medical world as the "starvation treatment," and is being discussed largely by authorities on diabetes.

Dr. Elliott P. Joslin, of Harvard Medical School, Boston, and who is also connected with the Nutrition Laboratory of the Carnegie Institution, of Washington and Boston, expressed his unqualified approval of the new treatment.

Another enthusiastic indorser of the "starvation treatment" is Dr. Lewis Webb Hill, of the Massachusetts General Hospital, where the method has also been tried out for about a year and has been adopted for general use. Dr. Hill recently published a small book to assist the general practitioner in adopting the Allen treatment. It tells of the results obtained in the Massachusetts General Hospital, and presents a series of the diets used at the hospital. This list was prepared by the head of the hospital's diet kitchen, Rena S. Eckman. [W. M. Leonard, Boston, Publisher.—Ed.]

It is no exaggeration to say that the advance in the actual treatment of diabetes mellitus during the twelve months just passed has been greater than in any year since Rollo's time.

It seems that Dr. Allen's modification of the classical treatment of saccharine diabetes has been in use only for a comparatively short time, but it is already clearly proved that Dr. Allen has

notably advanced other physicians' ability in combating the disease. One of the difficulties likely to prevent the wide adoption of the treatment at the present time involves the detailed knowledge of food composition and calory value.

In carrying out the Allen treatment the physician must think in grams of carbohydrates and proteid—it is not enough simply to cut down the supply of starchy foods, but must know approximately how much carbohydrate and proteid his patient is getting each day.

The Technic.

Dr. Hill describes the treatment administered at the Massachusetts Hospital. The patients are kept on ordinary diet for the first forty-eight hours after entering the hospital, so that the severity of their cases may be determined. They are then put to bed and given no food whatever except whisky in black coffee until they are sugar-free. Under this method the system is very rapidly rid of sugar, all evidence of it disappearing in two or three days in most cases, and the longest length of starving any patient is four days. In a very few cases, however, eight or nine days were required, but this did not seem to injure the patient. When the patient is sugar-free he is allowed to eat small quantities of vegetables.

Vegetables, when this meagre diet is commenced, must be boiled in different water three times to rid them of as much carbohydrate as possible. A glance at the diet of a patient after the original starvation shows there is little danger of overeating. Breakfast consists of four tablespoonfuls of string beans and four tablespoonfuls of asparagus, with tea or coffee; dinner of two tablespoonfuls of carrots and three of spinach, with tea or coffee. To make up for the short rations earlier in the day, the patient is allowed twelve slices of cucumber and six pieces of celery at supper, with tea or coffee. The diet is gradually increased to include cabbage and onions, and in the third stage to include bacon and other foods.

One of the new features of Dr. Allen's treatment is that the patient never is allowed to return to what is generally considered a normal diet. Previous to his development of the new treatment it was generally considered by physicians that recovering diabetes patients should take on flesh to help build up resistance against "wasting disease." Dr. Allen argues that a patient should remain under weight always, even after recovery from the disease, to prevent a recurrence of its symptoms. Out of forty-four patients admitted to the hospital, who were chosen as the most severe out of a considerable number of applicants, it was proven that it was possible to eradicate completely all traces of sugar by means of the

starvation process. The greater part of the patient's stay in the hospital is devoted to the simple method of controlling his own condition through diet and in keeping down his weight.

Dr. Allen concludes that patients generally accept the radical treatment, with its quick relief, in place of weeks or months of privation heretofore used in stopping glycosuria.

If there is evidence of acidosis, as is indicated by acetone, starvation may produce coma, in which case 2 drachms of sodium bicarbonate should be given every 3 hours during the total fast. This will reduce the danger to the minimum.

After the fast, reduce the proteid intake very markedly, as an excess of proteid induces glycosuria nearly as much as does carbohydrate.—
EDITOR.

Rat-Bite Disease.

This disease, which is quite widespread in Japan, is reaching our shores. It is regarded as a protozoal disease of spirochetal type. It has a period of incubation of varying but usually considerable length following the bite of the rat; then febrile symptoms develop, gland enlargement, erythema and edema follow, and the disease persists for a year or more. Salvarsan is reported as most effective in treatment.

Burns.

First degree:

℞ Zinci oxidi, gr. lxxv (5 Gm.);
Magnesii carbonatis, ꝑiiss (10 Gm.);
Ichthyolis, gr. xv to xxx (1 to 2 Gm.).

M. Sig.: To be dusted over the burn.

Second degree:

℞ Zinci oxidi, gr. lxxv (5 Gm.);
Cretæ præparatæ;
Amyli;
Olei lini;
Liquoris calcis, āā ꝑiiss (10 Gm.);

Ichthyolis, gr. xv to xlv (1 to 3 Gm.).

M. Sig.: To be applied to the burned area.—Leistikow, in *Quinzaine thérapeutique*.

Practical Politicians and Disgruntled Doctors.

You'll find this very interesting communication from Dr. Douglas H. Stewart on page 57 of *this issue*. It is full of practical wisdom.

Perhaps it will stir up a thought or two in your own mind which you would like to send in for publication.

*Things We Know but Forget.**

By CHAS. E. REMY, M.D.,
AINSWORTH, NEBR.

I am sure you have all heard of the oculist who had a difficult case requiring the removal completely of one eye, in order that the sight in the other eye might be retained. Several professional friends were invited in to witness the operation. Then, while giving them a dissertation upon the case in hand he deliberately removed the good eye instead of the one diseased. This man knew very well which eye was to be removed, but with mind occupied in the scientific aspects of the case, his mental gaze, if we may designate it as such, focused upon the general discussion of the case in the abstract, rather than upon the specific case in hand—*he forgot*. This sounds to us here like an impossible and an unpardonable blunder; it is unpardonable, but not impossible, for I understand that the incident related was actually enacted in the clinic of a man previously very prominent in the optical world. I cite it here as one of the tragic possibilities that lie in wait for the busy physician and surgeon among the mazes of the many "*things we know, but forget*."

Please grasp the fact that I am not referring to the physician who does not know, and that I am not calling attention to his shortcomings or the danger and menace he may be to the human family, or the disgrace he may be to the medical profession. I am speaking here of the physician who thinks; the physician of knowledge; who is conscientious, careful and scientific in his work; in fact, of the average sincere, hard-working, honest physician, whether he be of the country or of the city. I very much doubt if there are any, or more than a very few, whom this paper reaches, who can look back upon the year just past without calling to mind some instances of the things they knew very well, but which in the pressure of some imminent need they overlooked entirely, or, in other words, they forgot.

Forgetting Important Symptoms.

For instance, did you ever go in and see a patient and forget to take his temperature, whereas the fact only dawned upon you after you had already prescribed for him, and perhaps was on your homeward journey? Did you never go in, take a temperature, examine your patient, and overlook the pulse entirely? Have you never gone over a patient in your examining room in a

thorough and, as you felt, careful, physical examination, and found yourself entirely at a loss when a glance into their eyes in a good light would have set you right on the instant the yellowish tinge therein came to view? Have you never called in a consultant on a case and had him walk over to your patient and perhaps test his reflexes—the one thing that you had overlooked—while there came over you a feeling of exasperation at yourself that you should have neglected to do this one simple little thing, that when done immediately cleared up the atmosphere and labeled your case for you. These are some of the things that I mean when I refer to the things that we know, but forget. Or, if you will pardon a bit of sentiment in a paper of this kind, I would quote the first four lines from that beautiful little poem by Margaret E. Sangster, entitled "The Sin of Omission":

"It isn't the thing you do,
It's the thing you leave undone
Which gives you a bit of heart-ache
At the setting of the sun."

Lucky the man who has never felt the air grow blue over the things he knew, but forgot.

Things We Should Not Forget.

There are so many things to be taken wisely into account when a patient calls upon you in regard to himself, or when you are called, it may be, by other members of the family to examine and pass upon the physical condition of a prospective patient. There are so many things it is easy to forget, that may exercise the most important influence bearing upon the case to be dealt with. Facts which appear insignificant in themselves, in experience often exercise a decided influence upon the special diagnosis. The varying individuality of patients must not be forgotten. For instance, a nervous, hysteric type of woman whose time is given over wholly to the dictates and calls of society comes to you and describes to you a group of symptoms as regards herself; but you immediately grasp the fact that these complaints are nothing more than an expression of the high strung and exaggerating mental condition of a hysteric person and you lay but little stress upon their significance. On the other hand, a half hour later, a man whom you know to be ordinarily a hearty, healthy, steadfast laborer, comes to you and recites to you the same group of symptoms, and you immediately and very properly attribute these to pathologic conditions present and set about seeking an explanation of the same. It is a thing

*Read before the Northwestern Nebraska Medical Association, October, 1915.

we all know and should not be so prone to forget in our everyday practice, this matter of the individuality of patients as regards the value of the subjective symptoms at least, and often the objective symptoms as well to a certain extent. Do not forget that it is not so much the signs present in every case that comes to you for diagnosis and treatment, as it is your ability to properly *interpret* the weight and importance and true value of these signs, which marks your ultimate success or failure with the case.

Forgotten or Neglected?

Some three years ago a paper of mine, "System in Diagnosis and Case Management," appeared in the *Western Medical Review*, and I wish to reiterate and emphasize here some of the things that were included in that paper. Some are things that physicians forget; some, I regret to say, are not even thus to be excused, for they are not forgotten; they are simply neglected. I refer to culpable negligence in the matter of taking histories and examining patients. There is not a physician to whom this paper is presented but who knows the importance and value of case histories; we will even go so far as to hope that there are none of these physicians who forget to take them. However, I could name for you a dozen—yes, twenty—physicians who never think of taking a case history, and who have never known what it was to keep a case record file in their practice.

There is not a physician to whom this paper is presented but who knows the importance and value of the objective examination of the patient. Yet the number of physicians in active practice who, in the monotony of the day's routine, entirely forget the physical examination would startle one. Even in the simplest cases no physician should neglect the precaution of examining his patient carefully, including in such an examination all the organs. For, on the one hand, some organic diseases do not excite early subjective symptoms; and, on the other hand, along with some organic changes which annoy the patient sufficiently to lead him to consult his physician may go others of the gravest importance of which he has no suspicion and which the searching physical examination first discloses.

Mistakes From Neglect.

There are doubtless a good many men among those to whom this paper is presented who have at one time held service as interne in some city hospital. It is only necessary to ask these men to recall the cases of mistaken diagnosis which they saw come into the hospital, many of which showed that no physical examination could possibly have been made, to enlist them as supporters of what I say here. And I do not believe I am

far wrong in classifying these things among those which we KNOW—but FORGET.

Keep Case Records.

However, there is such a thing as attempting to remember too much. If, for instance, you attempt to conduct an inquiry into the case history of a patient, get a full statement of their subjective symptoms, and make a thorough and exhaustive physical examination, you are going to *forget* a number of the points that you will *know* afterward should have been investigated; that is to say, if you trust to covering all the ground from memory. The escape from this dilemma is by having printed case records that may serve as a guide in the conducting of your examination. It is well to mention that you also eliminate thereby the distress and confusion of attempting to remember all the details of your examination for future reference when you come to treat the case.

Thus it is that I believe much of this shadow, this menace to our professional peace and success, may be eliminated, and the things that we *know* but *forget* become much lessened in number. There are one or two things of which I wish to speak, however, in this paper, which even the taking and careful filing of case records might not entirely eliminate.

Forgetting to Be Kind.

Did you ever stop to think how much a kind word means to the average person who is sick? The strongest man, when he has succumbed to the onset of a severe disease, putting him on his back in bed, has the habit of letting the years slip away from him and becoming a boy again. And it is the boyish whims and eccentricities that must be dealt with during the period of his sickness. What he needs as much or more than medicine, or which should supplement the medicine or surgery required, is the quiet strength and sympathy of his physician to lean upon and buoy him up. For the physician who has never known sickness himself, nor been reduced to helplessness by it, there is possibly some excuse if he does not remember; but for the one who has, there is no excuse if he forgets. Our profession is one that should engender unselfishness and thoughtfulness for others, particularly the unfortunate. And it is my belief that as a rule physicians are among the kindest and the most considerate of men—at heart; but it is also very easy, being busy with the petty worries of one's routine work, to forget. It is wonderful how a hand clasp, a little pleasantry spoken as you enter the sick room, or a smile for the patient, win the hearts of those who are become as little children again through the ravages of disease. Don't let us forget these things; they require but little

extra effort upon our part, and they mean much, very much indeed, to the sick.

Forgetting One's Fellows.

Then here is another thing we all know but are prone to forget. I refer to the physician's relation to the community wherein he resides and practices. He is one of the educated men of his community, and is, from a community standpoint and from a social standpoint, one of the leaders and supports of the communal and social welfare of his locality. Particularly in the smaller cities and villages and rural districts, the banker, the merchant, the school principal, the lawyer, and the physician loom large upon the horizon. They stand forth in relief as the foremost citizens, and upon them depends largely the responsibility for the social and moral welfare of their neighbors. The public eye is always upon them, and no one can sum up in words the far-reaching effects, beneficial or detrimental, as the case may be, that may come to a community from the smallest and seemingly most inconsequential acts and words of these men.

And particularly is this true as regards the physician. For, despite all warnings, man is prone to fix the standard for his own life and morals upon that of those whom he considers the leaders in the social and business life of the community wherein he resides. If, looking at them, he finds no sense of social justice, no instinct of fair play, no wholesomeness of moral tone, he is inclined to deny that such powers exist, and, following these gods of the clay feet, models his own life accordingly. The physician is not living his own life alone; he is living in a way the lives of all the young people in his community, and is responsible to the race for his influence on these people for good or evil.

Inasmuch as this paper has already been drawn out to a much greater length than was intended at its beginning, I will not prolong it by taking up at any length another subject that I should like to have taken time to discuss herein. I refer to the relations of the physician to his brother physicians and to his druggist; the courtesy he knows he owes them, but so often unfaithfully forgets. And I would wish it understood that no satire is intended here, or at any other place in this paper. I have used the word "forget," and I have meant "forget" throughout. I believe that physicians as a class are good men and probably more conscientious than any other class of citizens. Only, unlike the old German who in reply to a criticism from his wife remarked, "Shut up, woman! I knows what I forgets," let us as physicians be just a little more careful about forgetting some of these things we know.

Autotherapy

In Its Application to the Young Mother.

By CHARLES H. DUNCAN, M.D.,
233 Lexington Avenue,
NEW YORK CITY.

The most frequent cause of death following delivery, or abortion, is infection. As soon as the temperature rises, and the abdomen becomes tender, face red, discharge foul smelling, etc., place one cc. of the discharge from the vagina in an ounce bottle of water, shake well, and give in divided doses, one hour apart for three hours. Give no more at present. The temperature will usually drop in from twenty-four to thirty-six hours following this treatment. The extreme vascularity of the parts involved accounts in a measure for the response being so especially prompt and effective. The more virulent the infecting microorganisms, both causative and complicating, the quicker will be the response and cure.

This treatment is a God-send to the country practitioner, relieving the whole condition quicker and better than anything that has ever come before the profession. An empty uterus, and autotherapy will reduce the loss of life of patients suffering with puerperal infection, or infection following abortions, to a minimum. The results are absolutely dependable, and have been verified by many physicians. Some antiseptics destroy the therapeutic value of the exudate.

Mastitis.

The autotherapeutic treatment of mastitis consists in filtering the discharge from the breast, and injecting the bacteria-free immunizing filtrate hypodermically. The inflammation subsides within twenty-four hours.

Where the milk supply of a recently delivered female is scanty, the reinjecting of ten drops of the mother's own milk subcutaneously over the biceps muscles will stimulate the mammary glands into action quickly.

Many veterinary physicians employ it in the treatment of high-bred dogs and of cows.

The treatment is particularly applicable in those cases where delivery has been recent.

Tests on cows indicate that milk from a very recently delivered cow injected into another cow that has been lactating for several months and whose supply of milk has been diminishing, will stimulate the mammary glands of the latter into renewed activity.

The Nursing Babe.

Before closing this paper the writer will refer briefly to his method of treating the nursing child, which he calls "*Autogalactotherapy.*" This

method of treating the nursing infant was discovered by the writer in observing the mother-dog lick and cure her puppies. We can not overlook these crude animal methods of healing; at times we can learn much from them. (See *New York Medical Journal*, September 6, 1914, article by the writer under the title "Autogalactotherapy.")

The mother-dog, by licking the discharges that adhere to the orifices of her young, quickly elaborates in her body antitoxins to the toxins of the microorganisms pathogenically active in her offspring. The antitoxins transmitted through the milk to her puppies not only cures the one infected, but immunizes all of the rest against the bacterial infection in question. This same treatment would, of course, cure the nursing infant, but the human mother would rarely be called upon to cure her baby in this manner, for the physician is usually at hand to administer the more elegant therapeutic preparation in the following manner:

This treatment is particularly adapted to infections of the respiratory tract, as in snuffles, bronchitis, pneumonia, or those conditions where the discharge may be obtained from the nose.

If the physician has not the Duncan autotherapeutic apparatus necessary, he will be unable to give this treatment.

An Illustration.

The following case illustrates the writer's method of curing these infections, or of administering the unmodified antitoxins of the toxins active in the baby's body, to the child through the mother's milk:

Patient female, nursing baby aged ten months, was presented for treatment, suffering with severe bronchitis bordering on pneumonia. There seemed also to be present an associated rhinitis, for mucus flowed quite freely from the nose. The condition had persisted for about ten days. As to treatment, the mother was instructed to collect during the morning upon small pledgets of cotton as much as possible of the mucus flowing from the nose and to place the pledgets in a sterile bottle and bring them to the office. There were about twenty pieces in an ounce bottle. The bottle was filled with water and allowed to stand for twenty-four hours, with occasional agitation, after which time the contents were expressed and passed through the Duncan apparatus. Two cc. of the bacteria-free filtrate was injected subcutaneously, and a drachm was given to her by the mouth. The mother said she had a slight headache the next day, and was somewhat feverish. The cutaneous reaction was about the size of the palm of the hand. Forty-eight hours after the injection, however, the baby was distinctly better and progressively recovered without any other

medication. This test has been repeated successfully many times.

Ivy Poisoning Illustrates Principle.

The application of this principle has been illustrated many times in the rapid cure of ivy poisoning: It is given here for the benefit of the practitioner, for the results are absolutely dependable. A cow is fed an armful of the leaves from which the patient was poisoned, for two nights in succession. On the following day the patient is given the cow's milk to drink. Professor William H. Dieffenbach, of New York City, who tried this treatment on himself as a patient, reports that in one hour's time the stinging, biting pain began to leave, and that he made a quick recovery after drinking one quart of milk of a cow that had been treated in this manner. The cow apparently thrived on the leaves.

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If you store salvarsan, keep it cool; the solution especially is decomposed rapidly if even slightly heated.

Never dilute sp. aetheris nitrosi with water until just before it is administered. It loses its ethyl nitrite rapidly after being diluted.

A Very Practical Paper.

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Some Facts and Vagaries

Viewed from a Medical Standpoint.

By B. C. KEISTER, A.M., M.D.,
ROANOKE, VA.

In this age of rapid transit, new thought, specialism, commercialism, and self-aggrandizement, it behooves the conservative, thinking medical man of today to pause and take notice lest he should be swept into the current and be numbered with the great multitude of "vagaries" that are now playing their rôle before an over-credulous public. We are confronted by every imaginable form of sophistry from "witchcraft," an offspring of the dark ages, down to Chiropractic, Osteopathy and Christian Science, all of which are children of modern birth and obscure parentage.

When we recall the founders of these so-called sciences and study some of their peculiar characteristics, their false conceptions and teachings, their sheer ignorance and boldness, we can readily comprehend their peculiar relation to humanity and their well-laid schemes.

On careful investigation by a committee appointed by the Governor of Kentucky for the purpose of ascertaining the true character of a large number of the osteopathic schools prior to allowing their graduates permission to practice in that State, it was ascertained that not one of them was equipped for teaching the first principles of a medical education.

It was the writer's privilege to attend one of the patients who had, only a few hours prior to my visit, undergone a manipulative treatment by one of these D.O.'s for Bright's disease. The patient, a seven-year-old girl, was having uremic convulsions on my arrival, which I attributed to the manipulative treatment, and it required several weeks of constant nursing and treatment to bring this patient around. This is only one of many similar instances that occur in the practice of other physicians, showing clearly the irrationality of treatment by manipulation in nephritis.

Chiropractic.

We may add that the so-called pseudo-science, "Chiropractic," is based on about the same dogmatic principles as osteopathy, differing only in phraseology and the use of certain terms by which the D.O.'s distinguish themselves from their allied competitors, the D.C.'s, the former basing their theory on certain forms of manipulation, while the latter use the term "adjustment."

The founder of Chiropractic is one B. J. Palmer, and the parent school was located at

Davenport, Iowa. This is regarded as the mother school of half a dozen or more others located in various sections of the United States, and, like the osteopathic schools, are sending forth their graduates to all parts of the world, sowing seed of ignorance, superstition and fanaticism, and reaping as easy prey the credulous weaklings, the maimed and halt, the deaf and dumb, in fact, any and all comers, regardless of age, race or conditions.

A Poor Showing.

Two of the most distinguished graduates from these two parent or mother schools of Osteopathy and Chiropractic appeared before the State Board of Medical Examiners of Wisconsin with the view of obtaining a license to practice their respective callings in that State. It required but a few verbal questions on the part of the Board to discover that the candidate from each school was wholly deficient in the primary branches of medicine and surgery, as well as in the rudiments of a common school education.

The Chiropractic candidate was asked how he treated pneumonia. His answer was, "By adjusting the second dorsal vertebra which was impinging on the nerve that leads to the lungs." The Osteopathic candidate's answer to the same question was, "By certain manipulative actions by the fingers over the painful parts." He also stated that he treated appendicitis, Bright's disease, diabetes, diphtheria, gonorrhœa, typhoid fever, rheumatism, measles, gall-stone, fibroid and other tumors, diarrhea, dysentery, etc., all by a certain form of manipulation regardless of cause or conditions. The Chiropractic candidate stated that he was taught in his school that all diseases were caused by some defect or subluxation of the spinal vertebra, and that he treated all diseases by adjustments of the special vertebra implicated. In treating gonorrhœa he adjusts the third lumbar vertebra, thus relieving the impingement of the nerve that leads to the genital organs. In treating diphtheria he adjusts the sixth dorsal vertebra and ignores all germ theories and all sanitary precautions, claiming that all contagious as well as other diseases are due to "subluxation" of one or more of the 33 spinal vertebræ, and that the only rational treatment for these diseases consists of "adjustments."

Christian Science.

Then we have the so-called "Mind-healers," or Christian Science sect, playing on the fancy and imaginary powers of the over-credulous, trying to make people believe that there is no such thing as pain or disease.

The founder of this beguiling sect, while sojourning in the present world, exhibited about as many eccentricities and inconsistencies in her life as the theory and practice of her teachings exhibit before the conservative, thinking minds of a gazing public. Her imprudent acts and uncouth tendencies toward her three husbands, her bad treatment toward her only son and legitimate heir, to say nothing of the many other vagaries that characterized both her youth and old age, all combine to make a character that might well be compared to an eighteenth century "witch" or a twentieth century "fortune hunter."

When we recall the fact that her educational advantages as well as her early social privileges were of the most limited and rudimentary character, and that her only son could not read or write at the age of twenty-six, her three marriages, with a prospective fourth marriage to her coachman, these facts of her home life coupled with her sacrilegious tendencies of comparing herself with Christ in the matter of healing the sick and working miracles, should appeal to any sane person and cause at least the stronger minds of her thousand followers to pause and think of this departed spirit only as a gigantic, simple-minded fraud, who, for the sake of self-aggrandizement and the filling of her coffers with the money of the credulous populace, has "*passed on*," leaving her ever-faithful followers as a wandering tribe in the world.

Instead of discouraging or criticising the millions of *followers* of this departed saint (?), we, as conservators of the public health and benefactors of mankind, should exercise every reasonable means and human agency toward reclaiming them from their inevitable doom and their disgraceful attitude toward their fellow-men. We are fully aware that among their followers are hundreds of wealthy and intelligent people, who seem to be honest and sincere in their views, notwithstanding the *weak spot* in their better judgment.

It was the privilege of the writer to visit a city recently where there were fully 15 per cent. of the population believers and followers of this peculiar sect. They gave no concern to epidemics or contagious diseases, attributing all this to the mysterious doings of the "devil." Strange as it may seem, the city officials tolerated the false doctrines of this religio-scientific skepticism to the extent of allowing them the privilege of burying their dead without a physician's certificate, stating the character of the illness or cause of death, thus ignoring the regular public health ordinance of the city and State, causing much confusion in making up the health reports of the State. These conditions prevail in

many of our communities where this religio-fanaticism is tolerated. Why should this disgraceful state of things exist in this twentieth century enlightenment?

The Trail of the Cult.

From the time of Hierophant, of the Egyptian temples, down to the present, various sects and cults of pretended cures and healers of human diseases without the aid of medicines have appeared under many and various names, all claiming to have the power of healing through some mysterious magnetic agency of their own. They operate entirely outside of the jurisdiction of medical science, and, in a large measure, rest their claims of success upon the credulity and imagination of their deluded victims. In all such instances, however, experience has shown that these are nothing short of mystagogues, frauds and impostors of the worst type.

It is interesting to note the diversity of the various schools of healing human ailments without the use of medicine and surgery, appearing only for a season and then disappearing into oblivion, like the morning mist on the approach of the noon-day sun. We have the metaphysical healers, divine healers, prayer healers, magicians, theosophy, telepathy, new-thought, auto-suggestion, hypnotism, etc., all claiming to possess miraculous gifts or the secret of occult science, a kind of mythical knowledge, "Deep truths to others unrevealed; mysteries from mankind concealed."

In many instances these professors and followers are enthusiastic, self-deceived visionaries, while in a great majority of the cases they are downright frauds, practicing upon the credulity and ignorance of their patients for revenue only.

We are all acquainted with the celebrated Mystic of the eighteenth century, Anton Mesmer, who claimed to possess in himself an occult force derived from the stars, which he exerted upon his patients by stroking their bodies with magnets. He, in after years, discarded his theory of "sidereal magnetism," and in Paris practiced upon his patients with manipulation, aided by dim-lighted rooms and soft music.

It is a historic fact that Mesmer benefited many hysterical women and nervous men whom he treated by what he termed "animal magnetism." Upon investigation by a committee of physicians appointed by the French government for the purpose of ascertaining the real facts about this man of mystery, it was quickly discovered that his theory of "mesmerism" was a downright system of charlatanry and jugglery, and that Mesmer himself was an empiric and impostor of the worst type, and was accordingly driven from France.

Our country is filled with fakers of all kinds,

some of whom date their origin back to the fall of Rome, when civilization was in its most chaotic state, while many others, strange to say, belong to our much-boasted twentieth century civilization.

Facing an Evil.

We are today facing an evil, a curse that is about as great a menace, if not far more reaching in its deleterious effects on human health, even, than any of those previously mentioned. I refer to the gigantic patent nostrum evil. The promoters of this curse are of our own woof and blood, and are knowingly deceiving their credulous friends and neighbors wholly for the sake of filling their coffers at the expense of the health and life of their fellow-men.

The promoters of certain cures-for-women frauds have headquarters in nearly every city, where they employ some retired old maid school teacher or minister to deliver lectures on hygiene and the common ills of women, and by so doing introduce their devilish fraud to their over-credulous auditors and fleece them of their surplus earnings to the extent of \$25 to \$100 for a trial course of alleged "hygiene."

The Nostrum Evil.

We also have had strewed over the country in every village or cross-road store as well as in our city drug stores thousands of cure-alls in the shape of cough and consumption remedies, some of which contained morphine, and others that yet contain from 5 to 20 per cent. of alcohol, and are now and have been for the past half century making drunkards of both sexes.

Then we have a class of patent nostrum vendors traveling through the country under assumed names of "Doctors' Associations," who claim to cure any and all maladies to which humanity is heir, provided their nostrums are purchased and used according to their printed directions. They rent a suite of rooms in the most conspicuous locality of the city, and offer free consultation and free treatment for a certain length of time on condition that their medicines are purchased at their special prices.

In passing through a certain western city recently I found more quack, faith-healer, naturapath doctors' union association and Christian Science followers than all the rest of the population combined. I found the drug stores filled with patent nostrums of the worst type. The druggists informed me that their main income was derived from this source.

Need for Legislation.

According to the report issued by the president of the American Proprietary Medicine Association, the sum of \$181,000,000 was expended in 1914 in the United States for patent nostrums, many of which, as previously mentioned, con-

tained a large per cent. of alcohol, the allowable amount of morphine and other habit-forming drugs, annually making thousands of drunkards and "fiends" to be cared for by our municipal charity associations.

Notwithstanding our pure food and drug law, the increase in the use of patent nostrums is astounding, to say the least. In 1906, when this law was passed, the amount expended for patent nostrums in the United States per year was about \$165,000,000. Since the amendment of 1911 the increase has not been quite so marked in the sale of a certain class of nostrums, but this increase has been of sufficient importance to awaken our lawmakers to the necessity of a new amendment to the law, by which we may reach the public press. The principal, fundamental weakness of this pure food and drug law is that it does not touch the *vital matter of advertising*. Printers' ink in the form of advertisements is the "net" that catches the credulous victims of quackery.

Take away from the patent medicine swindler his ability to fill the advertising columns of the press with every imaginable variety of *lie*, and the industry would not last six months. It is admitted by the quacks themselves that 90 per cent. of their earning power is represented by newspaper advertising, and that fully 50 per cent. of all profits go to fill the coffers of the newspaper owners.

Public Opinion and Advertising.

It is well enough to talk of the effect of public opinion upon newspaper proprietors and to express the forlorn hope that they will soon commence to clean their columns of lies and fraud, but this is a hope that has grown old and decrepit. For the last ten years these patent medicine frauds have been exposed almost continuously, and yet there is not a newspaper proprietor in the land taking such advertising who does not know that the money he is taking is tainted with the blood of innocent victims sacrificed on the altar of chicanery and quackery.

It has been estimated by good authority that there are today on the market and being sold over the counter 27,000 different proprietary nostrums, and only 3,684 criminal prosecutions have been reported by the Bureau of Chemistry. Out of these prosecutions only 2,038 of these swindling frauds have been exposed, their secrecy torn away and their *deviltry shown up*. All honor to Drs. Alsberg and Kebler, of the Bureau of Chemistry, for thus starting the ball to rolling! Let the good work go on! And we hope ere another decade passes that this nefarious business will be wiped off the face of the earth. If we are capable of making laws for the extinction of alcoholic beverages, in view of the long and interesting rôle this king of all curses has played,

why should we not make and carry into effect laws restricting or prohibiting the manufacture and sale of a curse that is a *close second* to that of King Alcohol?

A Public Health Problem.

Let the medical profession, with the coöperation of the United States Public Health Service and the Bureau of Chemistry, start a more active campaign against this national enemy to human progress and everlasting disgrace to our civilization. Let the legislative committee of the American Medical Association coöperate with the various State medical association committees and call a convention of these to meet in Washington annually during the session of Congress, and during this convention elect a committee of one good all-round man, like Dr. Wiley, of Washington, or Welch, of Baltimore, to be on hand when bills or amendments are introduced pertaining to public health and preventive medicine and the eradication of fakers and nostrums.

We need a few more "*live wires*" in our national legislative halls, like Senator Owen, of Oklahoma, to champion the cause of progressive medicine and meet the onslaughts of such men as Senator Work, of California, who seemed to champion the cause of Christian Science and Osteopathy.

The only real solution to this gigantic problem is careful and constant watchfulness on the part of our legislative committee during the sessions of our State and National legislatures. As previously intimated, the United States Public Health Service should coöperate with the medical profession in bringing about the necessary conditions by which to eliminate any and all obstacles that hinder the legitimate progress of scientific and preventive medicine.

Health and Longevity.

It is a well-known fact that health and longevity of the human race is largely dependent on conditions that affect our environment, our habits and our inheritance. According to history and laboratory investigation, our longevity has been doubled during the past two or three centuries, and the probabilities are growing, with the study of eugenics and preventive medicine, that our lives will be doubled again within the next century or so. The length of life in European countries during the sixteenth century averaged from 18 to 20 years, while today it has risen to 44 or 50 years. The longevity of a nation depends principally upon the character of its civilization and habits of the people. When the enemies of health, such as nostrums, habit-forming drugs, alcohol, tobacco, illegitimacy and improper marriage, have been conquered, a hundred years will be regarded as the acme of maturity, and old age will not be considered before

man has reached his 125th mile-stone on the journey of life.

For ages health officers have been waging a war against cholera, plague, tuberculosis, typhoid fever, etc., which result from virulent germs or protozoa, but today the profession of medicine is turning its attention to the "*evil spawn*" of mankind, which is expressed and magnified by the mental and physical wrecks found in our hospitals, prisons, jails, reformatories and insane asylums.

Preventive medicine means more than vaccination against disease, sanitation and disinfection. It also means the study of heredity and the practice of eugenics, subjects which every thoughtful physician should consider who is anxious to contribute his share toward the prevention of disease and the improvement of the race.

The fundamental factors in the development of the family and race are heredity, training and environment, which are known as "*the triangle of life.*" "Environment is what we have, training is what we do, and heredity is what we are." Environment and training may result from the fortuitous or accidental circumstances of life, which are ever changing, but heredity is fixed by immutable laws, and defies the intervention of man.

The excellent results which have followed breeding and the mingling of select strains among animals and plants have been known to science for ages, and it seems strange that these principles have not been applied to the improvement of the human race. Statistics show that over 2,500,000 babies are born annually in the United States who are feeble-minded, epileptic, deaf, dumb, blind, insane or otherwise degenerate as a result of heredity. Mentally deficient parents will produce only mentally defective offspring.

To meet all of these deficiencies as well as exterminate the faker, the shyster, the Shylock and the great nostrum evil, it will necessitate a campaign by which a medical man can be landed in the President's cabinet at Washington under the title of *Secretary of Public Health.*

Morphin.

Morphin is certainly legitimate in treating the pain of incurable disease, in heart disease with a true cardiac dyspnea, in recurrent painful conditions not otherwise relieved, in certain surgical crises, in uncontrollable vomiting, in severe attacks of asthma, in some cases of diarrhea, in the terrible headaches one sometimes meets, in some cases of acute indigestion and cramp, in bad cases of renal or biliary colic and in the reduction treatment of morphinomania.

OUR OPEN FORUM

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This department of the MEDICAL COUNCIL is open to free exchange of proper opinion, criticism and matters of professional interest. Space precludes printing all letters in full, but so much of those received as will interest or instruct our readers will find place here.

Dr. Douglas H. Stewart Replies to Dr. A. Ernest Gallant.

EDITOR MEDICAL COUNCIL:

There is not the slightest controversy between Dr. Gallant and myself. In fact, his facts are so valuable that they may be considered as the strongest possible endorsement of my position that the mixture in common use and containing castor oil and balsam Peru need change and revision. As the Doctor knows, I am quite familiar with Van Arsdale's work and with Dr. Gallant's own paper, which was a "Summary of Twenty Thousand Cases" treated with balsam Peru and castor oil.

Dr. Gallant suggests one in sixteen of balsam and oil; and the nub of my position is that one in thirty-two of balsam plus aristol, to the oil, is excellent. My statement that a certain mixture does not seem active in controlling pus, etc., the Doctor confirms, emphasizes and strengthens. But you can see just what has happened to stir up the Doctor's pen. He knows (evidently) nothing about the make-up of a magazine or periodical; the words "A good formula," which he erroneously considers mine, should be removed nine lines farther along in the article, and then the dear old chap would not have stubbed his cherubic toe and stumbled flat over one of the mysteries of the "Take."

It is hardly necessary for me to accentuate the fact that all sorts of strengths of balsam up to one hundred per cent. are in use, and the rough and ready formula of one-third is well known. Manifestly, then, if these strengths had proved advisable, I would hardly have gone to the pains of recommending a complete alteration in their make-up. This I will suggest as valuable to all parties concerned.

Why do you not request Dr. Gallant to try out my formula of thymol iodid, etc., and let us all know if it is not more efficient than the one-to-sixteen strength that he has used so successfully? Then if THE COUNCIL will publish his results, that would be something really worth while. Because, whatever his shortcomings may be in making up a magazine, he certainly does know balsam Peru intimately.

DOUGLAS H. STEWART, M.D.

128 W. 86th St., New York City.

Failure in Treatment Caused by Neglect of the Laboratory.

A laboratory man, with years of experience, has the opportunity to look into many conditions that are a "terra incognita" to many of the medical profession; and such experience compels me to mention here some conditions that should not exist and could be removed easily by the medical profession.

There are many medical men who have a very deep interest in diagnostic work, and accumulate, besides their experience as physicians and surgeons, a great knowledge in such work.

But, on the other side, we have many doctors who haven't experience in laboratory work at all, not only in the more complicated diagnostic work in the laboratory, but in the simplest urine or blood examinations. I am sure that many of the readers of these lines will shake their heads and think these lines contain more than there really exists. This is a great mistake, and I am far from making accusation; I simply intend to tell my experience, and hope that it may have results in the profession.

In the number of medical men who save in the wrong place by not giving specimens to a special laboratory, we have to count three different kinds.

One kind is the medical man who doesn't know the importance of the diagnostic work and how far-reaching this can be. The second part represents the men who don't trust fully in the work of another and don't send to the laboratory, or who do their work personally, often without experience. The third part comprises the men who want to save expenses for the patient or suppose they wouldn't be able to charge enough for their own work if the patient had to pay to the laboratory man too.

All these doctors are working on a wrong base, because in many cases the patient would be very

Don't Hesitate

We want to print in Our Open Forum worth-while comment from working doctors. Don't hesitate to express sane and kindly criticism and tell what things have "fallen down" in your hands. Constructive debate is always stimulating.

much more obliged to his doctor if he had the right kind of treatment, and would be improved or cured in a few days or weeks, than to be treated for weeks and months on account of guess diagnosis. Let the patient know that an analysis of the urine, the blood or something else is absolutely needed, and you will earn more appreciation afterwards than by treatment "*ad infinitum*."

That there exist many medical men who are unable to do laboratory work in the right way I mention a few cases from my personal experience:

(1) A patient with exceedingly high phosphaturia was treated many months for kidney trouble.

(2) A patient with eye trouble was treated by a prominent specialist for more than a year for this trouble; not one urine examination was made during the whole time. I suggested a complete urine examination, and there was 1.5 per mille albumen present, many hyaline, granular and some epithelial casts.

(3) A patient had eight weeks' treatment for general infection, and, as the case turned to a dangerous point, an examination of the urine from both ureters showed the infection of one kidney.

(4) Another patient was treated several months for stomach cancer. Finally the examination showed a plain acholia, and after a few weeks' treatment with hydrochloric acid the patient felt completely well.

(5) A woman patient was treated for a floating kidney for a long time. As there wasn't any improvement a feces examination showed an enteritis.

I could tell a long series of such cases, but I want to limit this article.

But now I want to say some words about our present laboratories. Especially during the last few years the number increased very quickly, but a very bad practice made its appearance at the same time; that is, fee tables far below the prices for real work—work nearly impossible to do for such prices—and, without question, we find many untrue reports, caused by inexperience or other conditions.

A real Wassermann test, for instance, shouldn't be made for five dollars, because in a laboratory that doesn't make a whole lot of these tests every day the expenses are very high for a test, if it is made accurately; and it requires very accurate work, otherwise the test runs the danger of being incorrect.

Now I want to turn to the sputum examinations. A real, true sputum examination requires, in many cases, half an hour's work. How is it possible to do this work for 25 cents? If a laboratory receives a specimen of sputum, makes one smear, stains same, and gives a report worded so it doesn't say anything, except "T. B. are found," that isn't the right way to report.

If we receive a specimen of sputum and the first examination looks suspicious, without being able to find T. B., we should make a second, third,

fourth or fifth smear, to ascertain if T. B. are present or not, because every laboratory man with experience knows that it is sometimes very hard to find the T. B. Now, what good does it do to a physician to get an untrue or imperfect report?

All I say above is far from being intended to lower the standing of the everyday physician or of his ability to diagnose, and my intention is only directed to remind the medical profession that, especially in cases in which the condition of the patient is not absolutely clear, a laboratory examination very often will be a great help, and will not only show what causes one or the other condition, but that in many cases both the patient and the physician would be very much more satisfied by getting the right, quickly-working treatment instead of guess-work treatment for a long time without the physician being able to arrest the conditions and to improve and cure the patient.

ROBERT UNZICKER, M. D.

1507, 5 N. Wabash Ave., Chicago.

How Should Opium be Given, if at all, in this Case?

My wife, 35 years old, weighs 175-180 pounds; fleshy; been married 16 years; no children; looks healthy; menstruation regular, but only lasts two days, and very scanty, not as much in three months as ordinary women at one time; bowels regular; appetite good; just before or immediately after each menstruation has a severe headache, usually in occipital region; complains of pain being of a throbbing, darting nature and almost unbearable; lasts one day or day and night. One thing in her case is: She can't take any kind of opiate, even camphorated tinc. opium will cause severe pains in her stomach; even hypodermic of morphine or morphine and atropine will cause the same severe pain in stomach.

I failed to mention she has a tenderness in region of left ovary and over uterus. I would like it if some member of COUNCIL family would come to my assistance. The great trouble with me is, how to relieve the pain, or how to administer morphine to prevent it hurting her stomach.

J. A. BATTON, M. D.

Coble, Tenn.

Carrel vs. Wright,

in the Great Antiseptic Case.

Here is a difference of opinion between two great men in medicine that has a practical concern for all of us in our own practice.

We have tried to sum up the gist of the matter from that practical point of view.

You will find it on page 29 of *this issue*.

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Digitalis and Blood Pressure.

It is certainly true that the present tendency is to agreement with the observations of Mackenzie, who holds that digitalis does not greatly influence blood pressure one way or the other. From a clinical standpoint, Mackenzie seems to be the pioneer in this opinion. I find that Goodman, in his little book on blood pressure (p. 215), supports Mackenzie, saying, regarding digitalis: "High blood pressure is not a contraindication to its use, as digitalis given by mouth is inert as far as any specific action on pressure is concerned."

However, these authorities are strikingly at variance with the authors of textbooks on materia medica, such as Sollmann, Cushny and Hare, all of whom state unequivocally that digitalis raises blood pressure. Cushny says (p. 370): "All the digitalis bodies then increase arterial blood pressure, partly through changes in the heart and partly through contraction of the vascular walls."

Sollmann says, regarding the action of digitalis: "The therapeutic stage is characterized by considerable rise of pressure and a stronger and slower heart-beat. If digitalis action is produced rapidly, it may be seen that the rise precedes any change in the heart. It is, therefore, due largely to vasoconstriction, and it can be readily shown that this is due largely to a direct action on the arterial muscle, although the vasomotor center is stimulated as well." Sollmann presents some blood-pressure charts to illustrate this action.

The effort of Wood to explain the apparent discrepancy between the results obtained by animal experimenters and clinicians is interesting but not conclusive. He quotes Joseph's hypothesis (see *Therapeutic Gazette*, p. 382), that local vascular relaxation of the renal blood vessels may occur simultaneously with the contraction of the arteries of the splanchnic area. Wood says further that "it is not improbable that the recurrence of diuresis is indicative of a change in the caliber of the vessels."

Under the circumstances, what is the general practitioner to believe? It may be that all the authorities who have worked along these lines for the last twenty-five years or more have been absolutely wrong, but it is also possible that some of these later workers are also in error, at least as regards details. At any rate, before abandoning the therapeutic practice relative to the administration of digitalis that has been in vogue for fifty years, isn't it wise to take stock of other men's experience—and go slow?

It is rather significant, it seems to me, that practically every clinician of extended experience does not recommend digitalis in high blood pressure cases until there are marked evidences of decompensation or dilatation of the heart. When this condition presents, we are not treating high blood pressure *per se*, we are treating a weak heart. Sir Clifford Allbutt, in his article in

Volume II of Musser-Kelly's "Practical Treatment," does not even mention the use of digitalis in arteriosclerosis and high blood pressure. Faught quotes with approval the statement of Huchard, that "the abuse of drugs, especially of the iodides and of digitalis, is especially to be avoided"; While Beverley Robinson, also cited in the same work (see p. 139), says: "The more I watch cases of pronounced arteriosclerosis, especially in men and women past middle life, the less frequently I prescribe either digitalis or the iodides." Mackenzie himself is sparing in the use of digitalis, giving it only when compensation is lost, and deeming it particularly indicated in cases presenting auricular fibrillation.

All things considered, I feel disposed to wait for further developments before taking a positive and final stand upon the effect of digitalis on blood pressure. The question may be settled, and I am free to admit that the latest experimental contributions seem to indicate that digitalis is not the pressor drug that it has been thought to be for some generations back.

ALFRED S. BURDICK, M. D.
Ed. *Am. Jour. Clinical Medicine*, Chicago, Ill.

Pellagra.

Recent observations tend to show pellagra to be a disease dependent upon the character of the diet; but are we not too hasty in assuming this to be the whole case? It is said that the disease prevails among the poor in the country. In my practice in Florida, Georgia and in the Indian service, this was not the case, for pellagra did not then exist there, although the living of the people was most ordinary. It is hardly likely that the disease existed there but was not recognized by physicians, since so distinct a disease would certainly attract attention.

The writer lived among a people whose diet consisted of cornmeal, flour, bacon, syrup and a few vegetables, and who for months would have no butter or milk, yet there was positively no such disease as pellagra amongst them.

My experience is that there is very little syphilis or gonorrhoea among those who live in the country, and when these affections do occur the patients do not realize the importance of long-continued treatment.

It is said that the negro is particularly liable to contract pellagra, and it is well known that this race suffers much from venereal diseases.

Is it not possible that this disease, like others, may have been brought to America by some foreign element of people?

Pellagra seems to follow in the wake of syphilis, if it is not allied in some manner with it. It may be that the disease is caused by some form of spirochete, as was suggested by Dr. J. E. Evans in *Southern Medical Journal* in an article tentatively claiming an analogy with syphilis for pellagra; or even an attenuated syphilitic organism. At all events, syphilis, by

depleting the system, may render one susceptible to pellagra.

We know that syphilis increases the virulence of tuberculosis. It seems amusing to hear of associations formed to "stamp out the white plague" when no such movement is made to stamp out venereal diseases, which are admittedly such a factor in the tuberculosis problem. Destroy these, and I predict we will have less tuberculosis and perhaps less pellagra.

J. G. B. BULLOCH, M.D.

1659 Columbia Road, N. W., Washington, D. C.

Treatment of Grippe and Influenza.

I see by reports that you in the East are having a severe epidemic of grippe, with many fatalities. We also have an epidemic of it, but have so far had no deaths from it.

In the severe epidemic of '91 I had a hard attack, and very foolishly kept at work through it all. The intense disturbance of circulation, with chills, cold hands and feet, and the consequent cerebral congestion, with severe headache and distress, nearly destroyed my hearing, and it gave me a hint, or rather a hard kick, as to the main indication for treatment, and the results that I am getting now are so satisfactory that I make bold to send you a short outline of it.

The patient is given a hot bath or hot mustard, foot-bath and put to bed with hot water bottle to feet and an ice-bag to back of neck. Mild laxative plus colonic flushing repeated until bowels are well cleaned out. For the fever, a trinity granule once an hour till better, then every two or three hours. For intestinal antisepsis, a tablet of two grains each salol and quinine every two hours.

For the throat and bronchial irritation, simple remedies also are best. Equal parts of pure glycerine and sweet cream, taken hot, is a good cough remedy, especially good for children. Barley water, flavored with lemon juice, sipped frequently, is also good, as are elm lozenges. If a sedative is required, the little tablet of codeine, ammonium chloride and cubeb, is one of the best. Morphine is rarely needed. Heroin *never*. I would put heroin in the class of unreliable poisons, with nicotine.

There is probably no disease, excepting measles, that so entirely suppresses the patient's appetite, and it is well to withhold food entirely for first twenty-four hours, and then give only light diet. Some think because of the great depression and weakness that they must crowd the food, but when it is not digested or assimilated it can only add to the depression. After convalescence is established, elixir pepsin, bismuth and strychnia is a good tonic, as is the tablet of triple arsenates with nuclein.

W. A. MARNER, M.D.

Miles, Iowa.

A person taking potassium iodide gives a positive luetin reaction irrespective of the presence of syphilis, according to Sherrick.

The Epidemic of Influenza.

-In late December and early January the country faced an epidemic of colds, catarrhal affections, influenza and what appeared to many to be genuine grippe. Most of the cases were called "grippe," although we were unable to class most of our own cases as grippe. Indeed, we have not seen fully developed and characteristic cases of grippe since 1896; but we went through the severe epidemic or pandemic of 1889-1890, and may view the matter in the light of that experience.

Whatever may be the proper attitude, many of the present cases in debilitated and aged persons have resulted in pneumonia, and there is no doubt that even the mild cases are an infection of wide-spread diffusion.

Gentlemen who have made careful clinical observations during the present epidemic may be able to throw some light upon the pathology and the proper nomenclature pertaining to the present epidemic, and we wish such men would report to us their conclusions. In *J. A. M. A.*, January 1, 1916, Mathers shows that, in Chicago, pyogenic streptococci, and not the *B. influenzae*, were the organisms found in "grippe" cases.

Perhaps the end is not yet, as the period of seasonal incidence for grippe is largely before us. It would seem the course of wisdom to give serious attention to every "cold" during the coming months, isolating the sufferers as much as possible, and putting them to bed as a precaution. Antiseptic sprays and gargles, dietary precautions, an abundance of fresh air, and hygienic living in every sense of the word should be the order for all of the people; and the profession should be on the watch for any and every infection, as well as avoiding any depressing medication not positively indicated. In the absence of positive information upon the bacteriology of the present epidemic, there should be a very expectant attitude maintained regarding the use of bacterial vaccines, that doubtless will be urged as applicable in the treatment of the sufferers. And, Doctor, take care of yourself. Several overworked physicians have themselves died during this epidemic; and this is a warning we should all heed. Systematize your work; get proper rest; don't use alcoholic stimulants; keep warm and dry, and be sure to take such medicine as you may need. Your patients and the country need you.

If the black letters on your typewriter keys become dimmed, carefully paint them over with a strong solution of nitrate of silver and stand in the sun. Clean the keys with a soft rubber eraser.

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While we, as physicians, desire to be scientific students and practitioners of medicine, and that is the primary purpose for which this journal is published;

THE BUSINESS SIDE of Medical Practice

"The laborer is worthy of his hire."

yet, for the welfare of our dependent ones and our standing in the community, we must secure a fair compensation for the services we render our fellowmen.

The Psychology of Patronage.

A Reply to Dr. Fish.

By ROBERT T. MORRIS, M.D.,
616 Madison Avenue,
NEW YORK CITY.

My reply to Dr. Zaring was perhaps a bit too brusque, but after more than thirty years of observation I am convinced that doctors are too busy to get right down to a plain philosophy which would make them more contented. When answering the letter of Dr. Ralph C. Fish, please consider that I am carrying a sympathetic feeling while making points bearing upon the psychology of the situation.

"Perhaps the Doctor (Morris) has not as yet been compelled to realize the meaning of being placed upon the altar of sacrifice."

If Dr. Fish will step into a public library and ask for my book entitled "Doctors versus Folks," he may find that most of us have to go through very much the same sort of experience. Just a couple of concrete illustrations:

(1) When first entering the profession and finding that almost none of the leading surgeons of the day had accepted antiseptic surgery, Putnam published for me a little book which said things. Here are some extracts from review notices:

"This book is rich in bombast but destitute of any practical value."—*Medical Bulletin*, November, 1886.

"This, beyond doubt, is as contemptible a book as was ever written for medical men. The style to be expected from an ardent partisan with little knowledge and bad taste."—*Medical Herald*, November, 1886.

"A prominent example of superlatively bad style and sophistical reasoning."—*Southern Practitioner*, December, 1886.

Possibly Dr. Zaring and Dr. Fish may not realize that in the publication of this book I was placed upon an altar for sacrifice. After devoting years of time to preparation for entrance into the profession and having gone to Europe for the purpose of diligently working out a way for being a really good surgeon, equipped with the latest

scientific method, this was the sort of reward obtained. Opportunities for obtaining positions on hospital staffs were denied me because the leading men connected with those staffs looked upon antiseptic surgery as being fanciful.

(2) After I had become established in practice and had a first rate income, I observed that the methods for treatment of appendicitis, according to accepted principles of the day, gave a large death rate, a large suffering rate and a large morbidity rate. This was due to the conscientious work on the part of our very best surgeons following out principles of the Third Era of Surgery.

According to the principles of this era the surgeon was to thoroughly remove all products of infection, giving little consideration to the internal resistance factors belonging to the patient.

I followed up a clue from the laboratory work of a few investigators on the subject of normal cell resistance of the individual, and then worked out the principles of the Fourth Era of Surgery. These principles included the idea of doing the smallest degree of surgery that would suffice to turn the tide of battle between patient and bacterium, leaving the patient in charge of his natural resistance forces (giving him home rule).

Reforming Surgery.

I published a report upon a series of one hundred consecutive unselected appendicitis cases with a death rate of 2 per cent., at a time when the average death rate at leading hospitals in this country and in Europe in the same class of cases was 17 per cent., according to published hospital reports obtained for the purpose of collecting data. The death rate in some hospitals in cases of appendicitis with abscess and peritonitis was as high as 30 per cent., according to published reports from these institutions.

I made an effort to turn the mind of the profession away from the violent attacks of surgery which they were imposing upon appendicitis patients conscientiously, and for that purpose centered professional thought upon the idea of an inch-and-a-half incision and a week-and-a-half confinement.

Perhaps Dr. Zaring and Dr. Fish imagine this did not result in crucifixion. One critic even

went so far as to publish in the *New York Medical Record* a statement that statistics like mine were vainglorious cheats intended for the purpose of boastfully showing superiority, a claim which no one accepted because it was well known that such statistics represented selection of cases for the purpose of favorable report, allowing unfavorable cases to go without help. Patients who threatened to injure my statistics were allowed to die rather than introduce any risk to my statistics. At this late date when still better statistics are being published by many other surgeons, it is perhaps unnecessary to say that I had not refused help to any patient, but had operated every appendicitis case which had been seen by me during the period covered by the statistics. Controversy over this subject aroused such unfavorable action and reaction that it was a question at one time if I should not be obliged to give up the practice of surgery and enter some other calling in order to buy food and shoes for the children.

I might quote a number of other personal experiences in the same line and am simply referring to these two in order to allow Dr. Zaring and Dr. Fish to know that when answering their crucifixion points it is not unfamiliar ground.

Citizenship and Favoritism.

Dr. Fish says: "Men in the same professions do not have the same rights and privileges of citizenship . . . there are many men in our cities who would like to take up special work, but are debarred from entrance even though they pay taxes equal to other men in the same line of work to many of our public hospitals. Why? Because the appointees are selected by the trustees' favoritism."

This is no doubt true, but we must make a study of the terms of favoritism. Do they relate to broadmindedness, gentility, science and skill on the part of the candidate who becomes a favorite of the trustees? The answer may usually be in the affirmative.

The "Merit System."

"Why not have a merit system, that is, an examination, and the best chosen?"

Men who can pass the best examinations are by no means necessarily the best men. How many of the valedictorians at our universities are ever heard from in later life? Yet these are the men who pass the best examinations. Even in the Metropolitan police force examinations the men who receive highest marks are those of the mental type. The highest degree of courage, bravery and perhaps strength of character may be found in candidates for the force who belong to the motive and vital types. These men do not pass the highest examinations. Fitness for position upon the hospital staff or other medical institutions would not necessarily depend upon

merit-system examinations. A man is judged by his fellows according to his whole character as a man and not by individual acts or by proficiency in some one field of mental activity. We shall usually find that men who stand high in public institutions belong where they stand. There are exceptions, to be sure.

Politics.

Sometimes politics, sometimes nepotism, sometimes any one of half a dozen social forces will place a man in position for which he is not naturally adapted, but in medicine we shall usually find that a man who maintains high position after obtaining opportunity is a man who has chopped his way step by step with a merit axe.

" . . . the terrific inconsistencies of State government, relative to medical affairs. Are these not a disgrace to the medical profession, as well as to the capacity of our Legislatures?"

Very true. We must remember, however, that State governments are chiefly under control by politicians. The politician represents as distinct a type of mind as does the poet. He is the phylogenetic brigand belonging to a clan, yet a real good fellow withal; good company with ready fellowship for anybody who will join his clan.

Others in "The Same Boat."

If Dr. Fish imagines that the medical profession is the only one which suffers because governments do not make best use of expert scientific consultants, it is because he has been too busy with his good work as a doctor to make observations in other fields. Man is only half civilized as yet. He does not know how to use available experts in any field of action.

Expert geologists and geophysicists were sent to Panama after the Culebra slides had occurred instead of beforehand, and yet we should not have had any Culebra slides at all excepting for a masterly stroke of dynamic politics some years beforehand.

Success in the science of medicine and in the art of medicine are two separate matters. Success in science depends upon correct discovery of facts or accurate observation of facts in their relationships.

In politics position is obtained by means of tongue and pen. The politician who has obtained important place through power of phrase is in position to do a good deal of deciding about who shall hold situations that are under his control. His training has been in oratory, perhaps, rather than in analysis of scientific men and method. His power is the power of dialectics and of expediency. His training having been in this direction, renders him unable to distinguish a charlatan from a responsible authority in science. Men who take charge of public opinion are not

sympathetic with the cause of expert science in any field of the public service. This is not due to any wrong intention so much as it is due to ignorance belonging to a type of mind which has been trained in other ways.

Boards of medical examiners have not been free from the influence of politics, any more than boards of other examiners in other fields of work have been free from political influence, and yet on the whole the boards of medical examiners have consisted of very trustworthy men, sometimes including the ablest minds available in the State.

Crucifixion.

"And yet Dr. Morris believes that the best must submit to crucifixion."

Quite true. Man is only semi-domesticated as yet. A man of third-class mind with good powers of coordination and collaboration is apt to take a good comfortable mean-type position in his calling. A man of second-class mind, that is, with inventive talent, must be prepared for conflict, engendered by his suggestions which are new, and in which the public has not as yet had experience. There are compensations for this attitude on the part of the public. Having an inventive mind myself, I have put propositions at various times which were all wrong and which deserved to be defeated, but good propositions which deserved to succeed have been so sharpened and polished by opposition that they were given better cutting edge and point for purposes of penetration.

A man of first-class mind, that is, with creative genius, is so far out of range of the critical ability of his time that he is apt to be crucified and to appear after death as a reincarnation in others, who have been imbued with his spirit. That is why I believe that the best must submit to crucifixion.

"An Eye for an Eye."

Dr. Fish believes that the best way to get rid of any sort of injustice is to impose injustice upon those who are responsible for it. Theoretically this is perhaps true if the principle of turning the other cheek fails. Practically, however, this very thing has led to about all the wars in history.

Injustice belongs to those organic laws which relate to survival of the fittest,—cruel laws but natural laws. The fox is unjust to every pretty little rabbit which he happens to find contentedly at work in the moonlight.

As a matter of fact, the medical question may stand for the whole human question in its entire range of movement. If we were to have everything all right at the present time, people who come here 2,000 years after us would have to mope around with nothing to do.

Perhaps, after all, a certain teaching from St.

Francis is the best teaching for members of the medical profession. He advises men to find fault with no one but themselves. A man who leaves others alone and who finds fault with no one but himself will gradually attain to such stable position that he may enjoy all of the reasonable satisfactions of life. One who nervously gets the fidgets because he is not enabled to impose much injustice upon others will not lead the useful life which belongs to the one turning his hand calmly to things which are to be done right at hand.

Shylocks and Medical Societies.

"The cooperative influence of the profession in general ought to be big enough and strong enough to eliminate those whom we term Shylocks, whether they are public or private ones."

Lend your aid to the established medical associations in the direction of just this sort of cooperation. There is perhaps no calling in the world in which men do not often wish they were out of it and in some other calling where things are easy. Things are easy in the other callings in the fancy only of those who have acquired methods of contentment in their own calling.

Efficiency.

"One of the twelve medical apostles of the city of Worcester does surgical work for the insurance companies at twenty-five cents a head or office call."

The public finds out if the examinations are worth that or less. This doesn't really keep the superior man from being worth seventy-five cents. One may observe that the doctors with the largest practice in almost any city are the ones who charge most for their services.

If any doctor will take charge of the first case of dyspepsia that comes into his office in such a way that preliminary expert examination costs seventy-five dollars before the doctor has prescribed a single dose of medicine for that patient, he will find that twenty-five cent patients leave the twenty-five cent doctor as quickly as fleas jump away from a dead fox.

If the patient can not pay seventy-five dollars the doctor can beg in the interest of the patient, and his very next patient is likely to be one of the sort who evens up all cuts in the financial road. If the doctor who follows this method lives in a village he will find wealthy people spending their vacation in his village in order to be near him.

There is a certain psychology of patronage in the diamond business and quite a different one in the coal-by-the-bucket business, the one being the psychology of wealth and the other that of poverty. Some physicians are so placed as to find the psychology of wealth available to them, while others are forced to the psychology of poverty;

and these two classes of doctors don't understand each other's point of view. It is distressing that in medicine a class of young men graduate with even ideals and the same hopes; but they drift as far apart as are the communities in which they settle; and some become embittered, while others attain to the good things of life, each as his environment shapes his career.

Both rich and poor must have doctors, and the doctors of the rich and those of the poor are

often driven as far apart from each other as are riches and poverty. Perhaps, in our present civilization, this is unavoidable; but there is need for a great get-together movement among physicians, even as there is among the people at large. If educated people in lay occupations would draw together instead of founding their social distinctions upon wealth and old-family affiliations, the educated professional men would be in better position to draw together also.—EDITOR.

Business Ethics vs. Medical Ethics.

JUDGING by much current comment, part of which was by our contributors, medical ethics are deteriorating, the man at the top blaming the man at the bottom and the one at the bottom returning the criticism in kind. The Great In-Between is ignored in the discussion, probably because he is saying little. But the fact remains that, despite talk emanating from the big cities, the old code of medical ethics continues to fit in with most doctors and their communities about as well as does the old United States Constitution.

Fundamental conditions change but slowly, and the ethics of medicine and of business change but little in essentials. But methods change and varying interpretations are placed from age to age upon old creeds and old codes of ethics; but the creeds and codes remain. Man himself changes but little, but his environment does change and the problem of the man is to adjust himself to environment.

A Commercial Age.

A commercial age has dawned. Business felt the change first, and the professions are beginning to feel it. Commercialism is the destiny of this age, argue as we will; and we may as well meet the situation as it is, for we have to live in the present, not in the past. The reason why this is a commercial age is found in the means of intercommunication—railways, steamships, ocean canals, telephones, telegraph and postal services. Trading is the first instinct of tribes thrown together; and the next instinct is intertribal war, the tribe thinking itself the superior and stronger one wanting to control trade and make the vanquished buy from it. After a series of wars, trade goes on even more briskly than before, and both victor and vanquished find market for their goods. The present European war is a trade adjustment, and commercialism will become more strongly entrenched than it was before the ante-bellum days of this age. Yes, a great commercial age is ahead of us, an age of peaceful commercial progress; and we have need to establish an international peace in order to promote the great international trade boom ahead. The war will

clear the air and it will place commercial ethics upon a higher plane, giving to each and every nation as big a "place in the sun" as each and all may be capable of filling.

America's Place.

By America is meant this hemisphere, both the English-speaking and the Spanish-speaking portions of it. Some years ago the relations between America and Spain were adjusted by a war fought on this side. At the present time the Spanish-speaking races of this hemisphere are adjusting matters between themselves; and it is going to be an easy matter for the English- and the Spanish-speaking peoples here to pull together for common business interests.

America is fighting out the social and industrial problems of this commercial age, and the warfare here, if we have any, will be that between capital and labor.

American Business Ethics.

American business ethics are improving steadily. The great trust has taught all business that coöperation pays better than does cut-throat competition. Small business is learning this lesson, and, in the aggregate, will soon be big business, with every man given a chance, according to his degree of efficiency, as Germany is teaching us.

American medical ethics is in course of business adjustment, and this is very necessary in view of this commercial age tending to commercialize medicine. We may deplore the fact that medicine is being commercialized, but we can't prevent it. The thing to do is to regulate it.

Doctors in a Hard Fix.

There is no doubt at all that modern commercial conditions in medicine are putting many estimable men in a hard position, just as the business trust forced many small business men to the wall. How is a doctor to live up to modern ideals of medical efficiency if life is for him a constant struggle to get his rent money together and his family fed? This man sees young fellows of intrinsically less ethical perspective than himself but who have mastered

certain specialized technic get his patients away from him and, by modern business methods, as applied to medicine, crowd the thoughtful and conservative man of experience almost clear out of the medical game. A day or so ago we met a physician who has attended over two thousand confinement cases and had a corresponding large experience in other lines. Over \$18,000 is owing to him. He is a capable man in many ways, is honest and reputable, and is very much of a gentleman. Yet two more modern men who lack most of his graces have secured practically all of his patients, and he is hunting a non-medical job so his family may eat. These more modern men are not violating medical ethics and are excellent physicians; but the situation is desperately hard for the old doctor. Such conditions are parallel to those obtaining a few years ago in American business enterprises, when the trusts were cutting the throats of competitors.

Co-operative Ethics.

The lesson the medical profession needs to learn is to make medical ethics coöperative, so that the submerged men in medicine may have at least a fighting chance. It will be good business to do so. Let the "trust" group in medicine learn some brotherhood and humanity as applied to the well-meaning but submerged physicians; let them help to make their distressed brother effective; let the great medical societies take a hand in this uplift! We need not stop fighting inefficiency, quackery and medical graft; but let us be humane and kindly to every doctor who wants to do his best! Let us help him to do it! Let us place medical ethics upon the present coöperative basis of business ethics! Doctor, what can you suggest in the line of doing this?

Look out for overhead charges in conducting business; they eat up more than a man can make unless he is careful.

You will get larger returns from money invested in small renting properties than from large ones.

It pays to use neat labels on all medicines dispensed.

Business is Business,

even with the physician. Indeed, what YOU have found good business in your work may help your fellows in the profession more than you may realize. Perhaps they may not have thought of the very thing you should tell them in these pages.

Practical Politicians and Disgruntled Doctors.

DOUGLAS H. STEWART, M. D.
128 W. 86th St., New York City.

The greatest trouble under which the medical profession is laboring, is that while many big things are wrong, each member has some little individual or pet wrong, the urgency of which blinds him to the fact that he must be content with what he can get, be that much or little, because any attempt at righting a multitude of injuries invariably leads a meeting or an assemblage into confusion and lack of cohesion—into a sort of blind alley, where things are wrong, are impossible of being righted, and where the state of affairs may not even admit of comprehension.

In any community up to that period in its civilization when the franchise is both obtained and exercised, an unscrupulous man may annoy his neighbors as he pleases, provided he has the physical prowess or a sufficiently strong body-guard. If he has the latter, no one's rights may take precedence of his whims or audacity. The pyramids were erected by unwilling, wageless, whip-driven and voteless workers.

In our country the two most powerful weapons for the oppressed are "clamor and votes." In the political world nothing is granted because it is just and right or because of inert, inactive or spineless complaints, but because a delegation makes a clamor to the effect that if "a concession or change is not brought about, then the body which that delegation represents will deliver a solid vote of its members to the man (or party) who will bring it to pass."

Throwing Away Our Weapons.

This is a land of suffrage, and the doctors, by despising or neglecting politics, have thrown away their best weapons and earned the contempt, ridicule and neglect of politicians. Right, wrong or high-mindedness are not factors in this problem, and inefficiency is only increased by indulgence in piffle. The great question is: "Are you willing to mass votes for the doctors' interests?" If not, then your complaints will probably increase in number, if it be possible; will fall on deaf ears, and will grow in futility. For to him that hath a pull shall all things be added, but to him who hath not, even our law courts will present the astounding spectacle of thirteen untrained men (viz., a judge and jury) passing upon medical testimony. On the other hand, in both medical and communal politics, general practitioners, by pooling their votes, may obtain almost any desirable thing.

The County Society and Politics.

Let any county society hold the balance between two political parties, and there will be small fear of its having any grievances. The politicians will eagerly and promptly remove them. Eloquent talk of right or wrong, of law and justice, or of any other beautiful ideals, will never obtain them, but how smooth the path of

the body that can deliver votes and how easily the ideals will come true of themselves.

General practitioners are sleeping lions, but no one will trouble to rouse them. If a hod-carrier should say to one of their number "I am just as good as you are," then he would understate his case. The hod-carrier's complaints will be quickly attended to, because he votes and he belongs to a union that has solid votes, while the physician is a member of a broken, disorganized and disgruntled profession. His medical society dares not enforce discipline to the limit of impartial and unswerving justice, and its vote is so split up or neglected that it is not worth bothering about. It is said that no two members will vote the same way upon anything.

Clique Government.

Doctors may despise politicians and politics, may even apply the term "dirty" to both, and the result is just about what a far-sighted man would have anticipated, *i. e.*, the doctors are governed and ignored by little cliques, whereas the backing up of any demand by a combination of votes means a big, universal clique, whose officers are its servants, not its masters. But as matters are, the doctor rates very low indeed upon the list of the politician and of the real estate office, and of the credit man. Furthermore, his neglect and misuse of the ballot appears to laymen to fully entitle him to free admission into the "Fool's Paradise."

Let's Wake Up!

Let a county society once hold the balance between two political powers, and its members will not be allowed to have any real grievances. The politicians will eagerly eliminate those in advance, as it were. If you would have a smooth path, do not talk right or wrong, or law, justice or any other beautiful ideals; talk votes that you are prepared to furnish, and the ideals will be yours for the asking.

As an example is usually given, perhaps it might be well to mention that this idea was once carried out against the profession at large. In a certain city a certain number of men made up their minds that they desired to control all the public hospital positions. They had one hundred and ten votes (about). They offered to support a commissioner of charities, and they obtained the wished-for control. All the incumbents were removed without charges or discharges. The county association voted that the whole thing was a violation of the code of ethics, and that is all its protest amounted to. In answer to my question, "How was it done?" the engineer of the deal told me "We wanted it, we worked for it and we got it." The hospital positions in institutions that were supported by taxes were delivered over to a clique and have remained under its control for twenty years.

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What Is a Doctor Good For, Aside from Medicine?

I propose a question that must have agitated the minds of many physicians: What are we fitted for, aside from medicine, to gain a livelihood? The lawyer can combine real estate promotions with law practice, and is generally a fair business man. The clergyman can lecture, write articles and books, and some—at least our city clergymen—are pretty good business men. But medical practice seems to fit one for no other career. I would like to hear what other physicians may have to offer.

CHARLES F. D'ARTOIS-FRANCIS, M. D.

Brooklyn, N. Y. —

This is a good question. Let us view it as we would if absolutely out of a job and without any social pride. The answers will differ, according to the individual gifts. To start it, here goes: Our amateur fad is floriculture, in the literature and practice of which we have kept right up for years, and it would not be very hard to pick it up as a business, probably making some mistakes at first. We used to teach physics and chemistry, and could do it again. Then, too, when in college some money was earned in making scientific charts in water color, and that is profitable work if any one has any ability as a draughtsman. We could do inside electric wiring and installation. Having spent a year and a half behind the dispensing counter, probably that could be taken up after a little study. And we can write a little bit. Think over it a little, Doctor, and probably you will decide you need not go hungry, even if some State Board does tell you you must not practice medicine.—
EDITOR.

Paine Refrains from Telling How.

In order to lure the unsophisticated speculator into believing that Dame Chance can be safely collared and controlled in Wall Street, J. Overton Paine, Newark, N. J., "tipster," relates how, way back in 1899, he made a million dollars from a shoe string of a margin of \$100. This ancient history is now paraded forth to get customers for his market letters. Whether Paine made a million or a few hundred thousand dollars out of a fortunate speculation, is not so important for his prospective clients to know as it is for them to acquaint themselves with the fact that he has gone broke on Wall Street as a broker, proving that, contrary to his false assertion, his riches made there can vanish as fast as they come. For what Paine charges \$25 a month, the average speculator can get out of the daily financial press with an expenditure of but a few cents, and in all probability what he there learns will be more reliable than anything this capricious garbler of the truth can ever dole out. As far as *The Financial World* has been able to keep a record of Paine's operations they have produced more pain than the happiness he promises in the foreword of his Munchausen circulars.—*The Financial World*.

CONSTRUCTIVE REFORM

For the Practical Benefit of the General Practitioner

Alcohol as a Therapeutic Servant.

KING ALCOHOL has reigned long enough, and it is time to end his rule; but Servant Alcohol may be very useful. This article will ignore the king and tell about the servant, and what he may profitably do in the domain of therapeutics. What is here said is predicated upon the action of alcohol in the form of whisky, brandy or wine; and the toxicology of alcohol will be merely touched upon.

Many form an erroneous idea of the action of alcohol upon internal mucous surfaces because of their misunderstanding of its action upon the skin. It is true that alcohol applied to the skin and allowed to evaporate cools the surface and may act as a sedative; but it must not be forgotten that repeated applications harden the skin from coagulation of its protein substances, while continued application with evaporation prevented causes marked irritation, is vaso-dilator, and may go on to severe inflammation.

Even in greater measure does this vaso-dilation and inflammation, with coagulation of protein, manifest itself upon the mucous membranes over which it passes, or through which it passes, in ingestion, in the process of digestion, and in elimination.

So, then, it is evident that the therapeutics of alcohol inheres only in dilute solution. The contention has been made, but not sustained, that alcohol even in very dilute form is finally equally irritant. Be this as it may, the fact that dilute alcohol is very rapidly absorbed makes it improbable that therapeutic doses of wines and dilute liquors used for a reasonable length of time will have such deleterious action. Chronic alcoholism is another and a different matter.

Secretion.

Indirectly, alcohol stimulates the secretion of saliva and of gastric juice; and Chittenden and Mendel have proven that alcohol present in the blood-stream stimulates the flow of gastric juice and increases its solids and acid. These observations apply wholly to medicinal dosage, large amounts of alcohol, especially if taken continuously, bringing about pathological changes.

Digestion.

Below 5 per cent. strength alcohol does not inhibit ferment action, and hence in such dilution does not interfere with the processes of digestion; but 20 per cent. solutions stop the action of

pepsin completely until after absorption reduces the percentage of alcohol present. Carbohydrate digestion is even more retarded by acid-bearing alcoholic liquors unless taken quite dilute. Medicinal dosage of dilute alcoholic liquors do not interfere with the chemical and ferment activities of digestion. Indeed, alcohol in medicinal dosage may promote peristalsis, aid in fat digestion and promotes absorption. Remember that the pathology of alcohol in this field is easily reached.

Nervous System.

The action upon the nervous system differs with the individual, but small doses always shorten the latent period for reflex actions and have a depressing influence on neuro-muscular co-ordination and effort dependent upon them. Even in small doses there is increased ability for a short time but a marked reaction. In consequence, alcohol even in small doses has no place in nervous diseases except in occasional cases where it seems adapted to produce sleep and in cases where small doses may be necessary in a patient accustomed to drink.

Circulatory System.

In therapeutic doses alcohol is a circulatory stimulant, slightly raising blood pressure; but it is not to be compared in efficiency to other drugs for its cardiac influence. Indirectly, however, by reason of its dilating the cutaneous blood vessels, small doses lower temperature slightly.

Respiration and Kidneys.

Small doses stimulate respiration, the manner of its action not being definitely known. Small doses are diuretic, probably through increase in blood-pressure.

Therapeutics.

Alcohol, although possessed of some nutrient properties, must be regarded purely as a drug, and it must be used only within its indications and in reasonable dosage. Large doses are never indicated—doses such as induce drunkenness.

Local uses are many and need not be discussed in detail here.

Shock is one of the cardinal indications for alcohol, since it increases the amount of blood on the arterial side and relieves venous accumulation. Even here its use should be only for a brief period.

As an aid to digestion it is sometimes useful

during convalescence. But the use of well-diluted alcohol with food is to be limited, for its use in aiding digestion, to such cases as do not secrete enough gastric juice, and this cannot be predicated of convalescence in general, although nearly always it is true of old and very debilitated people.

Its use as a heart stimulant is limited principally to acute febrile diseases, such as pneumonia and typhoid. When the heart beat is frequent and the pulse markedly compressible, heart failure may impend, and in such cases alcohol is of undoubted value. A marked advantage in the conditions noted is that it tends to promote sleep, as it also does in aged people with weak circulation. In typhoid small doses have a certain food value, as they also do in the "starvation treatment" of diabetes.

Sometimes, in the depressing gastroenteric diseases of infancy, very small amounts are of value. To abort "a cold" alcohol must be taken very early—early enough for its tendency to relax the cutaneous vessels to relieve internal congestion.

Alcohol possesses a limited antidotal influence over certain organic poisons. It may be used as a heart stimulant and in certain digestive crises in the absence of more direct remedies, and in emergency. With some women it seems to aid in establishing the menses when the system fails normally to relax. In septic cases *sometimes* it appears to sustain the powers of the system over a crisis. Small doses of iced champagne will allay some cases of vomiting, and a small dose of brandy in hot water may allay gastric distress in weakened individuals. Threatened collapse when under stress may sometimes be averted by fairly full doses of alcohol. When food is not absorbed in the course of depressing illness, a little alcohol may aid.

There may be a few other indications, but they are not many; and what has been narrated covers practically the whole field of alcohol as a remedy. As may be seen, it is a very useful agent in a small field—a field constantly decreasing as the science of therapeutics advances.

In health, alcohol certainly is not needed and is vastly more liable to do harm than to serve any useful purpose.

Will You Help

*in constructing "Constructive Reform?"
It is not worth while boosting the dead
past; but it is abundantly worth while to
conserve the valuable heritage of the past,
as well as to reach out to grasp the good
things just coming into being.*

The Alkaloid and the Whole Plant Drug.

A writer in THE MEDICAL COUNCIL, Dr. Potts, while presenting a most excellent letter to the readers of that journal in pinning faith on single remedies with positive belief in their selective action, especially argues in favor of the alkaloids, asks: "Who now uses opium when he wants morphine?" "Why use jaborandi when we have pilocarpine? Why carry pounds of liquids when you have the same action from a pellet? Why use belladonna in preference to atropine, or nuxvomica in preference to strychnine?"

In this query the doctor misleads, very seriously, those who have not observed both sides of this class of remedies. No one, learned in the use of these remedies, will use one for the other. He asks who uses opium for morphine. This supposes that morphine covers the ground of opium fully, which it certainly *does not do*.

Anyone who has used both of these preparations in medicinal doses can obtain results from fluid preparations of opium, in inflammatory conditions, that are simply impossible with morphine. Any one who uses jaborandi for atrophic diseases of the skin, or imperfect action of the sweat glands, using it in small doses, over a long period, is positively convinced, when he knows fully the action of pilocarpine, that he cannot get the same results from that alkaloid.

He who uses nuxvomica for chronic atonic conditions of the stomach or intestinal tract does not think of undertaking to secure the same results from strychnine, even when he knew that remedy well, and he who uses very small doses of a good fluid preparation of belladonna throughout all of the local inflammatory conditions of childhood would fail in at least seventy-five per cent. of his cases, if he depended upon atropine, and so throughout all of the alkaloid-carrying drugs.

The two remedies are equally important, but they must positively *be studied separately*. They must be considered each with reference to its own characteristic action.—*Ellingwood's Therapeutist*.

"Circumcision of the Tonsil."

Dr. F. G. Murphy, Mason City, in *Iowa State Med. Jour.*, advocates detaching the tonsil from the pillars and freeing it from other adhesions by a simple office operation. He would not "masacre" the tonsil; he would simply "circumcise" it, and thus save it from its many ills. He has "circumcised" the tonsil in 90 cases, doing a rather thorough job, separating a portion of the muscles which cover the tonsil. This freeing of the tonsil allows its normal drainage and it soon retracts, crypts clearing up and congestion subsiding.

This seems like a sensible procedure.

In chronic nephritis, which is really seldom cured, the patient will live longer if adequately nourished.

Oxyuris Vermicularis in the Etiology of Appendicitis.

Dr. Kwannosuke Suzuki, fleet surgeon in the Japanese navy, in a scholarly paper in *Surgery, Gynecology and Obstetrics*, December, 1915, concludes:

1. In an appendix the oxyures may be harbored, not only in the lumen, but also in the mucosa and submucosa; this may occur without producing any clinical symptoms or any noteworthy anatomical changes.

2. We sometimes encounter a case in which an appendix infected with oxyures is inflamed through a totally different agent. For this reason the origin of appendicitis can not be attributed to the worms, although these parasites have been found in an inflamed appendix. In the majority of cases the presence of the oxyures in cases of appendicitis, whether it be chronic or acute, is to be considered as a pure accident.

Rheindorf always attributed too great importance to infection caused by oxyures. His statement to the effect that all cases of appendicitis or pseudo-appendicitis are to be attributed to oxyuris infection, appears to me to be inaccurate.

3. I was able to ascertain that a true inflammation is provoked by the parasites when the latter have penetrated the wall of the appendix in large numbers, and that the traumatically destroyed fissure in the tissue is for a protracted period of time in connection with the lumen, thus offering the infecting agent a portal of entry. This type of the disease offers us distinct histological data, for which reason I have designated it "appendicitis oxyurica." But this type of the disease is only rarely met, and among one hundred and three surgically extirpated appendices I met but one such case.

4. A non-inflammatory, but pain-producing morbid condition of the appendix is sometimes caused by the oxyuris, in which cases traumatic destruction of the tissue accompanied by hemorrhage can always be demonstrated. It is very much to be doubted whether oxyures which are merely situated in the lumen are able to cause this painful condition, without any accompanying anatomical changes.

Among the one hundred and three above-quoted cases I found three cases of this type.

5. From my investigations I am able to affirm with certainty, that a part of the oxyuris passage and cleft of which Rheindorf speaks, and several fine fissures in the lymph nodules seen in his illustrations, as well as certain defects at the edge of the mucosa, where no oxyures are to be found, are to be looked upon as artefacts. But on the other hand, Aschoff is, in my opinion, mistaken in considering every oxyuric passage and fissure to be purely artificial in origin, since the evidence of my own preparations, presented in this paper, must lead one to admit that an undoubted cleft is occasionally formed by the parasite.

Send \$3.00 for four years' subscription.

Saves a dollar. So much more convenient.

Best Current Medical Thought

Magnesium Sulphate in Non-Amebic Dysentery.

Dr. F. Wyatt-Smith, in *The British Medical Journal*, November 27, 1915, has this to say:

In February, 1898, when our forces engaged against the Waziris on the Northwest Frontier of India were being exhausted by dysentery, you were good enough to publish my experience in South America in the treatment of non-amebic dysentery by drachm doses of magnesium sulphate every two hours. I found it to be a specific; and the observation was confirmed by correspondents at the front, by the medical officer in charge of the gaol at Mauritius, and, later, in the South African war, by friends engaged in it. The observation is not new, for a correspondent in Belfast pointed out that it was published at least three hundred years ago. But that need not prevent the younger surgeons at the Dardanelles from giving the treatment a trial, when, I think, if it is the non-amebic form of dysentery with which they have to deal, they will be astonished at the results.

Hypertonic Saline Solution in Gynecology.

Clifford White, F.R.C.S., in *The Lancet*, October 30, 1915, commenting on the use of this solution in shell wounds, emphasizes its value in surgical gynecology and as a vaginal douche, and he specifies details, as follows:

Since my return to England some months ago I have used a solution made of 4 drachms of sodium chloride and $\frac{1}{2}$ drachm of sodium citrate to each pint of water as a vaginal douche in all inflammatory and septic cases where a douche is required, and find their effect is better than that of the antiseptic douches previously employed. In puerperal cases with sloughing of the perineum and vagina the effect is extraordinary—the so-called "puerperal ulcers" being replaced by healthy granulations within a few days. Among the patients thus treated have been cases of sloughing of the vagina from repeated unsuccessful application of the forceps, septic lacerations deeply involving the broad ligament and cervix, and sloughing of the cervix and vagina from repeated attempts by several people to deliver a patient who was subsequently delivered by abdominal section. In puerperal sepsis (especially abortion cases), after clearing out the uterus and douching it with saline solution, it is useful to leave a few tabloids of salt inside the uterine cavity to ensure that any organisms left there are flooded with the serum that is drawn in to dissolve the salt. The use of salt tabloids was, I believe, suggested first by Mr. Beckwith Whitehouse in France.

In gynecology all forms of infected and congested pelvis respond well, such as salpingitis,

cellulitis, gonorrhoea, vaginitis, and erosions of the cervix. Among the most striking results is the way in which a carcinomatous cervix cleans up before operation: these cases rapidly lose their offensive smell and become cleaner in appearance much more quickly than with iodine douches. As far as an experience at present limited to four cases enables a statement to be made, it appears that the parametrium during the operation is less congested than usual, but this may be only a coincidence. In the cases where drainage per abdomen is necessary on account of acute infection (e. g., gangrenous appendix), the results of saline irrigation of the drainage track have been highly satisfactory.

For hospital out-patient use the powder is put up in the proportion of one ounce of salt to half a drachm of sodium citrate. This proportion of citrate is rather lower than usual, but quite high enough for the purpose, considering that the present price of citrate is about 5s per pound. The powder, being bulky, is dispensed in paper bags labeled, "Two tablespoonfuls to two pints of water as directed."

Non-surgical Treatment of Exophthalmic Goitre.

Differing from the surgeons, Dr. Israel Bram, of Philadelphia, in *New York Medical Journal*, November 27, 1915, contends, after curing twenty-four cases, that 75 per cent. of cases are non-surgical, the 25 per cent. of surgical cases being those with dangerous pressure symptoms or showing malignant tendencies. Quinine hydrobromide in 5-grain doses, ichthyol in 2-grain doses, extract of suprarenal gland in 2-grain doses, iron, arsenic, and lecithin, are the drugs commended, using each as indicated. Rest, hyperalimentation and the violet-ray or the X-ray are useful adjuvants. Treatment should be kept up for six months.

The Treatment of Asthma.

Regarding asthma as a paroxysmal dyspnea, Dr. Bertram C. Davies, Los Angeles, in *Interstate Medical Jour.*, November, 1915, believes the "disease" to be a protest from a system carrying an overload. Asthma has no pathology of its own, unless a right heart dilatation or an emphysematous lung be so regarded. There is a special etiology, more or less, for every case of asthma. Heredity is little of a factor; nor does climate count as much as many think, although there is no doubt that winter, or the life people lead in winter, is productive of asthma. Sedentary life and occupation is a fertile source of asthma. Nasal conditions, adenoids, and other conditions are often etiologic.

Whatever causative condition exists, it must be treated; but, after all, diet is the principal factor, especially an excess of food or an improperly balanced dietary. The balance between proteid and carbohydrate intake, if faulty, is very apt to induce asthmatic attacks. Constipation should also be relieved.

Aborting Middle-ear Inflammation.

Dr. Frank E. Miller, New York City, in *The Medical Times*, reports splendid results from the following conservative ear treatment:

The general practitioner knows full well the tendency of middle-ear infection, suppurative and non-suppurative, to eventuate in abscess, and to extend to, and involve, the mastoid cells. A practicable, safe means of preventing such involvement, with its serious complications may be described as follows:

℞ Morph. Sulph., gr. $\frac{1}{4}$;
Atropin. Sulph., gr. 1/150;
Sol. Adrenalin Chloride, gtt. x;
Petrolati q. s. ad (Sten'l), ʒi.

The internal ear is first cleansed as thoroughly as possible, preparatory to the application of more affirmative remedial measures. A sterilized eustachian catheter, covered with Meg. M. A. A. Co., morphin and atropin sulph. (gr. $\frac{1}{4}$ and 1/150) is inserted into the internal ear, and any pus or other infectious material drawn off by aspiration. This preliminary step, for obvious reasons, is important.

The patient's head is now reclined upon a pillow, so that the external auditory meatus presents what may be likened to the flaring part of a funnel, formed by the auditory canal.

Into the canal is placed a four per cent. solution of cocain, so that if the tympanum is intact, there is a small "puddle" of the solution into which from two to four hypodermic tablets (containing morphin, gr. $\frac{1}{4}$, atropin, gr. 1/150, each) are dropped, and, as the cocain anesthesia permits, gently stirred in the solution until fully dissolved. The cocain is for quick anesthesia; the morphin-atropin combination to prolong the anesthetic state during, and after, the further treatment.

A small can of cataplasma kaolini, previously heated in a water-bath or pan of boiling water, is made ready. When at comfortable temperature, a piece of sterile absorbent cotton is loosely wound around a wooden toothpick, or other clean stick (of just sufficient size to go into the ear-canal up to the tympanum, but not large enough to irritate or impinge on the sides of the canal) and the remedy smeared over the cotton. This is then carried into the ear and carefully placed there, and a pledget of clean cotton placed over all to protect the ear-cavity from without. The application is allowed to remain in situ for forty-eight hours, before removal. This must be insisted on to secure the results desired.

At the expiration of the forty-eight hour period, the ear is washed out, and the otitis media, mastoiditis, etc., have disappeared. Please understand, the remedy is placed right into the ear-canal, through the external meatus. This, on account of the anesthesia already secured by the cocain and morphin-atropin applications, is practically painless, and hence practicable. If the tympanum should be so swollen and bulging and immediate destructive process is indicated so that it cannot be saved it can be punctured without

any pain under this local anesthesia. There is nothing harmful in this application, and I have never had any untoward results from the use of the above mentioned preliminary treatment for securing anesthesia. Even as high as four tablets of the morphin-atropin combination have been safely used in cases of children, even with perforation, but I would distinctly advise against morphia and atropin tablets or otherwise in case of perforation of tympanum it might be large enough to allow leakage into mouth causing nausea and sometimes poison to patient.

Activating Dormant Bacteria.

Drs. Swan and Goadby, in the *British Medical Journal*, November 20, 1915, publish a laboratory-followed series of war injuries and that seem definitely to prove that organisms may remain for a considerable time in the vicinity of a penetrating foreign body without giving rise to constitutional symptoms; but that recrudescence of local sepsis in healed wounds may follow the activation of the dormant bacteria by irritants and trauma and even by slight surgical intervention.

What Constitutes Tuberculosis in Childhood?

John Lovett Morse, A.M., M.D., Boston, in *Boston Med. and Surg. Jour.*, discriminates between tuberculosis infection and tuberculous disease. At 16 years not over 10 per cent. have escaped infection, but only a small proportion have tuberculous disease. A positive tuberculin test signifies only infection. Infection in children is almost invariably glandular; unless other tissues are involved and general symptoms present, the child is not necessarily tuberculous.

One must judge by the general condition, taken in connection with reactions and laboratory tests; but too much stress must not be laid upon slight temperature elevation. Anemia, debility and fatigue may be due to many things other than tuberculous disease. Dr. Morse tends to the view that tuberculosis in children is so similar to that in adults that nearly the same diagnostic criteria apply in both cases, especially physical signs and the presence of tubercle bacilli in the sputum.

This is recommended to relieve chilblains: Camphor, 1 gram; balsam of peru, 1½ grams; white wax, 40 grams; flaxseed oil, 80 grams. Melt ingredients together.

Your Medical Society

may have just listened to a particularly helpful paper. Won't you suggest that it be sent to us? Or some admirable plan for Society effort may be working in your country. Let us hear about it, please.

The COUNTY MEDICAL MAP

A Forum for the Problems of the County Medical Societies

The County Map aims to co-operate with the National and State Societies in promoting a wider interest in the County Societies, in increasing their effectiveness and in the interchange of plans successfully employed to effect these ends.

Members of County Medical Societies are invited to contribute to this department such matters as are of general and widespread interest.

County Societies publishing Bulletins will confer a favor by placing - The Medical Council - on their mailing lists.

The Physician at Thirty-five.

The ranks of the members of the medical profession are overcrowded, as are the ranks of very nearly all professions, trades, and other occupations. The result is the survival of the fittest, and a hand-to-mouth existence for the others. That the young physician may avoid the ordinary, ever-present pitfalls in this respect, he must make himself fit for his profession early and earn a competency before he is three score years of age, that he may not need to worry about being forgotten in his old age.

The fable tells us that Rip Van Winkle on his return to his native heath after twenty years of sleep, finding that no one recognized or remembered him, was led to soliloquize thus: "How soon are we forgotten after we are dead." Yet in the case of the physician, he does not necessarily have to die in order to be forgotten or passed up, for it does not take long for one's popularity and prestige to wane.

This was never more true than at the present time, when people are beginning to do things; that is, people are beginning to feel that some doctors help and cure them, while other doctors are just "marking time" and taking their money.

The physician who expects to wear well must build upon a rock. He must build early while the building is good; he must be a student always, resourceful, attentive to details, and most important of all with morals and habits that are above question.

The survival of the fittest is in fact a grind, but only so to the incompetent. As soon as a physician's activity, either physical or mental, shows the least sign of fag he is likely to find himself on the down-and-out pathway. A check is therefore necessary on any sprouting habits that may operate to bring on any sort of fag. New and strange gods are forever beckoning to the people, for it is the day of the young man, in medicine as well as elsewhere. So while the physician is yet active he should prepare for that inevitable time when his activities will, in a certain measure, be stilled.—*Monthly Therap. Topics.*

ACTION, NOT WORDS.

Some Things the New York Federation of Medical Economic Leagues Have Accomplished.

"Introduced the Nelson Bill to make dispensaries free to the poor. Forced New York County Society to reject the 'Fee Bill.' Caused the Bronx Society to reject the 'Fee Bill.' By publicity campaign, brought about its rejection by State Society. Placed the Industrial Commission on record against it. Examination of school children by private physicians. Defeat of Christian Science Bill while our County Societies were caught napping. Defeat of Whitney-Seeley Bill, which sought to give the State Board of Regents the right to revoke doctors' licenses. Caused public hearings to be held by the State Board of Charities on 'Dispensary Abuses,' and secured their promise to license no more hospitals that did not allow all physicians to treat their own cases."

Contrast this with the miserable showing made by the physicians of Illinois. Doctors, wake up!

The Secretary of the League is Dr. O. Rotter, 161 East Eighty-ninth Street, New York.

Write the Secretary and get some inspiration. It will help solve your own economic problems.—*Bulletin Chicago Med. Soc'y.*

Get the Community Habit.

Our members are all compelled to practice medicine, using that term in its broad sense, but each one of us has a particular part of the subject that we like best.

It is utterly impossible for each of us to follow closely and keep posted on everything that composes the advanced medical thought of today. Now, then, why not encourage our members to work and advance themselves along their own particular line of thought they are most interested in, in addition to their regular work. The reason for it: When you have a difficult case along the line that your brother physician is doing his special work, have him in consultation, and when he needs you in the special line of work that you are doing, let him return the compliment. To my mind if this plan was carried out conscientiously it would be only a short time until our members would be trained to such an extent that it would not be necessary to call the specialist from afar, and in addition, our own members would be respected for their professional ability to a much greater extent in their community. Why can we not get to trusting our own men as well as those a long distance away? Visionary? No! Depending altogether on the spirit with which it is taken up, do it, and the finger that points at you *today* as living in the country and for that reason alone not qualified to give an expert opinion, will point tomorrow at you with the assurance that your opinion is just as reliable as the best man from any distant part. Cultivate the community habit.—*Bucks County Medical Monthly.*

How Workmen's Compensation in Pennsylvania Hits the Doctor.

Under the Workmen's Compensation Act, physicians are liable as employers for injuries to office assistants, drivers and drivers' helpers and collectors, no matter how incurred, while in course of employment, excepting in case of intoxication or reckless indifference to danger, in both of which cases the burden is on the employer to establish the defense. It will be "conclusively presumed" that employers and employees accept the provisions of the act unless either party serves a written notice on the other. The notice must be filed with the Bureau within ten days after service and before accident occurs.

If the provisions of the Act are not accepted or if legal acceptance is made and the Bureau is not already satisfied that the physician is not of sufficient financial ability to carry his own risk, the employee has an option of claiming compensation from the employer, in which case the employer has no defense for the reason that practically all possible defenses have been removed by the Act.

In a few words the Act removes all common law defenses available to the employer and they are never restored, and this is true whether he accepts or rejects the Act.

An employee is "one who works for a valuable consideration for another." Excepting those who are engaged in a casual employment—something out of the ordinary and usual course of business—and excepting those to whom goods or chattels are delivered to be cleaned, repaired, or ornamented, etc.

The total liability for total disability is not to exceed \$4,000.00. In case of death, the claim may reach as high as \$8,200.00. Partial disability claims may reach as high as 50 per cent. of wages for 300 weeks. Claims are payable in installments and may extend through a period of more than sixteen years.

The Workmen's Compensation Act has been adopted in thirty States. Instances where employer and employee have rejected the Act are exceptional. The employer who makes no election has adopted the Act. Having adopted the Act, the employer must insure the payment of compensation in either one of four ways:

1. He must take out insurance in a stock company.
2. He must take out insurance in the State Fund.
3. He must take out insurance in a mutual association approved by the Workmen's Compensation Bureau.
4. He must satisfy the Bureau of his financial ability to pay compensation.

When a physician takes out insurance in a stock company, he is insured not only against compensation, but his policy includes a liability coverage, covering all forms of accidents, damages, personal disfigurement and loss of services in case of a minor. This is the only form of insurance that really enables one to stop worrying.

(County Medical Map continued one leaf over.)

Important Announcement

BECAUSE of the great scarcity of creosote, due to the European war, we were obliged to discontinue our advertising of CALCREOSE in this journal, several weeks ago.

It is with great pleasure we announce that we have recently secured large supplies of creosote, and are now prepared to fill all orders for Calcreose.

Physicians who have used and hence appreciate the value of Calcreose may now order direct or through the wholesale drug trade, with the assurance that their orders will be filled promptly.

Physicians who are as yet unacquainted with Calcreose are urgently requested to order from us direct *ON APPROVAL* (use coupon below) and give it a thorough trial in the treatment of *THROAT* and *LUNG DISEASES*.

THE value of creosote has long been recognized by authorities in the treatment of diseases of the throat and lungs and in gastrointestinal infections.

The use of creosote has been neglected largely because of the difficulties of administration.

Calcreose, a chemical combination of creosote and calcium (contains 50% creosote) overcomes many of the objections.

Furthermore, the combination (creosote and calcium) is believed to have therapeutic properties not held by either drug alone. Calcium being of value in many cases, particularly tuberculosis.

Careful and accurate clinical work demonstrates that as high as 60 minims of creosote, when combined with calcium as in Calcreose, may be safely administered daily in a large per cent. of cases without digestive disturbance (reports of much higher dosage have been made).

Ungentum Iodi. Dahl.
(Iodized Ointment.)

Formula: Contains 4 per cent. iodine (same iodine strength as the U. S. P. ointment), but rapidly disappears upon application to the skin, leaving practically no stain, an advantage over the U. S. P. product that every user will appreciate.

Indications: Same as U. S. P. ointment. It will be found particularly efficacious in the reduction of non-suppurating inflammatory swellings of the glandular system, inflamed muscles and joints (particularly those of gouty or rheumatic origin), both for its local and general effect. This can also be said of that large class of goiters which receive such prompt relief from iodine medications, as an abortifacient for boils, carbuncles, beginning skin infections and erysipelas.

Price: Dozen 1-ounce glass jars.....\$2.40

ORDER HERE

THE MALTBIE CHEMICAL CO.
Newark, New Jersey.

M. C. 2

Please send me, all charges prepaid :

1-lb. Calcreose Powder.....\$3.00
500 Calcreose Tablets..... 1.55
½ doz. Ung. Iodi. Dahl..... 1.20

I will remit in 60 days for all that are satisfactory.

Nothing to be returned, nothing to be paid, if results are not satisfactory.

Dr.

Address.....

The County Medical Map

Mutual companies may not continue to exist for more than sixteen years, and assessments must be uncertain; it is doubtful whether or not the State Fund protects against personal disfigurement or loss of service in case of a minor, and few physicians will be able to satisfy the Bureau of their independent financial ability.

When an award is made against an employer, it has the same legal standing as a labor claim. It is not assignable; it is not liable to creditors for payment of debts and no claim under exemption laws is allowed. It is entered as a judgment lien against the employer's property.

It may also be stated that all agreements between employer and employee as to the payment of compensation for injuries sustained are void as contrary to public policy, unless in certain cases, they be first approved by the Workmen's Compensation Bureau.—*McKean County Bulletin.*

Lost a Good Member.

Dr. John L. Marchand, of Irwin, has moved to Prinzapolka, Nicaragua, Central America. We will lose an earnest worker in our society. He was almost always present and took part in the discussions.—*Westmoreland County Bulletin.*

Dr. Marchand has contributed several able articles to our pages.—EDITOR.

Improving With Age.

We are told that the legal fraternity outranks the medical fraternity in their social relations with each other, and that they are more loyal, professionally, toward their colleagues. We do not believe this. True, in the days gone by, there did exist in the medical profession, a lamentable degree of jealousy. But, at the present day, the medical societies are exerting a salutary influence, and, are in a great measure, dispelling these petty jealousies. A cordial spirit of fraternal feeling exists and we are all the happy recipients of a delightful uplift. Where can you find a more congenial set of fellows than a large gathering of doctors?

A lofty spirit of social feeling pervades all our gatherings, and, this, in itself, refutes all insinuations of selfishness and jealousy.—*Lancaster County Bulletin.*

How Texas Gets its "Pep."

We all have some originality, but mighty few of us can measure up to the standary of the secretary of the Titus County Medical Society of Texas. His announcements beat anything we have ever seen. Our secretary has received the following letter from this unusual person, and we all bow low and take our hats off to him.

Mount Pleasant, Texas, Oct. 12, 1915.

Dear Doctor Myers:—

I received your programs, also note as regards the Medical Council. Well, Doctor, I have tried all kinds of schemes to entice the doctors to at—
(*County Medical Map continued one leaf over.*)

LISTERINE

A safe, non-poisonous, unirritating antiseptic solution

LISTERINE embodies a two-fold antiseptic effect, in that after the evaporation of its volatile constituents—thyme, eucalyptus, mentha, gaultheria and ethyl alcohol—a film of boracic and benzoic acids remains upon the surface to which Listerine has been applied, affording more prolonged antiseptic protection.

LISTERINE is a trustworthy surgical dressing; it has no injurious effect upon the tissues in which the healing process is going on.

LISTERINE in proper dilution is useful in the treatment of abnormal conditions of the mucosa and forms a suitable wash gargle or douche in catarrhal conditions of the nose and throat.

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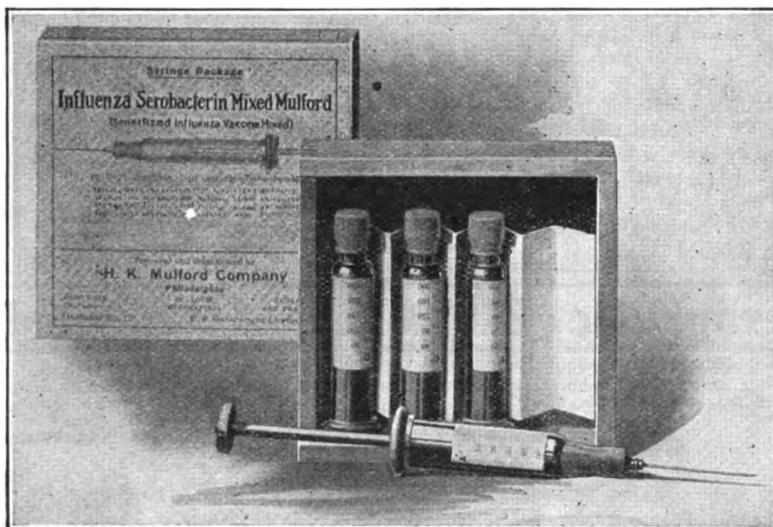
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Syringes contain killed sensitized bacteria as follows:

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<i>B. influenzae</i>	125	250	500	1000 million
<i>Staphylococcus albus</i> and <i>aureus</i>	250	500	1000	2000 million
<i>Streptococcus</i>	125	250	500	1000 million
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The County Medical Map

tend. I have had nice printed notices, etc. Then again a good program with some out-of-town doctor on it. But the expense didn't justify keeping it up when it was productive of no increased attendance. So I got me a Dan's Duplicator and a Dick Mimeograph.

I find it gets more doctors in the meetings to have no set program published, but bring up such as interest the members at the meeting.

Allow me to say that you surely are getting out a nice and interesting Bulletin and the members should be appreciative of it, too. I am.

Yours truly,
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—Bucks Co. Med. Monthly.

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The Business Problems of Medical Charity.

This is the title of an article in the November number of THE COUNCIL. He doubts if there is a surgeon of prominence in any city of the United States who is not doing from \$100 to \$1,000 per month in charity. He suggests that one physician in each community be paid a sufficient salary to support himself and family without any private practice. Let the paid man do the charity work, and let the other doctors charge all patients and then give what they can afford for the support of the poor and keep books with it. The physicians are carrying an unjust load by reason of those who stay with one doctor as long as he will carry them, then going across the street to another doctor, villifying the one who has treated him so long and faithfully, and getting medical advice from doctor number two, until some day when a statement is sent, the letter is returned marked "Left City—No Address." Let's have a change and let medical charity be dispensed on a strict business basis. Charge everybody, then give one-tenth for religious and charitable purposes and see if the doctor's widow don't get on better.—*Bulletin Butler County (Ohio) Medical Society.*

(Book Reviews Continued one leaf over.)

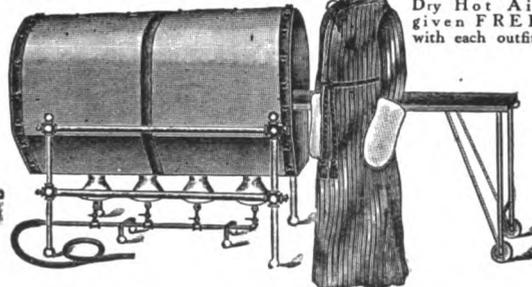
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Book Reviews

Manual of Embryology.

By A. Melville Paterson, M.D., F.R.C.S., Professor of Anatomy in the University of Liverpool. London, 1915. Oxford University Press, American Branch, 35 West Thirty-second Street, New York. Cloth, copiously illustrated, 391 pages. Price, \$2.75.

This anatomical work, while devoted principally to human embryology, embraces comparative embryology and data which must be classed within the realm of pure science. Consequently, the subject is much more elaborately treated than is common in medical anatomical text. The obstetrician will find much to interest and instruct in this very carefully worked-out treatise.

Tonsils and Adenoids: Treatment and Cure.

By Richard B. Faulkner, M.D.A., companion work to a previous volume by the same author and entitled "The Tonsils and the Voice." A 30-page booklet, sold for \$1.00, or, with the previous volume, the two for \$3.00. The Blanchard Company, Lock Box 445, Pittsburgh, Pa.

Rather unconventional, and at variance with most texts upon the subject, this pamphlet recognizes the fact that surgical treatment of tonsillar and adenoid affections has not been very satisfactory; and the author has set about the task of devising a line of treatment dependent upon the use of the electro-cautery in place of the knife

and upon certain well-conceived medicinal formulæ. Also, we believe very properly, he blames dust with causing most of these troubles. One can hardly judge the value of his treatment without trying it; but the measures are so simple that this is readily done.

Hospitals and the Law.

By Edwin Valentine Mitchell, LL.B., of the Faculty of the College of Law, University of South Dakota. Cloth, 178 pages. Rebman Company, 141-145 West 36th Street, New York City.

This work is an admirable sequel to the author's previous book, "The Doctor in Court," and offers to the medical and lay managements of public and private hospitals legal guidance and suggestion of authoritative character, with legal citations and decisions covering all problems liable to arise. The language is understandable by the non-legal reader and yet the elucidation of principles is full and complete.

News Item.

Beginning with the January, 1916, number, *The Journal of Cutaneous Diseases*, including syphilis, will be published for the American Dermatological Association by W. M. Leonard, of Boston. Each number will contain 80 pages, and as far as possible be of interest and value to the general practitioner as well as to the dermatologist.

GEORGE M. MCKEE, M.D., Editor.

(Helpful Points one leaf over.)

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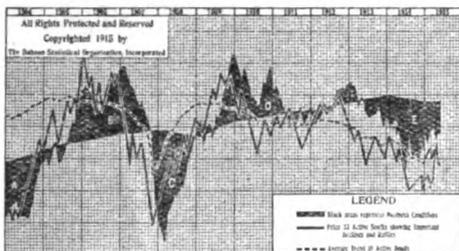
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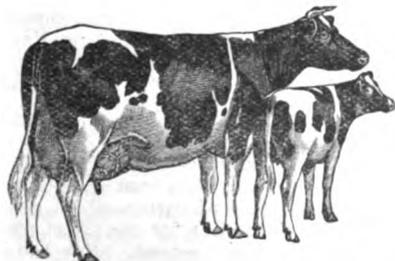
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Helpful Points

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Among the comparatively new therapeutic agents which have been strikingly successful in the French war hospitals, is Iodagol, a form of colloidal, electro-chemical iodine, prepared by Viel, and but recently imported into the United States.

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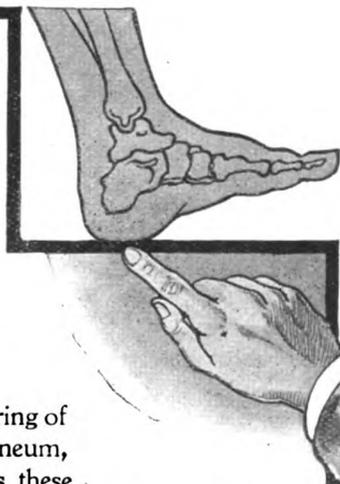
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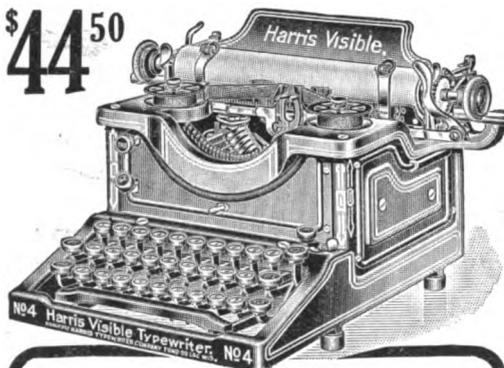
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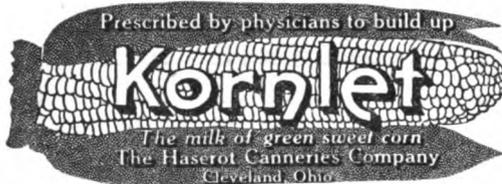
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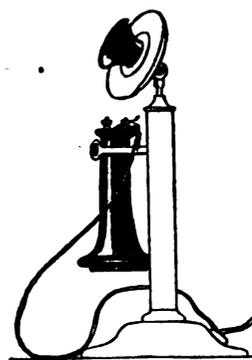
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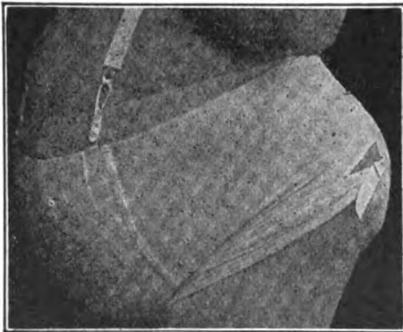
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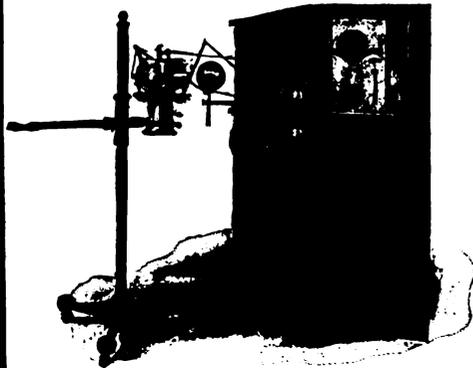
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Philadelphia, Pa.

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EDITOR

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Vaccine Treatment of Colds and Influenza.

EPIDEMIC influenza is a crude term, but it expresses as well as any other what the country has been passing through. In England they have become accustomed to epidemics of severe colds, their damp and mild winters promoting them. The profession over there calls these cases "colds," although the *Pneumococcus* and the *Micrococcus catarrhalis* are the organisms most found. In this country we call the same thing "La Grippe." Now, as a matter of fact, the *B. influenzae*, causative of grippe, is a rather virulent organism. Not found outside the human body and perishing quickly in open air or water, yet this bacillus will persist in the nasal sinuses for a long time. Influenza vaccines, that is, vaccines made from the *B. influenzae*, are quite commonly regarded as worthless; and this paper is not about the treatment of true grippe with vaccines.

But we very much doubt if any considerable proportion of the cases seen in the United States in December and January last were true grippe and due to the *B. influenzae*. It is perfectly true there was a public excitement over "the grippe," and half the people coming to our offices said they had it. But in 1889-'90 and in the couple epidemics since, the last being in 1896, the victims did not come to the office; they were very ill and in their beds. Some of them were this time, but they were largely cases of pneumonia, mostly in mild type, or were aged or debilitated persons.

Our own cases impressed us as streptococcic infections of the nasal passages and bronchi, with some modified pneumococcic involvement. Perhaps we were influenced in this view by the careful observations of Mathers, in *J. A. M. A.*, Jan. 1, 1916, and by our really large experience with true grippe clear back to 1889, when we certainly had our hands full and with a discouraging number of fatalities.

For want of a better term, we called our cases this season "influenza;" but believe they were really what the English call "epidemic colds." We may be mistaken; if so, please show us.

However that may be, the English have been treating their cases with vaccines and with very great success. This editorial is based somewhat upon their practice in the matter. Bear in mind we have had an open and wet winter, cloudy and raw; just such conditions being present as breed the English "epidemic colds."

Determine the Organism.

It is not always clinically practicable to determine the organism or organisms involved in these cases; but it is possible to pick out a few characteristic cases in an epidemic and have bacteriologic cultures made. All that is really necessary is to have the patient blow his nose upon a square of sterile gauze, place the gauze in a sterile container and at once turn over to the laboratory. If distant, such transference to the laboratory is to be more careful and elaborate, as by smearing collected secretion on a blood-agar tube. Boards of health should make studies in every community, informing the physicians of the findings. The laboratory details of such studies are too elaborate to print here; but, if we are ever to introduce the English methods of treating these influenza cases with vaccines, such studies of influenza incidence should always be made. Until they are made, vaccine treatment will be largely misdirected.

An Argument.

Really it seems a pity that, for all our talk about accuracy in diagnosis and treatment, when the doctors get very busy with an epidemic, a rule-of-thumb procedure is followed, totally oblivious to the modern teachings. When the newspapers get to talking about the "great epidemic of grippe," grippe it is for all who think they have it. This is a serious matter to contemplate. There has been a tremendous incidence of sickness, and we have secured no real guidance from those who should give it. Nearly every physician with whom we talked had a different treatment, at least differing more or less from all others. If we have a contagious disease present in a community, it is highly important to have some specific treatment for it. We try to do so with diph

theria. Why not recognize influenza as equally serious? There is urgent need for a respectable modicum of scientific definition respecting the oft-recurring epidemics of contagious colds, influenza, infectious catarrh, grippe, or what not; and we owe it to the public to know this enemy and mobilize against it instead of precipitating a public scare that takes three people to the drug stores for depressing coal-tar analgesics to one that consults a physician.

And we are a good deal to blame ourselves. Why do we accept a patient-made diagnosis during a "grippe epidemic" when we refuse to accept such diagnoses at other times? Every case should have been examined and carefully diagnosed and an honest opinion given. Had this been done, thousands of cases would not have been called grippe and would have received the very simple medication they needed in place of what they got. Just to illustrate: In one morning several persons consulted us with the ready-made diagnosis of "grippe." One merely suffered from facial neuralgia due to an ulcerated tooth. Another was depressed and nervous from too heavy smoking of strong cigars and from a congested liver. One was merely frightened by newspaper reports and was not ill at all, and the last had acute rheumatic fever following follicular tonsillitis that was neglected.

During the epidemic there was an immense amount of misdirected treatment, largely by the patients themselves; but many physicians stocked up with one of the many "grippe tablets" and passed them out just as the drug stores passed out much the same thing. This was not creditable to the profession. Grippe and cognate troubles need more than ordinarily careful examination and diagnosis. Were this done it would not be long until our treatment of these cases would at least be rational. And right here is where the vaccine treatment scores heavily.

Which Vaccine to Use.

As said before, vaccines made from the *B. influenzae* are rarely effective; but it is a fact that usually the infection is a mixed one, streptococci being almost always found. Always determine which organisms are present in an epidemic and, so far as practicable, in each case; or use autogenous vaccines exclusively. Stock vaccines are perfectly available when one knows the organisms involved.

No attempt will here be made to describe the technic for vaccine employment in this class of cases except to say that doses should be *gradually* increased and sharp reactions avoided, except in septic cases, when large initial doses are necessary. As has been intimated, catarrhalis, pneumococcus, or influenza vaccines may be theoretically indicated; but usually a mixed vaccine

is what meets the indication, and in these instances the influenza vaccine seems to possess some efficiency, that is, as part of a mixed vaccine.

It has been abundantly demonstrated in England that vaccines cure many cases of contagious cold and prevent the spread of the disease; but there the bacteriologists announce the kind of vaccines to use at the first alarm, and the practitioner may then inoculate the members of the family in which a case develops. In a community thus intelligently handled the cases are generally light and the chronic sinus infections are rarely noted.

Sensitized streptococcus vaccines seem to be especially valuable in these cases. Friedlander vaccines also do well. Pneumococcus vaccines are differently regarded by different men. Catarrhalis vaccines are not so effective because this organism is not especially persistent. Pure vaccines of *B. influenzae* are frightfully toxic, even very small doses depressing; but as one element in a mixed vaccine they may be used.

It must be admitted that this matter is yet rather complicated and that it needs study; but the unsatisfactory status of the American "grippe epidemic" is not to our credit, and something should be done. Vaccines offer the most rational solution we know of to date.

Drug Treatment.

This is upon an absolutely unsatisfactory status, and we don't believe it can be asserted that there is any *defined* drug treatment of these conditions. Symptoms vary, and the symptoms are met more or less by drugs, which vary, according to the ideas of the doctor. Neighbors have called us several kinds of crank; but we never use a particle of any of the synthetic remedies in treating these cases, and never anything more depressing than a little aconite during the first day or two. A trifle of codeine or a dose or two of Dover's powder is all the narcotic medication employed. Gelsemium and cimicifuga relax the nerves and relieve the pains and aches. Ammonium carbonate was used to quite an extent, as was digitalis, and strychnine in a few cases. The bowels should be kept open by non-depressing laxatives. Our idea was to put the patient to bed and give no medicine unless there was positive indication for it, and then stop it as soon as possible. Absolutely no drug-induced depression in any case was permitted, there being quite enough as a factor of the disease itself without adding to it with drugs. Our own experience with vaccines in these conditions is not sufficient to warrant conclusions; but what was noted was distinctly favorable.

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Some Fracture Heresy.

WE HAVE SEEN the rise and fall of the surgical carpenter, who built a scaffolding around a fractured limb and set Nature's workmen to the task of uniting the bones. Building a scaffolding, in the shape of splints or fracture box, was about as far as the surgical carpenter went. His downfall began with the X-ray, for that wonderful detective made it probable that the surgical carpenter would be haled into court if he failed to get an anatomically correct adjustment of the fracture—one that could be shown in court in the shape of X-ray pictures neither the court nor jury understood.

And having made the X-ray exposures in many hundreds of fractures, we have deliberately determined that in average hands, anatomically correct adjustment of fractures are just as rare as are bad results from more or less deviation. One would not think this to be the case from reading medical journals and surgical text-books, with their wealth of X-ray pictures showing correct anatomical adjustment; but a veteran X-ray operator who works for many surgeons sees another side to it.

Really it is remarkable what a good job Nature does, functionally considered, and how bad a one she does anatomically viewed. Pulled into any sort of approximation, carefully splinted in places by the surgical carpenter, put at rest, and then left alone, Nature pulls most fractures through with a firm union and a useful member.

The surgeon of twenty years ago, like the obstetrician, had "eyes in the ends of his fingers," and he attained to a proficiency in fracture work that most surgeons of to-day seriously lack. But now these "eyes" must be the X-ray in the case of the fracture, and pelvic measurements and Cæsarean section in the case of obstetrics. And "eyes in the ends of the fingers" are going out as a lost art. What a pity!

The Carpenter Militant.

Next came the carpenter militant, who nailed the fracture together, imposing tremendous traumatism. Sometimes this nailing was necessary; but usually it was done to get an anatomical result that looked pretty but was not always useful. Then he acquired a drill. We used to run one electrically, with a motor, boring through bones galore while the surgeon got his wires ready. The drill was like that used by the dentist. But that imposed too much stress, and simpler hand drills came in.

How the surgeons did sweat over some of those jobs of wiring, and swear over how the thing wobbled and tore loose! Silver wire is very nice in theory; otherwise it is not nice. Sometimes this wiring was necessary; but often it was all

an effort to get correct anatomical approximation. The post-operative X-ray pictures of some of these wired cases required the X-ray expert to lie one minute and pray the next, the first for the benefit of the patient and the other for the surgeon, who had to open those wounds later and haul out the wire, or what they could get of it. And the wire or nail that remained was a foreign body, just as much as is a bullet. And when the X-ray man heard the thing grate while the surgeon was working, he mentally chalked up one more indictment against militancy in fracture work.

Sometimes a country surgeon brought in a case for just one examination and sent him back again a few weeks later; and these country cases, oftentimes, had the more durable and useful limbs, though less anatomically correct in adjustment. They were treated in the old way, and they knit tight and firm. Oh, yes, they did! We have had abundant opportunity of comparing the militant with the passive treatment of fractures. The militant method gave anatomical results that looked well, but the passive method gave the better functional results. Which was the better surgery?

The Surgical Mechanic.

Next came the surgical blacksmith, with his plates and screws, and his open treatment of fractures. He sent the carpenter to the discard.

But the screws would not "stay put," working loose for most any reason or no reason at all. The latter the surgeons described as "an aseptic rarefying osteitis," whatever that is. We could never figure out if it was a disease of the screw or of the bone, or simply the "innate perversity of inanimate objects."

Then, too, metal plates were poor scaffolds. In contact with bone, the plates seem to rust the bone away, just like a bullet does in contact with bone. Look at your next case with a magnifying glass and see if this is not true. And, what is worse yet, plates interfere with the formation of new bone, or seem to do so. We are not sure of this but it certainly looks that way. They look like mending harness with strap-iron, which is all right only when a trace breaks nearer to a blacksmith than to a saddler and harness maker.

And you just ought to see the nasty sinuses and stiff joints resulting, as well as the long-drawn-out siege of it for the patient. Have a few of these cases to look after when the surgeon has dropped out of the case in your favor and you will think a few lurid things over them.

Quite a few surgeons are coming to see things in this light, and more ought to do so. So if

this is surgical heresy we do not stand entirely alone.

Query: What will the fracture engineers do next?

Non-operative Management.

We need to return to kindly and conservative handling of human tissues, in fracture management as in other things. The old non-operative treatment of fractures was more satisfactory than is the present operative craze except in the exceptional case. Needless to say, there are some fractures requiring open and operative treatment, and they should have it; also the X-ray should be used in every fracture case, if available. The technic now so rampant will continue to apply to a minimum number of cases. Nature should be the doctor first called in consultation when we encounter a fracture. If Nature fails, it is time enough to consider operative procedures.

The Status of Osteopathy.

A CONTRIBUTOR in February MEDICAL COUNCIL takes Osteopathy to task. As a matter of fact, the word "Osteopathy" is foolish, but no more so than "Spondulotherapy," which is an alleged scientific substitute for it. But the indifference of the medical profession to the well-developed science of massage and Swedish movements is responsible for these newer cults; so, perhaps, we have little to say.

It will not have been until ten years from now that a perfectly judicial estimate of Osteopathy may be attained. We confess to inability to estimate its claims with any degree of scientific accuracy, partly because it is hard to define these aims under the present conditions of its practice. One meets perfectly sincere gentlemen of manifest attainment who are applying its practice in a sane and discriminating manner; but one also meets others of its practitioners who are distinctly *not* men of sufficient attainment. To promote the attainments of the one class and to suppress the incompetent practitioner is, largely the affair of a new profession that has not yet quite found itself; so one should not expect too much all at once.

We have been carefully studying the "Text-Book of Massage," by Despard (Oxford University Press) and "Mechano-Therapeutics in General Practice," by Swietochowski (imported by Paul B. Hoeber, New York), in comparison with American osteopathic text-books, and we cannot but be impressed by the fact—an obvious fact—that these foreign works which are not involved in, or concerned with, Osteopathy, actually present much more scientifically than do osteopathic texts practically all of the useful and

sustained data of the latter class of volumes. In other words, Osteopathy as such has added very little indeed to the science and art of healing, however much it may emphasize this important mechanical branch. True, it has advanced some new details in technic and laid emphasis upon the so-called spinal reflexes; but that these new methods really add materially to the resources of mechanical treatment we are not at all prepared to admit, though perhaps some of them may, in time, be demonstrated to do so.

Justified Mechanical Measures.

Whether called Osteopathy, Spondulotherapy, or merely massage, it is manifest that the practice of mechanical and manipulative measures constitutes a warranted specialty in medicine; but that this, electro-therapeutics, hydro-therapy, physical culture, or any such branch practiced alone, warrants the practitioner to claim efficiency in treating the great range of affections common in a general medical practice, is foolish, or worse. Equally is it foolish for the medical man to claim that these practitioners are all mere parasites, wholly incompetent, or venal; for many of the more reliable men engaged in the practice of Osteopathy frankly admit its limitations and refuse to apply osteopathic methods in the treatment of many who consult them. Also do many of them subscribe for medical journals and buy standard medical books.

Quack Osteopathy.

Unfortunately for Osteopathy, which is trying hard to get upon a decent educational and legal basis, quack osteopathy has flourished amazingly. A precious galaxy of non-medical fakers who tried, but failed, to get recognition from the Pennsylvania Legislature, numbered among them a bevy of so-called Chiropractics and non-medical Spondulotherapists. To rid themselves of affiliation with this commercially-minded crowd of ignorant pretenders is being made the care of the better prepared Osteopaths and their State boards.

The Future of Osteopathy.

Osteopathy, to get upon this decent basis, should join forces with the medical profession in the establishment of a uniform and non-partisan basis of attainment for any and all who desire to enter any branch of the healing art; or, in other words, have a single medical board of reasonably high basis, preferably national, and whose license would be required of practitioners regardless of what they call themselves. Accomplishing this would, within a few years, place osteopathic and medical men alike upon a basis that would lead to their mutual co-operation instead of the present antagonism; and Osteopathy, probably under some more scientific

name, would take an honorable place among the medical specialties. Also mechanical and manipulative measures would not then be neglected like they have been by the medical profession, and are today by a large proportion of what the Osteopaths call "Medical Doctors."

Unless some such plan is followed, Osteopathy will face being either discredited or absorbed. The new has worn off, and the osteopathic practitioner who knows nothing but "adjustments" and who ignores other things is even now having hard sledding. Many Osteopaths are studying medicine in a broader sense; they are developing, and will not long be content to be tied down to a partial rôle in medicine. Unless the osteopathic profession provides for the future of these wide-awake members of their fraternity, they will abandon all connection with the propaganda and become physicians and surgeons in the usual meaning of the terms. Osteopathy, if it is to endure, cannot afford to ignore obvious trends and the ambitions of its better men.

Sects Have a Place.

Nearly every medical sect emphasized something useful and served to correct certain abuses. Sects seem to be necessary for this very thing. But so soon as their work is accomplished they can honorably join forces with a corrected and readjusted profession, and they *should* do so. The trouble with Osteopathy in its earlier days was that it was not a medical sect, like Homeopathy was in its earlier days; but it was what might be called a medical rebellion, calling to its banner a host of men who did not know enough about medicine to know why they were opposed to it. But to-day Osteopathy may be regarded as a medical sect, since it now realizes that chemistry, bacteriology and a whole lot of things other than "adjustments" count in practice.

Hahnemann discovered no facts essentially new; neither did Beach nor Scudder; neither did Still (we say this after careful reading of the writings of all of them); but they emphasized things that needed emphasis at the time. The thing for us, as physicians, to do, is to judge all kindly and tolerantly, learning what we can and rejecting what we must. There is not an important medical laboratory of to-day but it makes more *real discoveries* than did Hahnemann, Beach, Scudder and Still all put together. Suppose these laboratories started sects for every new discovery? Unfortunately, sects are always founded upon *theories*, not upon facts. Modern medicine is concerned only with facts, wherever they come from; and that is why it will endure after all sects are forgotten and their data merged in the common literature of medicine. This is destiny.

The Psychology of Advertising vs. the Doctor.

Southern Medical Journal, after quoting one of the State journals whose editor proposes that the profession boycott all of the medical journals with good reading pages but advertising pages carrying few or many products not approved by the A. M. A. Council on Pharmacy and Chemistry, goes on to analyze the situation, and says:

The evil has its roots deep down in the prevailing system of medical education, wherein an abstruse system of pharmacology has supplanted clinical therapeutics, so that one might almost say that the more high-grade and pretentious the school of medicine from which a man graduates the less practical knowledge he has about adapting available materia medica to the treatment of disease as seen at the bedside. For instance, in the announcement of a certain A school, pharmacology claims 130 hours, therapeutics 32 hours, and other prominent schools make even less mention of drugs and their prescription.

Consequently graduates of class A plus schools are often among the most liberal patrons of proprietary nostrums. Even college professors prescribe widely advertised preparations, guided only by their partisan literature and neither knowing nor caring what the Council says of the drugs. Not until every medical college employs an earnest, competent, experienced therapist to teach therapeutics, one who knows by reading and experience what effect to expect from his medicines and is innocent of "nihilism," and allows him ample time for teaching, will it become unprofitable for manufacturers to provide and mercenary journals to advertise fake proprietary compounds, with pseudo-scientific names.

Here is an editor who has the courage to tell the truth. Some of the journals most favored by this very class of A-plus professors carry volumes of discredited advertising. The readers of MEDICAL COUNCIL know therapeutics and won't tolerate such advertising in our pages. We have been eliminating them, but steadily adding to our list of rank-and-file readers, who know better than to prescribe fakes. "It is to laugh."—EDITOR.

Diagnosis in Everyday Cases

Doesn't tell you anything new or complex.

But a mighty helpful, common-sense paper that emphasizes the things we all of us ought to know and *use* as a matter of course, *but don't*.

If we did we would be better physicians.

In this issue on page 45.

A Notable Issue

Of course, we think each month, that that month's issue is one of the best in MEDICAL COUNCIL'S history.

It is because the making of each new issue is approached in such a spirit of *earnest* determination that each issue *shall* be better than the last, that MEDICAL COUNCIL has a quality of *practical helpfulness* and *live interest*, distinctive in medical journalism.

But we have for the April issue, several papers of such unusual interest and practical helpfulness, so different from the *average* medical journal contribution, that we feel April will be a truly *notable* issue.

Just glance at the titles given here of some of the interesting, practical things in store for you in the April issue.

"A Plea for Practical Methods in Diagnosis," by J. W. Kennedy, M.D., F.A.C.S., is a wholesome argument that will delight every level-headed doctor who reads it, as it contains the most lucid criticism of "*brain-storm surgery*" in recent literature.

"Abnormalitis," by Dr. Estill D. Holland, is a most suggestive paper upon a common symptom-complex that is more or less epidemic in a *psychical sense*; and it "*takes the lid off*" of some common practices.

"The Clinical Significance of Acute Abdominal Pain," by Dr. Harvey F. Smith, is *especially* directed towards informing the *general practitioner* concerning diagnostic points worked out by the specialist; and, the diagnosis made, very simple treatment is outlined for some cases, and the indications for surgery given for others.

"The Business Need for Ethical Publicity," presents a difficult subject in a *new* light, and suggests the organization of Physicians' Exchanges as a public utility serving both the people and the *profession* in an *ethical way TO PROMOTE BUSINESS*.

"Acute Nasal Sinus Suppuration," is the subject of an able paper by Prof. John J. Kyle, in which the etiology and complications of various influenzal and other infections are cleared up, and many suggestions of value presented.

"Surgical Brain Storms and Railroadng Patients," will be an incisive editorial upon the wretched methods followed by *publicity-seeking surgeons and hospitals*.

"Therapeutics by the Back Gate," will be a novel presentation of the way some of our resources came in. Others come in by the front door; but that is another story.

"What the Great War Has Taught the Surgeon," by Dr. G. S. Foster, is momentarily expected at the time this announcement is written. Dr. Foster is making a *very careful study* of the subject.

Yes, Doctor, April MEDICAL COUNCIL will be a number of *solid* worth to you.

Not only read it yourself, but do your medical friend a *good turn* and induce him to—"Get the *Medical Council habit*."

There Is Always a Reason

These letters, just two or three out of hundreds of similar ones in our files, suggest the reason (and a *solid, sound-built* reason, too) why MEDICAL COUNCIL has become the — "*MOST WIDELY CIRCULATED MEDICAL MONTHLY*."

"I like MEDICAL COUNCIL. You have been giving us a splendid journal. Several of the articles are each *worth more than the cost of a year's subscription*."

Edgefield, S. C.

DR. W. D. OUZTS.

"No one in active practice can well afford to miss the numerous valuable hints and side lights on professional topics, to say nothing of original articles and editorials in MEDICAL COUNCIL, all of which I have enjoyed greatly."

Cleveland, Ohio.

DR. W. M. A. HOSICK.

"For the past ten years I have enjoyed MEDICAL COUNCIL as the *most practical* and *helpful* journal that comes to my desk."

Frederick, Okla.

DR. J. D. OSBORN, JR.

Send \$3.00 for four years' subscription.

Saves a dollar. So much more convenient.

Therapeutic Notes.

Never combine aspirin with quinine; they are incompatible.

Look out for complications in the present streptococcus (grippe?) infections.

Don't suddenly cut off morphin in myocardial degenerations or in the heart of old age.

There is no direct evidence that mineral oils exercise any effect upon the respiratory organs.

In delirium tremens with a weak heart and low blood pressure, epinephrin is of value. In cases threatening a fatal ending spinal puncture may save life.

Hyoscyamus acts more like belladonna than like opium; it contains hyoscyamin, scopolamin and atropin, the hypnotic action being due to the scopolamin.

The following papers are contributed exclusively to this journal. Republication is permitted if credited as follows: MEDICAL COUNCIL, Philadelphia.

ORIGINAL ARTICLES

Sentences, like sunbeams, burn deepest when most condensed.

We are not responsible for the views expressed by contributors: but every effort is made to eliminate errors by careful editing, thus helping the reader.

The Rational Treatment of Traumatic Corneal Ulcers from Foreign Bodies.

By M. R. DINKELSPIEL, M.D.,

Formerly Instructor in Ophthalmology and Assistant to Hospital Dispensary Staff, Medico-Chirurgical College, Philadelphia; Ex-Resident Physician Philadelphia Hospital (Blockley), etc.

WILKES-BARRE, PA.

Injuries to the eye, of whatever degree, must be approached in a radically different manner from injuries elsewhere in the body. The multiplicity of tissue varieties, the presence of structures not found elsewhere, and the contiguity of dissimilar tissues, all associated in the functional capacity of the eyeball, make this imperative. An exceedingly small fractional portion of an inch of scar tissue at or about the center of the cornea is sufficient to impair vision, and all cases of corneal infections demand that this be kept in view.

The coal-mining regions of this country offer a most prolific source of exciting conditions for injuries to the eyeball, and of the cornea in particular. Every minute that such a foreign body is retained in the eye increases the danger of additional infections from surrounding sources.

The materials most frequently encountered by the writer imbedded in the cornea have been coal, rock, gravel, culm, wood, iron, steel and emery.

The reaction of the eye to the lodgment of foreign bodies varies according to the structure affected, and the composition of the offending materials. While a cinder may cause the most violent reaction, other materials may remain quiescent in the eye for many years, as in a case recorded by Riecke where a piece of stone had remained in the eye for over thirty years without causing any reaction. Stone and copper are particularly liable to cause the most violent reaction, the former no doubt on account of its rough surface, and the latter on account of its selective property of causing suppurative inflammation.

Foreign bodies affecting the cornea may be slightly superimposed, may have burnt their way into the corneal layers, such as hot cinders, emery, etc., or may be deeply imbedded, as in the case of sharp pieces of metal. The result of the injury may vary from a slight abrasion to a complete perforation with infection and subsequent hypopyon and panophthalmitis.

Reaction to Infection.

It is remarkable in some instances what tolerance the eye presents to infection, but once established, the malignancy and virulence of the infective process sometimes appears out of all proportion to the extent of the injury. In a recent case of mine, a patient while stirring hot lead received several drams of the molten metal into his eye. I succeeded in removing the whole mass in one cast, the eyeball with all its structures being left uninjured and intact with the slightest reaction, which soon abated upon the installation of castor oil and frequent flushings with boric acid solution. In another instance a patient had a particle of dust blow into his eye, lodged on the cornea, which resulted in an ulcer which suppurated, involving the deeper structures and destroying a portion of the eyeball.

The following points are important in approaching the treatment of corneal infections from foreign bodies:

- (1.) Removal of foreign body with the least possible delay.
- (2.) Removal of the foreign body in such a manner as to cause the least destruction of the integrity of the eye, especially of the cornea.
- (3.) Complete disinfection of the area involved, and immediate disinfection of all broken-down tissue.
- (4.) Constant disinfection of the conjunctival cul-de-sac by means of the least irritating and most powerful germicidal solution.
- (5.) Complete rest of the eye and paralysis of accommodation.
- (6.) Daily inspection.

(1). Removal of the Foreign Body.

Foreign bodies in the cornea should be removed without delay. They may be so deeply imbedded as to require radical measures for their removal. Between these two extremes there are of course all degrees of penetration and lodgment. The eye should first be cocainized, and this according to the extent of penetration of the offending materials, cocaine, as is well known, having a tendency to soften the corneal epithelium. In the case of a foreign body slightly lodged in the cornea, one instillation of a four per cent. cocaine solution will suffice. In deeply imbedded foreign bodies, two to three instillations may be necessary. Notwithstanding the number of apparatuses on the market for corneal illumination, I find the oblique illumination with a plus thirteen diopter lens with a finger piece, in addition to the direct examination of the eye, the most satisfactory procedure. Staining of the affected area with flourescin is of great assistance. Before attempting the removal of the foreign body the eye should be thoroughly flushed, as more or less mucus usually surrounds the imbedded material.

(2). Removal in Such a Manner as to Cause the Least Destruction.

Unless a foreign body is so lightly attached to the cornea that it can be very easily dislodged, it is better not to use cotton on a probe for the purpose, as considerable abrasion may occur upon healthy tissue. All foreign bodies in the cornea, if removed with a spud, should be picked out and not scraped. The object should be to insert the point of the spud underneath the object and lift it out rather than to approach it with a lateral stroke. In the case of metals, and emery there often remains a rusty discoloration, which should be carefully differentiated from further material remaining, as a continued effort to remove this residue after the foreign body has been removed, may result in unnecessary destruction and even perforation of the corneal structure.

(3). Complete Disinfection of the Area Involved.

My practice for disinfecting the area upon which the foreign body is lodged varies according to the materials composing the foreign body and the extent of the corneal structure affected. There are a number of chemical cauterants, such as carbolic acid, iodine, trichloroacetic acid, silver nitrate, etc. If the area involved is at all large, ulcerated, or looking doubtful, I discard all chemical cauterants and use the actual cautery, which remedy is the safest, surest and shortest route to recovery. Its application is an art which should not be lightly attempted except after long study and practice, as injuries out of all proportion to the original area involved may be the

result from poor judgment or lack of precision in its application. The object of the cautery is quickly to sterilize the area involved and *no more* than sterilize it. I know of no agent in the treatment of corneal ulceration as effective when properly employed and none as destructive when carelessly handled.

(4). Constant Disinfection of the Conjunctival Cul-de-Sac.

It is self-evident that a structure like the eye, almost constantly exposed to bacterial infection, and of tender and easily destroyed tissues, offers no easy task for disinfection. When we consider that notwithstanding that the conjunctiva of the new-born is practically sterile at birth, and that within the first few hours becomes filled with bacteria, the disadvantages are easily conceived.

Boric acid solution is no doubt the most universally employed collyrium, and as a cleansing and very mild astringent solution, its position is justified. But when we are dealing with infected wounds, or those suspected of becoming infected, something stronger should be employed. Such a solution should possess the quality of being non-irritating, non-toxic, one which does not coagulate albumen, or damage any of the delicate structures of the eye ball, and at the same time a strong antiseptic. Formaldehyde solution is too irritating. Bichlorid of mercury is too destructive. I have found chinisol solution in a strength of from 1/1000 to 1/2000 according to the degree of tissue involvement and infection the best suited for the purpose. The solution is particularly adapted for corneal infection, and may be used as strong as 1/1000. In susceptible individuals, and I have met but few, a stinging sensation sometimes follows the chinisol solution, but sodium chloride, grains ten to the ounce, in a large measure will prevent this.

(5). Complete Rest of the Eye and Paralysis of Accommodation.

It is my practice to apply an occlusion bandage in every case where a foreign body has been removed from the cornea, the bandage remaining according to the degree of involvement varying from a few hours to several days. This also lessens the subsequent irritation from the friction of the lids during winking. Unless the foreign body has been lodged at the extreme periphery of the cornea, a drop of atropine solution is instilled and continued as long as any inflammation is present, unless there are contraindications for the employment of the mydriatic.

(6.) Daily Inspection.

No case in which a foreign body has been removed from the cornea should be discharged until all signs of irritation have disappeared, as the least superimposed infection may start the inflammatory process anew.

Functional Tests of the Kidneys.

By WILLIAM H. DEADERICK, M.D.,
HOT SPRINGS, ARK.

As long ago as 1857 Todd, and in 1865 Roberts, discussed the delayed elimination of certain drugs, and in 1873 Bouchard experimented with fuchsin for this purpose.

Most of the work done along this line has consisted of experiments upon the elimination of various chemical substances.

It is scarcely within the range of reasonable expectation that any single test for kidney function will entirely supplant clinical observations as a basis for diagnosis and prognosis, but results of these tests must be correlated with clinical findings.

The polyuria test was introduced by Albarran in 1904. Its value consists in demonstrating the reserve force of the kidneys, a diseased kidney not being proportionately able to respond to the increased stimulus, and for comparative tests of each kidney of an individual. After giving the patient half a litre of water the urine is collected during half-hourly intervals for three hours. During the second half hour the urine is normally increased, attains the maximum during the third half hour, then decreases rapidly.

The objections to the test are the long time required, the fact that it is not always possible to produce a polyuria even in a healthy kidney, and that a polyuria may have pre-existed from a diseased kidney.

Total Solids.

The determination of the total solids excreted by the kidneys is readily determined and with sufficient accuracy for practical purposes, according to the method of Haeser and Haines, if the amount of urine in twenty-four hours and the specific gravity are known. The number of ounces is multiplied by the last two figures of the specific gravity and ten per cent. of the product added, the result being the number of grains excreted in twenty-four hours.

The amount of solids excreted is not a very accurate index to renal efficiency, notwithstanding urea is the solid which most influences the specific gravity.

Kidney Permeability.

Methylene blue was first used in 1897 to test the kidney permeability. It is not supposed to indicate the degree of secretory activity. Fifteen minims of a five per cent. solution are injected hypodermically. The normal time of appearance in the urine is from fifteen to thirty minutes, the maximum excretion is during the third or fourth hour, and elimination is completed in from thirty-six to forty-eight hours.

The test is not accurate and has not been generally adopted.

Defective Tests.

Phloridzin was introduced for this purpose by Klemper, in 1896. One cubic centimeter of a 1 to 200 solution is injected hypodermically. Glycosuria appears in half an hour and disappears in three or four hours. A wide variation of results has thrown this test into discredit.

Indigo-carmin, first used by Voelcker and Joseph, has not received favor, as only 25 per cent. is excreted by the kidneys. It is supposed to be excreted by the cells of the convoluted tubules. From five to ten cc. of a 0.3 per cent. solution are injected intravenously. The beginning of elimination is noted from two to six minutes, and after fifteen or twenty minutes the color of the drug has almost disappeared.

Rosaniline was first used by Lepine in 1898. Between 60 and 65 per cent. is excreted by the kidneys. After hypodermic injections it first appears in the urine within thirty minutes; elimination is at the maximum during the third and fourth hours and is completed in about twenty-four hours. Owing to the greater amount of this substance excreted in the urine, it is more reliable as a test than indigo-carmin, but cannot be regarded as having great diagnostic value.

Nitrogen Determination.

The determination of the non-proteid nitrogen of the blood as a test of kidney function was recognized by Bright in 1836. The difficulty of the technic and the inconstancy of the results preclude the general practicability of the method.

The electrical conductivity of the urine was introduced by Turner. The method is complicated, the apparatus expensive and the results inaccurate.

In 1897 Koryani averred the value of cryoscopy, the determination of the freezing point of urine, as an index to renal sufficiency. The freezing point of the urine varies within wide physiologic limits, deficiencies in certain solids, may compensate for large increase in others, and it is largely influenced by diet and water; so this test is not of great value to the general practitioner.

Potassium iodide was one of the first substances used to test renal efficiency, having been introduced by Duckworth in 1867. Following the teachings of Schlayer, it is used to determine tubular functional capacity. Five-tenths of a gram of potassium iodide is given by the mouth and the urine is tested every two hours by Sandoz's method. Excretion should be completed in from thirty to forty-eight hours, and if prolonged beyond sixty hours, tubular disease of the kid-

neys is supposed to exist. This test has recently been proven unreliable.

The Salt Test.

The excretion of sodium chloride in the urine has been studied particularly by Schlayer as a test for tubular efficiency. After the estimation of total chlorides has been made in a patient on an ordinary diet, five grams of sodium chloride are given by mouth. Within twelve hours the amount excreted should equal that administered, otherwise there is delay. The salt test is not thoroughly satisfactory.

The Lactose Test.

The lactose test advocated by Schlayer as an index to the vascular function of the kidneys consists of the intravenous injection of a solution of twenty grams of lactose in twenty cc. of distilled water pasteurized at 75 to 80 degrees for four hours on each of three successive days. All of this should be excreted in four or five hours. This test is sensitive and is useful for diagnosis, and but for the time required for the preparation of the solution, would probably be of broader clinical use.

A Reliable Test.

Phenolsulphonephthalein was first described by Remsen in 1884 and was introduced as a functional test by Rowntree and Geraghty in 1910. It is a bright red crystalline powder, somewhat soluble in water, more so in alcohol, but insoluble in ether. It is non-toxic and non-irritating, is excreted with rapidity and exclusively by the kidneys. Its color renders it peculiarly fit for colorimetric estimation. It appears in the urine in one hour when given by the mouth, in ten minutes or less when given hypodermically or intramuscularly and in three to five minutes after intravenous administration. Geraghty believes that it is excreted by the renal tubules alone, the glomeruli being little, if at all, concerned. It is capable of demonstrating the reserve force of the kidneys.

The preparation best suited for general use is a solution each cubic centimeter of which contains six milligrams of the drug. The best colorimeter is Rowntree and Geraghty's modification of the Autenrieth-Konigsberger instrument. Twenty to thirty minutes before injecting the solution the patient is given 200 to 400 cc. of water to insure diuresis. This, however, is not essential, as the output of the drug is not influenced by the amount of urine. After the bladder has been completely emptied spontaneously or by aid of a catheter, exactly one cc. of the standard solution is injected into the muscles of the lumbar region. It seems important to select this location since intra-gluteal injections have given subnormal readings. To ascertain the time of appearance of the drug, the urine is allowed to drain through a catheter into a test tube containing a few drops of a five per cent. solution of

sodium hydroxide, and the time of the appearance of the first faint pinkish tinge is noted. The urine is collected at the end of one hour after injection, and at the end of two hours, care being taken that the bladder is completely emptied. To ascertain the amount of the drug eliminated, the urine of each period is placed in a litre graduate, ten cc. of a five per cent. solution of sodium hydroxide added, and then diluted with distilled water to one litre. A small portion of this diluted urine is placed in the rectangular cup and the wedge-shaped cell is manipulated by means of a screw until the two sides of the color field are identical in intensity. The percentage is then read from the indicator on the instrument.

Excretion Time Index.

The drug should first appear in the urine from five to ten minutes after injection; from 40 to 60 per cent. should be excreted in the first hour, and from 60 to 85 per cent. in two hours. The influence of diuretics on the output of phenolsulphonephthalein has been studied by Rowntree and Geraghty, who found that those diuretics which are known to exert some stimulating influence on the activity of the secreting cells of the kidney, namely, caffeine, urea, dextrose, phloridzin and calomel, slightly increase the output, while those acting by changes in osmotic tension or blood pressure, as sodium chloride, potassium nitrate and digitalis, apparently have little or no effect on its excretion.

Clinical Bearings.

The conditions in which this test is of value in determining renal efficiency are especially acute nephritis, chronic parenchymatous and chronic interstitial nephritis, uremia, cardiac disease and cardio-renal disease. It gives valuable data in surgical conditions of the kidneys also. In renal calculus, renal tuberculosis, renal tumors and hypertrophied prostate causing obstruction there is both delayed and diminished excretion. Further experience will doubtless broaden its field of usefulness to the surgeon. Uremia has been predicted before the appearance of suspicious symptoms.

Like all other clinical tests, this one is not absolutely infallible. Rowntree and Geraghty found five mild cases of chronic parenchymatous nephritis of short duration in which the phenolsulphonephthalein elimination was normal. Foster also reports three such cases, and Pepper and Austin, Cabot, Keyes and others have noted shortcomings. Practically all clinicians, however, who have had much experience with the test are loud in their praise of its reliability, and it may be conservatively regarded as the most efficient of all functional tests hitherto devised.

Conclusions.

1. The P. S. T. test is simpler than other functional tests. It is no more complicated than

an ordinary urinalysis, and requires but a short time for its application. The drug is non-irritating and non-toxic.

2. The total amount of work of both kidneys is accurately shown by delay and diminution of excretion.

3. The relative efficiency of each kidney is determined by analysis of the segregated urines.

4. The test is of great importance in cardio-renal disease by indicating the organ mostly at fault.

5. Valuable prognostic data may be gathered by the application of this test.

6. Absolute reliance should not be placed upon any functional renal test, but the results should be correlated with clinical findings.

*The Status of the Alcohol Problem.**

By HENRY O. MARCY, A.M., M.D., LL.D.,
180 Commonwealth Ave.,
BOSTON, MASS.

Alcohol a Narcotic.

We now class alcohol as a narcotic—a depressant, not a stimulant.

The wave of reform which has recently swept over the South and West, banishing the sale of liquor from large areas, is phenomenal. And I would like to see the great army of medical men in America actively enlisted in the teaching and practice of prohibition of the use of alcohol and other narcotics.

The drink evil has its inception primarily in two especial causes: first, the belief in the moderate use of liquor to be a physical benefit; second, the transient physical comfort induced by the narcotic effects of alcohol.

Medical science has proven: first, that alcohol is not a necessary medicine required to tone and brace up the general system; second, that strong alcoholic drinks are injurious, not possessing remedial virtue except in very rare instances; third, that daily repetition of small doses is injurious; fourth, that alcohol reduces the resistant power of the body; fifth, that the use of alcohol lowers efficiency and results in economic loss; sixth, that dilution does not, in the long run, reduce the dangers from alcohol; and seventh, that alcohol is a narcotic poison.

The "Bouquet" of Wines.

The "bouquet" of high-priced wines is produced, during fermentation, by certain bacteria, even as the flavor of creamery butter is produced. It is not wholly the alcohol that men prize in wines; it is this something else, or the "bouquet." Then, why may not modern science give us this desirable element without the alcohol? Let us recognize the social cup, but fill it with that which cheers but does not inebriate. The world demands relishes and condiments, and they are supplied to suit varying tastes. Then why not supply the world with tasteful fruit juices so processed as to have the "bouquet" of wines!

Temperance Drinks.

Condensed wines have been successfully made, but processes employing heat lose the aroma from the finished product. Concentration of wines and fruit juices by freezing processes offer many advantages. Fruit juices concentrated in this way are healthful and beneficial. It is to

Every vitalized organism is, in large degree, dominated by influences occult but all-prevailing; they originate in the nervous system and are under individual control, even in the lower species; but communal associations are instructive, and the lower animals afford many instances thereof, as well as do racial differences in man. Individuality, however, by repetition of thought and deed, gives expression to "bad habits," for "As a man thinketh in his heart so is he."

From the earliest periods of written history alcoholic abuses have been commented upon: the Egyptians, Greeks and Romans alike lauded the wine-cup, and deprecated its abuses.

For centuries the medical profession has recognized the evil resulting from excessive libations, and yet, by precept and example, most doctors have encouraged the moderate use of alcoholic liquors—less now than formerly. In the early part of the last century scientific treatises deploring the use of alcohol began to appear and at a time when business and public service, as in armies and navies, approved the wet seal of Bacchus.

An American, Dr. Benjamin Rush, published, in 1790, a dissertation upon the injurious effects of alcohol and tobacco, and his conclusions were quite in accord with the biological teachings of today. America has been foremost in this reform, even Father Mathews, of Dublin, who did a wonderful work in Ireland, came to America in 1849 and had a great following. The Washingtonian Movement, started by Dr. John Warren of Boston, was influential for reform, first in the medical societies, though not without opposition therein.

Other great medical exponents of temperance were Dr. Henry D. Didama of Syracuse, N. Y., and Dr. Nathan S. Davis of Chicago.

*Opening Address by the Honorary President, American Association for the Study of Inebriety. Abstracted from the original manuscript.

be hoped they are destined, in a degree at least, to supplant our enormously excessive use of tea, coffee and alcoholic stimulants.

The process of concentration is interesting. The fluid to be concentrated is subjected to a temperature below freezing, and the ice crystals, as formed, are mechanically broken up. The resulting product may be considered an unsweetened fruit sherbet. This is placed in a centrifugal machine of high power, and the ice crystals are driven out so forcibly that they resemble

snow ice and require breaking up with a hammer. The uncongealed concentrate, reduced in bulk 60 to 80 per cent., is ready for preservation. This process is being used to condense milk and cider.

It is not too much to believe that revolution in the drinking habit may be expected. In the place of table wines there will be furnished the fresh juices of the grape and other fruits, which, constantly used, will be found healthful and invigorating.

Furuncles.

By J. LEVERETT, M.D.,
Albemarle Place, Nepperhan Heights,
YONKERS, N. Y.

An old idea, and one which is mentioned by nine patients out of ten, is that the boil is a species of safety valve to let off some kind of poison which is in the blood and, were it not for the boil, would do untold harm. We know, however, that a boil is due to a local infection, starting usually in a hair follicle, which gives it its circumscribed character.

When the furuncle first appears it is hardly more than an inflamed pimple, but it rapidly grows in size and painfulness until the pus, which has now formed, is discharged through an opening in the skin. When first seen by the physician it is a brawny swelling, dusky red in color, with the skin tense and shiny. The patient has probably been treating it with various messes, more or less unclean, with the object of "drawing" it. These home-made preparations should at once be discontinued, those which are positively unclean for obvious reasons, and the more innocent appearing bread and milk, etc., poultices because what efficiency they have is very transitory and is heavily overbalanced by the fact that they are excellent culture mediums for bacteria and materially aid in the spread of the infection to other hair follicles.

Surgical Care.

If, on examination, pus is found to be present, the furuncle should be opened at once. This gives great relief from the pain and, if frozen first with the ethyl chloride spray, the operation is not in itself very painful. The incision should be deep and should be crossed by a second in the opposite axis of the boil, so as to give a gaping access to the pocket of pus. After all the pus possible has been evacuated it is my practice to swab out the cavity with pure phenol, using a toothpick covered with cotton for the purpose, searching out every little sinus and pocket. While this procedure causes a momentary burning sen-

sation, the secondary effect is anesthetic and the patient leaves your office feeling very comfortable.

A gauze drain is now inserted, the surrounding parts thoroughly wiped with bichloride solution to prevent further infection and the whole covered with gauze wet with bichloride 1/4000 and protected with rubber tissue or oiled paper. It has been demonstrated that a dressing in order to drain well should be kept moist, hence the wet dressing with the impermeable covering. If all the pockets have been found by the phenol swabs you will find little or no pus on the following day.

Non-Surgical Care.

In case pus be not present at the first visit, or the fact is in doubt, a different plan must be followed, one which is quite likely, if begun early enough, to obviate the necessity of surgical interference. First cleanse the boil and its neighborhood, especially any adjacent growth of hair, with alcohol or ether and, following that, with bichloride 1/1000. This will prevent the spread of infection to other follicles, the nine other boils which are popularly supposed, and with some show of reason, to follow the original one.

After this cleansing—never before—cover with a thick layer of a hot kaolin poultice and this with absorbent cotton. I always advise my patients not to be too stingy with this dressing but that it is true economy to use a little more rather than a little less.

This dressing may remain in place for twenty-four hours, but in many cases the results will be better if a fresh application is made every twelve hours. The patient should report for inspection once each day until it is apparent whether the inflammation has been checked short of suppuration (as will be the case if treatment has been begun early enough), or until pus appears, when it must be evacuated as described above.

As an adjuvant to this treatment I am accustomed to administer internally calcium sulphide to the point of saturation, which procedure, I have found, inhibits the formation of pus.

The Rational Management of Narcotic Addiction.

By ERNEST S. BISHOP, M.D.,
Clinical Professor of Medicine, N. Y. Polyclinic
Medical School.
151 West 85th Street,
NEW YORK CITY.

MEDICAL COUNCIL for December, 1915, carried a letter headed "How I Became a Morphine Addict and How I Cured Myself," and which was signed "A Reformed Physician."

The writer of this letter has my sincere congratulation on the happy outcome of his struggle with what he regards as a habit. There are some points in his letter which in the light of understanding point a moral quite otherwise than accords with his interpretation.

I believe this letter of his—written as it is with the best intention in the world, and in a spirit of Christian help and support to his fellow sufferers—conveys a wrong impression and is a dangerous influence if left unexplained. His is not the only case that has succeeded by this means, after great strain and stress and suffering, in escaping the condition with which he was afflicted. However much he may advise others to attempt the same methods, it should be widely appreciated that these methods are rarely successful and as a rule are very harmful.

The Weakness in the Psychic Cure.

I know a number of cases who have succeeded on the lines he followed. I know cases that have gotten off by Christian Science. I know cases that have been simply dumped into a padded cell and have managed to live through and have never resumed their drug use. I know cases that have had ultimate successful issue by treatment with the various advertised treatments and cures. There is no method which cannot point to some cures. The fact remains, however, that the average man—who is the man that we must reckon on—the man who is not buoyed up by an abiding faith in the help of divine assistance as the doctor expresses; the man who is not "a good many thousand dollars to the good" and cannot possibly withdraw several weeks and months from the active support of his family, to be spent in fighting nerve incompetency and physical torment—this is the man we have to help. And for the average man we have to treat, this method of withdrawal which the doctor was fortunate enough to endure to its successful issue is absolutely out of the question. A majority of addicts have tried it and have failed.

The doctor apparently regards himself as having yielded to a pernicious vice in the form of a

supposedly degrading appetite. This is a time-worn fallacy and it is a most unjust attitude to the average addict. What the doctor accomplished himself he advises others to attempt. If no other means are available and the victim is robust enough; if he has ability in enduring anguish far beyond that of the average man; if he has the support of an abiding faith in God, or in Christian Science, or in his own indomitable will, or in other extremely powerful mental stimulus which can place him almost on the plane of the early Christian martyrs in the endurance of torment—he will probably succeed. If he has something in him which can make him practically ignore the ills of the flesh; or if, like a rat in a trap, there is no other escape for him this method is worth trying.

I am not belittling in any way the helpful influence of human personality or the tremendous support of belief and faith in the supporting and healing powers of divinity. Every man who practices medicine conscientiously, in whatever line he practices, makes all possible use of whatever of these elements exist in his patients. I am stating this, however, that if one of the early Christian martyrs after weeks and months of castigation and torment should advise the average of his fellows to go and do likewise he would secure but a small following. The man of that mental and psychical type is unusual.

In medical terms the method which the doctor has succeeded with is not a method of election. Cutting off a toe will cure a corn, but it is rarely advised in surgical books as a desirable procedure.

From an experience with hundreds and thousands of cases observed and questioned in Bellevue hospital, in the Workhouse hospital, and in private practice, I know that the vast majority of morphine addicts have made desperate efforts on the lines the doctor recommends, and have failed. Such a procedure is economically, psychically and physically impossible for the average addict.

The Average Addict.

The average addict is the man we have to consider. It seems to me, and I am very strong in this belief, that it is about time that the medical profession was inspired and strongly urged, editorially and otherwise, to pay less attention to the sociologic, psychologic and other incidentals of narcotic addiction and seriously and determinedly to consider the obvious manifestations of body disease.

It is about time that the medical profession should insist upon a competent study of nar-

cotic drug action and reaction and clinical manifestations in the narcotic addict, as a problem worthy of laboratory research and of exhaustive investigation by men of ability in clinical and internal medicine. There is abundant material for such investigation in the narcotic wards of our large charity hospitals, and it should not be longer neglected. The need for some real instruction in disease facts in connection with narcotic drug addiction is too urgent and present to make delay in such work excusable.

Addiction a True Disease.

That there is a body disease, that there are horrible physical agonies in the deprivation of drug to a narcotic addict, we have a "Reformed Physician's" unconscious testimony. His description of the days immediately following the cessation of the daily administration of $\frac{1}{4}$ grain of morphine is as follows: "I determined to fight it out alone with God. I simply stopped suddenly and completely the $\frac{1}{4}$ grain I was taking. It was just as hard to stop as it was when I was taking 5 grains a day. Oh, how I suffered! One can't imagine how it is until after he has been through the same experience." The awful anguish, he says, lasted for ten days and after that he was weak and nervous.

He has my sympathy and my congratulations. I know something of the agonies he endured because I have watched them. I have watched them in Bellevue hospital and I have watched them in the New York Workhouse hospital. I have heard details from hundreds and hundreds of addicts. I know that in spite of years of observation and study of these cases—as a well-known and excellent physician, an ex-addict, told me—I can have no adequate conception of the physical agony of drug need. There is, I am sure, no physical torment comparable with it. I have had many addicts tell me that I could never appreciate the agonies of need for narcotic drug until I had experienced them, and that is an experience I hope I shall never have. This I know: some addicts die on account of need for the drug of addiction. I know that many doctors have told me of cases out of their practices where denial of the drug of addiction had caused death, although they had not realized it at the time.

If I were a layman and a child of mine were an addict and I watched him in the long continued agonies in which I have watched many addicts, watched him vomit and purge, watched him become pallid, haggard and drawn, watched him jerk and twitch and tremble, watched him collapse, and there was no other remedy for such physical torment than restraint and custodial care, exhortation, moralizing and prayer, I should not have a very high opinion of men who had had these manifestations before their eyes

and had not sufficiently investigated them as clinical phenomena of physical disease.

Hospital Handling.

That the narcotic wards of our great charity hospitals are still proceeding with their handling of narcotic drug addicts on the basis of mental and moral degeneracy or deficiency, or weakness of will, appetite, etc., or are applying one or another of the supposed specific remedies or combination of remedies, is a condition to which the medical profession can point with anything but pride. That these institutions admit day after day, and month after month, hundreds and thousands of cases of addiction all showing definite clinical symptomatology which is escaping clinical recognition, investigation and analysis, is a state of affairs of which we may not boast. That these institutions, together with some of the large privately conducted special enterprises for the administration of the different widely advertised "cures," have after many years given us practically no information of any real value concerning the physical disease from which their patients were suffering, is a fact which demands explanation and investigation.

Specifics.

I have expressed my opinion of specifics, and special routine treatments and methods and panaceas and advertised cures in the handling of narcotic drug addiction elsewhere and need not enlarge upon this point now. Such things may constitute an unavoidable stage in development from ignorance to complete understanding of a disease condition. In the light of the mass of material available, however, for competent clinical study of actual phenomena and symptomatology there is little excuse for the medical profession remaining longer in this stage.

Addiction Not a Mere Habit.

The addict today is in a sorry plight. We are still treating disease as a habit, vice and morbid appetite, and the addict apparently is the only one who knows it. It is about time that the medical profession realized that there is a rapidly growing appreciation of truth on the part of the addict and his friends and the laity in general, and that the time must before long come when of the medical profession will be demanded an explanation of material facts. We need clinical study of a definite disease by competent, unbiased investigators and practitioners of internal medicine, and it is about time that this need was realized. When it is realized and the vast amount of clinical material at our disposal is competently observed we shall have made a rational step toward the solution of the narcotic drug problem. Physical agony and symptomatology must have a physical cause, and it is about time that we recognize physical facts and were

able to offer to the addict and his friends and relatives more rational explanation of, and remedy for, physical actualities which they know exist.

The moral I draw from the letter of the "Reformed Physician" is that isolated cases of successful issue such as his are not a help, a guide, a pointing of the way to others, but are horrible examples; and the necessity for them is a blot on the escutcheon of medical progress to be wiped off as soon as possible. Such experiences are not necessary. The medical profession is waking up to the fact that morphine addiction is not a vice, is not a habit, is not a slip from grace, is not weak-kneed yielding to morbid indulgence—but that it is a disease and that it must be studied as a disease.

I give you my word that out of a hundred addicts I doubt if one is capable financially, physically and spiritually of the "Reformed Physician's" experience. I wonder if the doctor appreciates how much proof of disease he has written in his letter! I wonder if he knows how strongly he has argued against the case he started out to prove! I have showed his letter to a number of addicts and ex-addicts and I wish he could hear their comments—sympathy and admiration for him as a man and regret that he did not know better. There is one point upon which they all agree; that in signing himself "A Reformed Physician" he puts addicts in a false light. The average intelligent addict knows that he has some kind of a disease; and that in having a disease he has nothing to reform from, but has something which he hopes the medical profession will wake up to a recognition of, and a general understanding of, and a widespread ability to rationally treat and cure.

It is not necessary for me to argue my position in this letter. Three years ago my paper on "Narcotic Addiction a Systematic Disease" was published in *The Journal of the American Medical Association*. A year ago I read my paper on "The Analysis of Narcotic Addiction" which appeared in the *New York Medical Journal* last February. My paper on "The Fundamental Consideration of Narcotic Addiction" which was read before the Medical Editors' Association, last October, appeared in the November issue of *American Medicine*. A paper on "Preliminary Consideration of Narcotic Addiction in Surgical Cases" appeared in the December number of *American Journal of Surgery*. Both of these last two journals contained editorials showing the change of the medical profession's attitude toward this subject. Another paper appears in January. These papers will have covered my conception of the general problem, and to them those interested are referred.

Therapeutics from the Racial Standpoint.

The Indian.

By BACIL A. WARREN, M.D.,
First Lieutenant, M. R. C., U. S. A., in Charge
U. S. Government Hospital,
LEUPP, ARIZ.

Speaking of the trades and professions, the arts and sciences, I think one may quite truly say that, generally speaking, it is more what a person can do than what that person knows that will make for success in life. Today the world does not so much demand of you what do you know as "what can you do?"

In the realm of medicine, it is what you can do that counts. But the laity pretty generally think that it is because a certain doctor is so smart that they want him. As a matter of fact it is what that particular doctor has been able to make them think he knows together, secondarily perhaps, with what he can actually do.

Believing that I am right thus far in my premises I may go a step further and say that the successful practice of medicine depends very largely upon two things: first, what the physician can actually accomplish in curing disease, relieving pain, and preventing illness; second, the amount of hypnology, mental hybernation, or suggestive influence that the physician or surgeon brings to bear on his respective prospective patients.

So, the Indian medicine man has comparatively few physical applications or treatments that have a direct effect in curing or preventing disease or alleviating pain, but he is a top-notch when it comes to the mental gymnastics necessary to make his people think that his benighted mind is a storehouse of all the knowledge of the "ancient holy people" just as the white physician who may be considered an ignominy by his confrères and known by his classmates to be a "tail-ender" will, nevertheless, be thought a walking encyclopædia of medical science and really the brightest and best physician in town by hard-headed business men, preachers, lawyers, and society folks. He is able to make the people *think* he knows, and after all that is a very important thing to do; and it is very practical, for it generally "brings home the bacon."

Prophet, Priest and Doctor.

The Indian Medicine Man is, among his people, not only doctor but prophet, priest, and almost

king. He prophesies whatever his fancy dictates or whatever will best serve his purposes and his people believe him; he marries maids' and men in the Indian way and formerly is said to have exercised *justis primi noctis*; he treats his people in the Indian way when they are sick, and when he is so fortunate as to have a patient recover while under his care he and all the family tell it far and wide how that he, Medicine Man Lost His Hair, or whatever other tell-tale name he may happen to have, cured the patient; while, should his monotonous singing, dancing and beating of tom-tom or shaking of gourd rattle fail to drive away the evil spirits and restore the patient to health, he usually, in this climate, blames the illness or death, if that should occur, to either the lightning, the wind, or the c'in'di (demon).

But the Medicine Man goes much farther than this in the stretches of his imagination and in his efforts to build up his own reputation and set the feelings of his people against some other medicine man, white or Indian.

The Medicine Man and the Hospital.

In numerous cases of reservation Indians whom I have treated in the U. S. Govt. Hospital here, when the patients were making most favorable progress and in some cases were almost well, the medicine man would make strenuous efforts, through the people of the patient, to get the sick one out of the hospital that he might persuade the people that this person was really very sick yet and would never be well unless he sang over him. If, as is usually the case, we do not let the patient leave the hospital until he is entirely recovered, even then an Indian medicine man will usually get hold of him, hold a big "sing" over him, for which he charges many pieces of bright, new calico, several sheep, a horse, or money if the patient's people are possessed of any, and incidentally steals my thunder by claiming that he cured in one night what I could not cure in many weeks.

Indian Treatment of Trachoma.

One of my predecessors in the Government Service here took into the hospital the case of a girl who was nearly blind from trachoma. After many months of thorough, painstaking, expert work with her eyes she almost entirely recovered her sight. She was discharged from the hospital. A certain medicine man, one of the most popular in this vicinity, and known as The Fat Medicine Man, held a "sing" over that girl soon after she left the hospital and has been bragging ever since that he restored her sight. As a matter of fact these Indian medicine men seem to realize their utter inability to favorably influence the course of trachoma and so far as I have observed do not even attempt to treat it except, as in the case

above mentioned, where a cure has already been effected.

Fractures and Dislocations.

They are not so guileless as to refuse to treat any case whatsoever, however, if there is any pay in sight. Only yesterday a little Indian girl of about six years was brought to me for treatment for her left arm. They gave a history of the girl having been thrown from a pony about a year ago and hurting the arm at that time. Examination showed that there was a dislocation at the elbow joint. The joint was swollen and the forearm flexed at an angle of about 10 or 15 degrees and stiff, immovable. The Indian medicine men had been singing over this case off and on, whenever the folks could spare anything to pay for the treatment, during the past year. But somehow the bones had never seen fit to return to their correct position and finally, after it was too late, they had come to the Government doctor whose services cost them nothing. Perhaps you would think that these American Indians differ from white folks in that they do not want something for nothing, but anyone who knows Indians knows that they are great beggars. Certain it is that a medicine man's "sing," though it might set a dog laughing, would never set a bone. Sounds like Christian Science treatment, does it not?

Last year I was asked by the Indians to go and see a man whom they said had been run over and injured by a wagon some time before. I made a 110-mile trip with team and wagon over "the country God forgot" and when I examined the patient I found that when the wagon ran over him it had injured his right knee and dislocated the head of his right femur backward and upward. The wagon incident had occurred more than a year before I saw him; he had been lying there on the ground in his hogan,* unable to get up or scarcely more for more than a year and all the treatment that he had had was a medicine man's "sing."

He was so helpless that several of his people had to carry him out-of-doors and hold him over a hole dug in the ground for the convenience of defecation. It would be quite natural to pity a man, black, white, red, or green, in such condition, but this man was in that condition apparently by his own choice, for he could have called me just as well a year earlier than he did. There was a Mission Hospital and physician only about 20 miles from him where he would have gotten

*"Ho-gan" is the Navajo word for house. They also use the word "kin." The Navajo hogan is a hut built of logs, sticks and grasses, with the holes chinked up with mud. Its rounded top has a round or oblong hole three to six feet across, through which smoke makes its exit, and through which some rain, snow and dust enter. There is on one side of the hogan an opening or short, tunnel-shaped entrance way, covered by a blanket or piece of burlap, which serves as a door.

help at any time had he asked for it. Moreover this was a young Indian who had been for several years a student at one of our leading non-reservation Indian boarding schools where he had learned to talk English and was supposed to have acquired enough common sense to know that when a bone is dislocated it just needs to be put back into place and that any old song, any old time, any old place, by any old buck, witch, or wizard makes absolutely no difference whatever with that bone.

Of course if one infers that the Indian medicine man usually can not tell whether a bone is dislocated or broken or not, he must also reason that he is a fool rather than a knave. Personally I believe he is partly both and not altogether either one. In short, a good deal such a person as the white man was at the same stage of civilization.

"Civilizing" the Indian.

Whether the Indian can or should be civilized, as the white man understands civilization, is a big question about which there may properly be differences of opinion. This is perhaps mainly a sociological question and need not be discussed at length here, but it has a certain bearing on medical problems also. Some of the most able, interested, conscientious and far-sighted men and women who have worked among different tribes of our American Indians for ten, fifteen, and even twenty years have at the end of such service felt completely discouraged in regard to ever civilizing the full-blooded Indian. So far as my observation goes, I have yet to see or have positive information of any full-blooded Indian occupying a prominent place in the white man's civilization. Individual Indians having some white blood do make, sometimes, a mark for themselves and it seems that the more white blood they have the better they do. I would not be understood, however, as belittling, discouraging, or condemning the Indian. I look upon him as a child of nature.

Just Indian.

I think the red man, black man, brown man, yellow man and white man are different members of the same family, much the same as the coyote, bear and domestic dog are members of the same family. Coyotes and bears both have been to some extent tamed and domesticated, but why not let them just be coyotes and bears as nature evidently intended them to be? They seem happier, healthier, live longer, and perhaps do just as much good in their way. So it is with the Indian. He always has, generally speaking, been dirty, lazy, polygamous, and he has made little or no advancement any time anywhere, along the lines of what we consider civilization. But he is an Indian and always will be. Why not let him

fill his niche in the plan of nature? As far as being dirty is concerned, I'll wager that if you had to live in an Indian camp out on this Arizona desert where water is sometimes so scarce that there is barely enough to drink, you would be dirty, too. As far as being lazy counts, many a white man and woman work themselves to death just trying to get ahead of their neighbors or to give a delicate daughter a high education when she would be far better off without it.

Polygamy.

As far as polygamy is concerned, "it all depends," as the fellow says. Most people in civilized countries at the present time seem to be against polygamy, but just let a sufficient number of German males be killed in war or otherwise so as to make race suicide imminent unless polygamy were practiced, and see how quickly it would come into vogue. The same thing would occur in England or America under like circumstances, and it would not be thought wrong either; and far from being wrong it would be an absolute demand of nature and necessary to the interests of a vanishing race. Anyway, which is the worse, the Indian and his polygamy or the white man and his prostitution?

(To be continued.)

*Cyclic Vomiting.**

By HARRY E. MYERS, M.D.,
Clinical Instructor in Gynecology, Ohio State
College of Medicine,
COLUMBUS, OHIO.

This is a disease that is not infrequent and has as yet attracted but little attention except in this country. Although the clinical picture is more or less clear and definite, its pathology is undetermined. It is characterized by periodical attacks of vomiting, which recur at regular or irregular intervals of weeks or months, apparently without any apparent cause. The usual duration of attack is two or three days, and may last longer. During the attack usually all attempts to stop vomiting are without avail; but at the end vomiting stops spontaneously.

Etiology.

Most common between ages of two and four, but may date back to infancy, or may be found in children as old as twelve years. The two sexes seem equally liable to the disease.

In most cases the family record is neurotic in type; or there is gouty diathesis. The attacks are not usually traceable to an error in diet, yet

*Case report to General Practitioners' Medical Society, October, 1915.

a diet excessive in carbohydrates seems to bear some relation to the disease. The exciting cause in some cases is a nervous one—great fatigue or unusual excitement. In some cases the disease seems to be induced by some minor illness not associated with the digestive tract.

Symptoms and History of a Case.

The patient, a girl, nine years old, when she first came under treatment. She belongs to a family of a neurotic type. Her attacks date back four or five years. From this time they have occurred at intervals of three or four months. Occasionally four or five months would elapse without an attack. The symptoms in all attacks were alike, only varying in degree. The attacks in my patient were preceded by a prodromal period of from twelve to twenty-four hours, by marked languor, dullness, dark rings under eye, loss of appetite, and a general sense of discomfort in epigastrium; vomiting and retching, and great distress. Vomiting increased by taking food or drink. Vomited matter consisted of frothy mucus and serum. Slight temperature, 100 to 101.

Patient became very weak, and at end of third day she stopped vomiting spontaneously. On second day she became dull and apathetic and wanted to be left alone. Some headache and some fever, also thirst, and when she took any water vomiting was excited.

Prognosis in these cases is good.

Treatment.

Free purgation with calomel may abort attack. If vomiting has progressed nothing seems to allay or control it.

Water may be given by rectum to allay thirst and to stimulate urinary secretion. In protracted cases resort to rectal feeding. When vomiting has ceased, give broth, barley water, iced milk, etc. All sweets should be forbidden. Bicarbonate of soda, to counteract acidity, may be given in 15- to 30-grain doses. Diet later to consist of meats, green vegetables, milk and stale bread.

The Value of Cod Liver Oil.

On page 51 of *this* issue, in the Constructive Reform Department, you will find a careful analysis of the value of cod liver oil as a food and as a drug.

The one intention of the paper is to sift from the various advertising claims made for various cod liver oil preparations the practical points the practitioner can depend upon to give him results.

When giving mercurials remember to keep the mouth scrupulously clean to avoid stomatitis, and take care of the teeth.

Send \$3.00 for four years' subscription

Saves a dollar. So much more convenient.

The Treatment of Influenza.

By J. S. RAUDENBUSH, M.D.,
3633 N. Fifteenth St.,
PHILADELPHIA, PA.

Since the middle of November, 1915 (now middle of January, 1916), I have had many cases of influenza, but no complications and consequently no deaths, largely due to my patients following my orders.

Every epidemic has its own peculiar characteristics, and consequently requires different tactics in meeting it.

One cannot conquer the grippe by resistance. The sooner one submits to proper therapeutic measures the quicker is his recovery from the attack and the more apt he is to avoid its sequelæ and complications.

The patient does not improve where the room is cold, damp or draughty; it must be warm, not hot, but fresh air must be admitted.

I have observed every epidemic since that of 1889-'90, and have never seen a death from uncomplicated influenza, though its common sequelæ are tedious; but complications are serious and are frequently fatal.

My Treatment.

Keep the patient in bed all of the time and have his room warm and dry. Forbid all mental and physical effort; there must be absolute rest.

Thoroughly cleanse the gastrointestinal tract, preferably with magnesium sulphate.

Give some form of quinine, but be careful with depressants and all drugs which lessen excretion and secretion, for these must be kept active.

On account of the persistent cough occasioned by the irritation of the respiratory mucous membranes, mild expectorants should be given at first. Later, I find 5-grain doses of ammonium chloride to be excellent in effect. Counterirritation best allays the congestion of the throat and chest. Apply tincture iodine or some fatty preparation containing capsicum; but do not bundle up the neck.

I have not conquered very effectively the insomnia, headache, neuralgia and myalgia because I avoid the use of opiates in decided doses, as well as the coal-tar products; but the circulation and emunctories remain good and the heart is not weakened.

I have not been able successfully to promote free diaphoresis until about the fourth day, and sometimes not so soon; then be careful the patient does not "catch cold."

The diet should be light; there should be no forced feeding. The appetite will return when the stomach is in condition for digestion.

After the "attack" is over, stimulants and

tonics are useful, 1/60 to 1/30 grain doses of strychnine sulphate then being indicated, but not more often than four times a day. Sometimes this may be given in a tonic wine.

Do not over-drug. Do not hurry the case, but give Nature time to build up the nervous system, for which the infection has such a selective affinity.

One accumulates strength like he does a bank account, and it may be dissipated in the same way—gradually or suddenly.

Keep the patient in bed until he is able to do

more than merely to sit up. When he moves about the house be sure it is kept at an even temperature. Let him go outside gradually and defer returning to work until he is quite recovered. Keep the patient indoors until after congestion of the mucous membranes has sufficiently subsided as to render exposure to outside atmosphere non-irritating.

Some patients complain about this slow and careful method; but they know they are safe, and their fear of dangerous complications keeps them obedient to orders.

*Diagnosis of Every-Day Cases.**

By B. W. STEARNS, M.D.,
UNADILLA, N. Y.

The medical student is always reminded in the beginning of his course of the importance of the fundamental subjects of medicine, viz.: anatomy, physiology, biology and chemistry; this is the foundation on which he begins. After the student has become familiar with the fundamentals, he finds that the other subjects of the course fit in naturally to make up the completed structure, the medical education.

Of the men who take up the study of medicine, it is only the minority who have the intuition to become careful diagnosticians, which is the foundation of medical practice. This special qualification may be found in evidence, if carefully looked for, in the school boy; it will be manifest in his observations of nature, his ability to locate swarms of wild honey bees in the forest, or the most likely feeding ground of fish in the stream.

After the individual has finished his medical education, he should be through with memorizing and should take up the process of analyzing the facts and conditions he has to consider in the daily routine of practice.

The late George H. Preston, of the College of Physicians and Surgeons of Baltimore, Md., in his last lecture to the graduating class of 1892, said: "I hope you all will show by the examination that you have grasped most, if not all, of the work we have gone over in the lectures and laboratory and will all come out of the examination successfully; but after all, it is better that you question everything that has been said, and prove it out each for himself."

During the first three years of practice all must necessarily base their work on the statements of text-books and lectures, but each time a disappointment comes up (generally frequent enough) the conditions and facts must be analyzed, and

the individual factor brought into use. It is not enough to say that you handled the case according to the practice of Prof. So-and-So, or according to such a text-book; there is always some condition different from what has been laid down in the best of text-books, and this is where the special intuition of the practitioner brings either success or failure.

Symptom Analysis.

The analysis of a group of symptoms, as to which is the underlying factor behind all the others, and to which the main line of treatment should be directed, will lead to a simplified medication, aiding the natural forces of the system, instead of an over-dosing, which quite often embarrasses the natural action of the system.

As an illustration, I will mention one of the most common ailments the general practitioner encounters, viz., some trouble of the stomach, the treatment being often based on the diagnosis of the patient, who may have a coated tongue, may be constipated, have occasional or frequent headaches, and a general languor. In an off-hand way a laxative and a digestive agent are given, which affords a temporary relief; many times a druggist can do that much for the patient; but if the physician takes a due amount of care in the case, he will often find, on inquiry, that the patient is having more or less trouble from hemorrhoids, either at the time or within a few weeks previous; a physical examination will very often show a congested liver, which is the underlying factor in the case and really requires the main attention in the way of treatment.

Another group of symptoms often given an erroneous interpretation is headache, shortness of breath, tachycardia, nervousness, and sometimes vague pains about the chest, sometimes loss of appetite and nausea; far too often I have seen such cases treated for heart or stomach trouble, without making a urinary analysis, which would have shown a marked nephritis behind it all. If there is any one axiom upon which to base a

*Address of the President of Otsego County Medical Society. Read at Oneonta, N. Y. December 14th, 1915.

successful general practice, I should select the following: That a correct diagnosis of the underlying condition of each case is the all-important point to start from; otherwise, valuable time is lost, which very often determines the success or failure in handling the case.

Exact Diagnosis Means Few Drugs.

The more precise the diagnosis the less drugs required to bring about a cure. A few months ago I was in attendance on a case of autotoxic absorption; the woman complained of a long list of aches and pains, headache, backache, nausea, pains in the shoulder and limbs; after listening to the whole list, I said to her that I seemed hard-hearted at times by not giving something for each and every pain, but I would promise one thing, and that was, she would not get into the undertaker's hands from any trouble she had at the time; and within two days all the distressing symptoms were cleared up and she went on to a complete recovery.

The public and a large portion of the general profession have become imbued with the notion that specialists possess superior knowledge of many conditions, including a greater diagnostic ability. This, I may be bold in asserting, is not the case, or at least *should not* be so. No practitioner should take up a specialty without at least ten years of general practice, and during this probationary period his attention should be directed, in every case treated, to determine the primal factor or symptom from which other symptoms arise. By following such a diagnostic analysis, many symptoms will be found to disappear without any special treatment. Diagnosing a case is something more than giving a group of symptoms a name to satisfy a patient.

The General Practitioner and the Specialist.

It is a common understanding with the public and the profession that 90 per cent of persons feeling the need of medical attention go to a general practitioner. If he recognizes the conditions present, and has the remedies, or can give the directions necessary to correct the disturbed conditions of health, he is expected to do so; but if a condition is found requiring the use of expensive apparatus, or a highly developed mechanical skill, the general practitioner should be posted on what specialist possesses the apparatus or skill needed to correct the condition.

No general practitioner should send a patient to a specialist for a diagnosis of the patient's condition; the diagnosis is the province of the general practitioner himself. He should be the architect of the case in hand, and his compensation should be commensurate with the responsibility incurred. Instead of the specialist receiving an enormous fee for a technical operation and the patient led to believe that the knowledge and skill of the specialist has been the

sole power that has brought about the desired results, the specialist should hold the same relation to the general practitioner that the skilled artisan does to the architect.

The architect must possess a brain capacity equal to that of all the artisans in the construction of an edifice, though he may have the handicraft of none of them.

Art and Handicraft.

The specialist should be superior to the general practitioner in handicraft only, and when the public and the profession as well come to consider the handling of a case in this light, there will be no branch of the profession to suffer for want of respect or compensation.

Very few surgeons claim over-much as diagnosticians previous to operative procedure, realizing that a small window in a brick wall reveals much on the other side.

I do not wish to convey the impression of criticising the specialist—surgeons or others—as a class, but rather to place a greater responsibility on the general practitioner; so that instead of acting as a scout or business agent of the specialist, he will be the architect or guiding power in every case that comes to him, calling in the specialist as the architect calls the artisan to carry out his plans.

It is evident to me that the general practitioner has unconsciously educated the public to the present view of things, by too often shifting the responsibility of cases to the specialists.

Too Much Narcotic Medication.

It is all too common among practitioners, when consulted or called to a case where the patient is nervous and excited from pain, to resort to a hypodermic the first thing for the salutary effect on the patient and friends; it is quite likely to lead to another call to that family, when a like condition of things occur; but is it the best thing for the patient? Can the practitioner determine the underlying cause of the pain after it has been relieved? It is like the insurance adjuster determining the amount of fire loss after the fire, instead of duly inspecting the property before the fire.

The practitioner is then left to form an opinion of the case on the statements of the patient, which is often warped and exaggerated by conditions not considered or thought of by the patient, sometimes leading to serious consequences, or encouraging a neurotic patient to drift into a drug habit.

Consultations.

Instead of referring puzzling cases to a specialist for diagnosis, a consultation should be had by general practitioners, as a trial court, making use of laboratory reports on the case to determine the proper line of procedure.

It is not at all out of place for the general

practitioner to handle the financial part of every case referred to a surgeon or specialist, presenting the latter's bill to the patient.

The knowledge that determines a correct diagnosis in the beginning of a case is just as important as the skill that performs the operation, and should receive equal recognition in the way of compensation. Conceding the fact that some individual general practitioners are deficient in diagnostic skill, they will do better by encouragement and assistance than by derision, in person, or to a patient.

The cases in which symptomatic treatment may be tolerated are rare indeed.

I often hear it said by laymen that such and such doctors are all right if they can find out what is the matter with the patient. On the other hand, during my fifth year of practice, a doctor of some twenty years' practice complained to me that his patients insisted more and more each year that he tell them what was the matter with them, which he seemed to feel was asking him to commit himself altogether too much.

Ending the Diagnosis.

It has been that spirit of evasion and shifting of responsibility, by many members of the profession, that has allowed the public to drift off to the fads and cults of faith cures, who through their ignorant enthusiasm have carried more influence than the medical profession.

Here I want to say that it often takes more care and diplomacy to have a negative diagnosis understood and accepted by the patient than it does to allow him to go on thinking that he is being treated for some ailment that in reality is purely imaginary, until he drifts off to some Christian Scientist, or Osteopath whose earnestness and enthusiasm cures him of his imaginary malady.

There is an Arab proverb showing that "the enthusiasm of the man who knows that he knows is often equalled or even surpassed by the man who knows not that he knows not," the latter being, in plain English, a fool. For the past twenty years it has been between these two classes the public has been let to choose whose enthusiasm they would follow, with an apparently increasing number following the latter class.

If the general practitioner bases his work on careful and thorough diagnosis of each case, he will not only hold his present patients but will draw more to him.

Epidemics.

Thus far I have had in mind the miscellaneous cases of every-day practice. It would hardly seem any special ability was needed in the diagnosis of epidemic communicable diseases, as measles, scarlet fever, varicella, etc., but the same care is just as necessary.

A number of years ago, in Baltimore, Md., during a small epidemic of smallpox, a man was

taken sick at a hotel; the case was pronounced smallpox and the man taken to the smallpox hospital; the case turned out to be measles, but he was exposed, contracted smallpox, and died from it; which proved a very embarrassing experience for the medical attendants connected with the case. Five years ago I was called to see a child 12 years of age that was supposed to have been exposed to scarlet fever. I reported the case to the local health officer and the family was duly quarantined; at the end of eight days the temperature was normal, at the end of twelve days there was no sign of desquamation, nor at the end of three weeks. I then said to the family, this child has not had scarlet fever. They were quite startled over it at first, but when I explained that the case was rotheln, and that the child should not take any chances of exposure to scarlet fever, the family was more than satisfied. Many physicians would have hesitated to announce a change of diagnosis; but nothing inspires more confidence than an expression of courage of your honest convictions.

Defective Teaching.

There is a marked deficiency in the medical curriculum as to the number of hours provided for teaching the practice of medicine compared with the time devoted to surgery. Of course, the time devoted to pathology, anatomy, physiology and therapeutics is considered as included in the foundation of general practice; but what is sadly needed is the practical application of these subjects to form a foundation for diagnosis, establishing a practical knowledge of the physiological relations of the various organs and their functions, as shown by certain interdependent symptoms in clinical practice and corroborated by laboratory tests.

In a May, 1915, number of *The Journal of the American Medical Ass'n.*, I saw a quotation from a personal letter of Oliver Goldsmith, English physician and author, of nearly two centuries ago, cited as evidence of the value of a liberal education as preliminary to the study of medicine. I wish to cite the same passage as showing the value and necessity of careful diagnostic work by the practitioner of today. Goldsmith said, "Give me leave to say that the circle of science which I have run through before I undertook the study of physic is not only useful, but absolutely necessary to making a skillful physician. Such sciences enlarge our understanding, and sharpen our sagacity; and what is a practitioner without both but an empiric? for never yet was a disorder found entirely the same in two patients.

"A quack unable to distinguish the particularities in each disease, prescribes at a venture; if he finds such a disorder may be called by the general name of fever, for instance, he has a set of remedies which he applies to cure it, nor does

he desist till his medicines are run out or his patient has lost his life. But the skillful physician distinguishes the symptoms, nor does he depend so much on the efficacy of medicines as on their proper application."

Dr. J. B. Murphy, of Chicago, said before the Congress of American Surgeons, that if he were asked the question as to the starting the study of medicine today whether he would take medicine or surgery, said he would reply without hesitation, "I should start in internal medicine, the advance of internal medicine in the next quarter of a century will be enormously greater than that of surgery; internal medicine has enormously more possibilities than surgery has; it is internal medicine that goes into details, makes a careful examination and analysis, and endeavors to arrive at a diagnosis."

Riding Hobbies to Death.

A little more than a year ago I was asked to examine a young man in declining health for a period of some five months; he had just been informed by two physicians that tubercle bacilli were present in his sputum, which, of course, settled the question of diagnosis.

But Dr. Osler has stated that 92 per cent. of individuals will be found to have living tubercle bacilli in the body at some time of their life, but only 12 per cent. develop the disease. Now on physical examination of the young man here referred to, I found a few râles in the lower part of the right lung, none in either apex; there was some cough, but very little expectoration; aside from the lung condition was a coated tongue, loss of appetite, marked congestion of the liver, poor digestion, constipation, quickened pulse (90), lack of sufficient rest and sleep, and marked nervous disturbance, the latter mainly from the anxiety over his condition of health. This case was ordered by his guardian to go at once to Saranac, where everything was directed toward the lung condition, as though that was the primal factor of the case.

He was put on forced feeding regardless of the condition of the digestion and liver, with the result that the patient has gone down hill steadily from the time he went to Saranac. Five months after his arrival at the institution he was submitted to a compression of the affected right lung by the use of nitrogen gas into the pleural cavity, all to no avail, the case steadily going to the bad.

I cite this case as a comparison to another I saw eight months later, a young man of nearly the same age, and in practically the same conditions of health; this second case was under my care for four months. I directed my treatment to the liver condition and digestive disturbance for the first six weeks, during which time there was a small loss in weight, followed in three weeks again to his usual weight and above it; the cough stopped and the lung became nor-

mal; the family history was equally good in both of these cases.

I want to sound a warning to various specialists, not necessarily in this County Society but throughout the State, against riding a hobby to a fatal termination in certain cases.

Defective Building.

An edifice constructed on a foundation with one defective corner is doomed to early destruction.

A diagnosis of pulmonary tuberculosis, stomach trouble, kidney trouble or several of the skin troubles, must take into consideration the existing physiological action of the liver, in order to form a complete foundation on which to base the treatment; a laboratory report of a case only establishes one corner of the foundation for treatment.

An editorial in an April number of *The Journal of the Amer. Medical Ass'n.*, in referring to a decision of the U. S. Supreme Court, says: "The diagnosis is the essential, and unless the 'doctor' is sufficiently well trained to make a diagnosis, he is not qualified to treat the patient intelligently by any method whatever." The Court says: "An Osteopath professes to help certain ailments by scientific manipulation affecting the nerve centers. It is intelligible, therefore, that the state should require of him a scientific training. He, like others, must begin by a diagnosis. It is no answer to say that in many instances the diagnosis is easy—that a man knows it when he has a cold or toothache. For a general practice science is needed."

In another editorial of the same journal reference is made to an article by Prof. Adolphe Abrahams, of London, on "Common Errors in Diagnosis," Abrahams classifies errors on the part of physicians into two groups, social and clinical.

Social errors, under which are listed (1) bad deportment and (2) lack of tact, affecting chiefly patients suffering from such functional disorders as hysteria, psychasthenia and neurasthenia. Social errors prevent the physician from gaining the necessary confidence of such patients and inhibit the establishment of the thorough sympathetic understanding which should exist between the functional neurotic and the physician. Clinical errors are due to (1) ignorance, (2) faulty judgment, (3) obsession, (4) failure to think anatomically, (5) failure to think at all, (6) reluctance to accept responsibility, (7) inherent difficulties in the case, and (8) incomplete examination. Naturally these divisions may overlap in their application to any special case.

I am surprised almost every week by patients coming into my office and saying they are discouraged over ever getting relief from their various disturbances, and hesitate to try any more doctors; but many of my staunchest supporters

and advocates are enlisted from this skeptical class.

I never base any treatment on some other's diagnosis; if I cannot take the time to analyze all the conditions of a case from the start, I let it go by. A patient may come to me and state he has some particular ailment that I find is a secondary symptom requiring little or no attention.

Too many physicians seem to get the idea that volume of business is the important feature of the practice of medicine, like it would be in the grocery or dry goods business, but it is not.

Prompt Results.

Prompt results in all cases where it is possible, making small expense to each individual, is what is being recognized and appreciated by the people, and will be even more so in the years to come than at the present time, and this can only be attained by careful diagnosis of each case at the beginning.

Co-operation.

In conclusion I want to mention one point in the line of consultation. It is a generally accepted axiom that the welfare of the patient is the first consideration. In a consultation over a case, where the attending physician has announced an erroneous diagnosis, the specialist may be able to straighten matters out smoothly, but with a competing practitioner it is a delicate position indeed in which to be placed; and yet if the final outcome of the case is successful there need be no injustice to anyone; honest frank coöperation will work to the benefit of all.

The Diagnosis of Pregnancy.

As an after thought, I wish to mention a condition that comes frequently to the general practitioner; that is, the question of pregnancy, in both married and unmarried, especially the latter. The diagnosis of these cases is too often made light of, as though it were a question of sociology; but there is an element of justice toward all concerned, including the rights of the prospective child, that demands a careful decision and correct advice on the part of the physician consulted, instead of gross evasion of responsibility that many physicians resort to until the pregnancy is far advanced and the girl frequently abandoned by her suitor. It looks to me many times as though the physician consulted had been timid over announcing the condition of pregnancy for fear of offending some one; but I want to assure such physicians that their fears are sure to bring embarrassment to themselves as well as the patient. The condition does not call for a hurried or snap diagnosis, but all such cases should be gone into thoroughly, and proper advice given the patient and her mother, if she is in reach.

OUR OPEN FORUM

A department of Current Comment, Instructive Case-Records, Short Original Articles, Clinical Discussion and Matters of General Interest.

Contributions to this Department should be short, pithy, kindly in expression, of true scientific value, and carefully prepared.

This department of the MEDICAL COUNCIL is open to free exchange of proper opinion, criticism and matters of professional interest. Space precludes printing all letters in full, but so much of those received as will interest or instruct our readers will find place here.

The Treatment of the Pneumonia Heart.

I was much interested in your January editorial upon the pneumonia heart. During the recent epidemic I had three old ladies, two aged 79 and one 80, to treat for pneumonia. They had high temperature, with very distressing cough, which my usual remedies failed to control. All three had poor circulations, becoming cyanotic during paroxysms of coughing. I have given them digitalis, aromatic sulphuric acid and an elixir of poppy, in combination with elixir lactated pepsin. This gave excellent results, producing sweating, controlling the cough, reducing the temperature and subduing the nervousness and insomnia. All three made excellent recoveries.

W. A. MARNER, M.D.

Miles, Iowa.

On Being the Architect in the Case.

Shortly after mailing the answer to Dr. Fish I made reference in the presence of my class at college to this idea of expending seventy-five dollars before giving the first prescription in a case of dyspepsia. Some of the members of the class asked for particulars.

When I first began the practice of medicine and gave a patient a prescription for dyspepsia, I was very happy when he failed to return, believing that I had cured him speedily. The fact of the matter was that he had usually gone to some other doctor and then to another one after that, and finally to some fakir.

Is it the fault of the public that it goes to all of the different kinds of medical frauds referred to in Dr. Kennedy's excellent article in the January COUNCIL? Is the public to be blamed? The fault is ours, in the profession.

We good-naturedly try to please the patient by giving him what he thinks he wants. This being a failure, he goes to some one else and finally ends up among the pretenders.

When a case of chronic dyspepsia comes into the office it is well to have fluoroscopic study made of the patient's peristalsis. Let us say that it will cost the patient \$25.00. Next in order we

must determine if toxins from some focal infection are being excreted by the mucosa of the stomach. We may be able to determine that toxins in excess are emanating from the colon, and that examination, let us say, will cost the patient \$20.00 for laboratory work.

Failing to find a focus of infection in the colon, we are to obtain a radiograph of tooth roots in a search for a nidus of *Streptococcus viridans*. We will suppose that this examination costs \$25.00. If the patient's pulse rate and peristaltic rate indicate over-stimulation of the vagus, we must have examination made for eye-strain, nasal hypertrophies or some other cause for vagus disturbance. So far so good, but in the most ordinary cases of chronic dyspepsia we may be only fairly under way in preparation for giving a first prescription when the patient has already been subjected to this degree of expense. Furthermore, no one can pretend to treat chronic dyspepsia unless he is prepared to subject a patient to many more kinds of examination.

The doctor of today must prepare himself not so much for infallibility as against infoolability. A chronic dyspepsia patient will fool a line of doctors reaching from the grocery store all the way to the post office unless they go at the case systematically and according to modern method. The doctor who subjects his patient to an expense of from \$75 to \$100 in the average chronic dyspepsia case before writing a single prescription or charging anything for his own services [Provided the patient has not gone broke on laboratory fees.—Ed.] will in the end make a very much larger income than the doctor who charges 25 cents for dyspepsia prescriptions.

If a patient is too poor to pay for expert examination there are ways for obtaining it. That is the glory of our profession—our ability for finding ways for giving relief to the patient who hasn't money enough to take him to the movies.

Were I to charge twenty-five cents apiece for examining and prescribing for patients, and if great flocks of them were to come in consequence of my dastardly underbidding, I could not afford to run my farm in the country. A very few patients on the other hand, thoroughly examined in advance of prescription, will soon allow a doctor to pay the running expenses of two farms. [Here, you would-be medical "farmers," get wise to this. Dr. Morris frankly classes a "farm" as a liability, not an asset.—Ed.]

ROBERT T. MORRIS, M.D.

New York City.

Have You Read?

Have you read "Functional Tests of the Kidneys"? It is a very interesting comprehensive paper, giving practical points in that concise style that makes them easily usable.

You will find it on page 35 of *this* issue.

Send \$3.00 for four years' subscription.

Saves a dollar. So much more convenient.

Thyroid Treatment of Nephritis.

Your editorial in January journal on nephritis, acute and chronic, contains many good suggestions; but I am surprised to find you have omitted one of the best of modern therapeutic agents. In my hands the fresh preparation of thyroid gland, as now marketed in tablet form, has given me such splendid results that I think it ought to be called to your attention.

Have tried, as you have, many of the drugs, with varying effects. In acute nephritis, after the initial elimination through the bowels and a careful regulation of diet, the use of thyroid gland up to the physiological effect of the drug has regulated the amount of urine secreted and gradually brought it to the normal standard with all constitutional symptoms abated.

My procedure is to use an oil, either castor or mineral oil, to clean out the bowels. Follow this by sufficiently large doses of a saline laxative, three times a day, to cause a soft mass or putty stool. My preference is for three evacuations daily. In large fleshy patients a dry diet, with a liberal amount of milk or buttermilk and, if insisted upon, a little *percolated* coffee after the meal. Thyroid gland in ten-grain doses four times a day until thyroidism begins to develop, then drop to five grains three times a day, and unless untoward symptoms develop, to continue this for thirty or sixty days after urine has returned to normal and casts have ceased to pass.

Iron and arsenic are freely used with a little tincture of nux vomica to serve as a tonic. By using a good hemaglobin and arsenic preparation the difficulties of iron are eliminated.

For three years I have had a case that was pronounced acute Bright's under observation. Tests of urine are regularly furnished, and since the treatment ceased two years ago there has been a normal condition of the urine and patient has been engaged in active business for half of the time after relinquishing activities for fear of aggravating his trouble.

A very recent case, with urine at 1005 and total solids for twenty-four hours less than forty per cent. for patient's physical development, one week of treatment reduced quantity, increased solids to 1016, and removed cardiac and pulmonary symptoms so patient was able to do her household duties and is making steady general improvement.

In these conditions where the blood count shows diminished hemoglobin, cod-liver oil has acted nicely. This may be due to the iodine it contains or to its general tonic qualities.

In your closing paragraph you speak of "uremic cases." Is there a case of nephritis that is not in danger of uremia at any time? A coryzea, shock, chilling due to exposure, fright, and even excessive care or worry will induce exacerbations of very mild cases of nephritis, causing toxic symptoms to develop and which must be combated with sufficient elimination.

In arteriosclerosis and nephritis it is to thyroid

medication that I always look for pronounced relief and a marked softening of the involved blood vessels. In all cases accompanying symptoms and complications must be relieved by appropriate medication.

ROYAL O. BROWN, M.D.

Mt. Morris, Ill.

Post-Graduate Instruction.

Of late I have been much interested in the move being made to approximate post-graduate teaching facilities in Philadelphia, and would be glad to get in touch with anything of this kind as it develops, as I am contemplating an extended course of this kind in about a year from now.

Some time ago, as I was trying to size up the advantages which the different medical centers offered for post-graduate teaching, I was surprised to find that Philadelphia was practically at the foot of the class, and now that the old town is awakening, I am truly glad, and wish the movement abundant success.

GEO. L. HOWELL, M.D.

Washington, W. Va.

Congenital Occlusion of the Esophagus.

I see in the November issue of THE COUNCIL, a report of congenital occlusion of the esophagus. I will also report a case because I think they are rare.

Mrs. C., age 21; ht. 5 ft. 6 in., wt. 145. Has living one healthy child two years old. On May 14, 1915, she was delivered of the second child. The labor was perfectly normal; six hours; full term child; female, weighed 8 lbs., perfectly normal in appearance. There was a tendency for the babe to strangle at regular intervals. Upon lowering the head and cleaning the throat it was all right. Would nurse well, but upon attempting to swallow it would strangle. Every way was tried to deliver milk into the stomach. Catheters and filiform bougies were used in trying to find an opening, but no results. Consultation gave no results. Rectal feeding was instituted at once, but nutrition gradually lessened. The child died on the tenth day of inanition. The parents of the child refused to allow it to be operated upon or to send it to the hospital for care.

T. O. HARDESTY, M.D.

Jacksonville, Ill.

Don't Hesitate

We want to print in Our Open Forum worth-while comment from working doctors. Don't hesitate to express sane and kindly criticism and tell what things have "fallen down" in your hands. Constructive debate is always stimulating.

CONSTRUCTIVE REFORM

For the Practical Benefit of the General Practitioner

Cod Liver Oil as a Food and Drug.

IODINE VALUE is, in the case of cod-liver oil, 160; that of tallow is about 80; that of butter, about 50. Iodine value does not add to the digestibility of a fat or oil. Butter, with one of the lowest iodine values, is one of the most digestible of fats. So, then, the iodine value of cod-liver oil is very little of a factor and need hardly be considered in studying cod-liver oil as a drug. Iodine value, however, which indicates the amount of unsaturated acids of the fatty type, has nothing to do with the actual amount of iodine present, which actual amount is so very small in cod-liver oil as to be negligible; but the iodine value does show a relatively large amount of unsaturated fatty acids in cod-liver oil, which, on account of hemolytic properties, have been claimed to have an effect upon bacteria, more especially the tubercle bacillus, a theory disproven by laboratory research. Doctors have had so much literature about cod-liver oil and its content thrust at them that they are apt to be fogged over the facts in the matter. There is a small amount of iodine in cod-liver oil—too small to count therapeutically and "iodine value," which is high, has absolutely nothing to do with the actual amount of iodine present.

Cod-liver oil is largely made up of unsaturated fatty acids—palmitic, therapeutic, erucic, jecoleic and gaduleic—with a little cholesterol and a mere trace of phosphorus, and, as before noted, a trace of iodine. This is about all that can be said concerning oil properly prepared, that is, from perfectly fresh livers subjected at once to low pressure steam, then frozen and pressed in that condition. But plenty of inferior or partly spoiled material is worked up, and it contains oxy-acids, an increased amount of free fatty acids, and certain organic bases. Reliable literature says these last are of the ptomaine type; but interested parties who want to dispose of unmarketable oil call them "alkaloids" and say they are the active principles of the oil. So, then, the so-called extracts of the oil contain these ptomaine—"alkaloids," other organic bases, and coloring matters; and the extract incorporated into "tasteless" products, wines of cod-liver oil,

etc., has a vogue which has no scientific basis. Cordials, wines, etc., of cod-liver oil, whatever other merit they may possess, certainly can not claim such as pertain to cod-liver oil itself or any medicinal effect inherent to it.

A Dynamic Drug.

Cod-liver oil is a drug supplying actual energy as well as healing. Each gram of it supplies 9.2 calories, and even when taken in large quantities is nearly all absorbed, which is far from true of fats in general. And in addition it promotes the absorption of other fats. These qualities are due to low melting point and the contained free fatty acid, which, in the alkaline intestinal tract, immediately emulsifies the cod-liver oil and a certain amount of other fat present.

Metabolic Advantages.

Most fats are made up of saturated fatty acids, and they must be desaturated by the liver before becoming available for use by the different organs of the body. This is true of the subcutaneous fat of the human body itself. Now cod-liver oil is almost entirely composed of unsaturated fatty acids, and it immediately becomes available as a source of energy without the intervention of the liver, as proven by Leathes. This is to be expected, as it is a liver oil.

Indeed, so readily taken up is cod-liver oil that one need have no fear of the adiposity induced by its prolonged ingestion, since this deposited fat is itself rapidly taken up by the system.

In conditions of malnutrition, the resistance of the system to toxic influences is dependent upon the amount of available nutrition. Here cod-liver oil is almost invaluable, serving actually as a remedy as well as a food.

During any toxemia glycogen rapidly disappears, and the subcutaneous fats are carried to the liver to be desaturated and become available to the tissues as a source of energy. Cod-liver oil not only conserves the subcutaneous fat but affords energy at once.

Pure Oil the Best.

It is not true that the old, malodorous oils are the best, for they contain less unsaturated fatty acids than does the good oil now made in an atmosphere of CO₂, which prevents the oxidation to oxy-acids. Then, too, these nasty oils contain the ptomaines before mentioned, and even if they are in small amount they are more or less harmful. The more free from color and odor, as well as taste, an oil may be, the better remedy is it; and it must be remembered it can not be truly metabolized outside the body itself. So-called metabolized cod-liver oil products have no basis whatever in science.

Pharmacology.

Here is another instance, in addition to that shown in January regarding arsenic and that in February concerning alcohol, where the laboratory pharmacologist has cleared up scientifically a host of more or less empiric conclusions and has placed an old remedy upon a rational basis; for what has been stated regarding cod-liver oil is a brief explanation of the findings of the pharmacologic laboratory. Certainly physicians should welcome all such findings and hope for more of them. This is real constructive reform, to which this department of MEDICAL COUNCIL is devoted.

Therapeutics.

Malnutrition is the keynote of its therapeutics, whether this be in rickets, tuberculosis, tertiary syphilis or other wasting disease. After acute infections or other debilitating disease, in many chronic illnesses, in bronchitis with low vitality, in anemia and the neuralgias due to it, and in many nervous and nutritional diseases, cod-liver oil is of real utility.

Perhaps it may not be generally known that in diabetes when the patient is rapidly losing weight, large doses of the oil may do much good; but if the excretion of acetone is increased it should not be used.

The main contraindication is in atonic conditions of the stomach; but even then it may be given with care, especially in malt extract with a little *nux vomica*.

Never give with the meal; wait until an hour after eating. Emulsions are useful, with or without malt extract. Begin with small doses until tolerance is established, when the quantity given may be increased. Various other drugs may be combined with the oil, as may be indicated. Egg emulsions may be made readily, and the ready-made combinations with thick malt extract are useful and commonly procurable at the pharmacy.

Avoid all prepared products of cod-liver oil that claim too much or that carry less than twenty-five per cent. of the oil, as well as all of the cordials, wines, "tasteless" preparations, oil-less oil elixirs, metabolized, or extracted products unless what is desired is the other agents in these products other than the oil alleged to be there. When you want cod-liver oil, see that you get it, and of the purest stock obtainable.

When using typhoid vaccine the intervals between injections should not exceed ten days or anaphylaxis may occur.

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Pharmacologic Action of Oil of Chenopodium.

It is shown by Salant and Livingston that the intravenous injection of doses of 0.02 to 0.085 cc. of chenopodium per kilogram produced a fall of blood pressure in dogs, cats and rabbits. Recovery was observed. The effect was greater in dogs than in rabbits or cats. A second injection of the same dose produced a greater effect, but when this injection was repeated until the total amount reached about 0.2 cc. per kilogram, no response of the circulation could be observed. This was especially the case in dogs, but to a much smaller extent in cats. This phenomenon was absent in rabbits. Fall of blood pressure was of cardiac origin, as the volume of the kidney decreased with the fall of blood pressure. Frequency of heart action was diminished after oil of chenopodium. A very marked decrease of vagus irritability was observed after oil of chenopodium. Respiratory depression such as decreased amplitude and rate, with apnea, was also caused by chenopodium, but this effect with small doses was less constant than that on the circulation. Cats react more readily than dogs. Small doses may stimulate respiration in rabbits. Apnea was very seldom observed in the rabbit, even after large doses. No methemoglobin or hemolysis was observed even after the intravenous injection of 0.02 or 0.024 cc. per kilogram, or the introduction of 2 gm. per kilogram into the stomach or small intestine of the cat. Liberation of oxygen in the body by ascaridole is suggested as a possible cause of respiratory depression and apne. Action of chenopodium on respiration is independent of its effect on the circulation. Reduction of sensitiveness of the respiratory center to carbon dioxide is not the cause of action of chenopodium on respiration. Amounts of chenopodium tolerated by intravenous injection varied in the same animals. The average is approximately 0.03 to 0.35 cc. per kilogram in dog, cat and rabbit. The less depressant action of chenopodium on respiration in the rabbit is attributed to relatively larger amounts of carbon dioxide in the blood.—*American Journal of Physiology*, as abstracted by J. A. M. A.

Will You Help

*in constructing "Constructive Reform?"
It is not worth while boosting the dead
past; but it is abundantly worth while to
conserve the valuable heritage of the past,
as well as to reach out to grasp the good
things just coming into being.*

Modernizing Botanic Medication.

A recent work upon pharmacology includes these botanic drugs: Flavoring agents, inert demulcents, excipients, etc., vegetable acids, pilocarpus, several alkaloids, calabar bean, belladonna, hyoscyamus, stramonium, colchicum, lobelia, curare, conium, gelsemium, scoparius, nuxvomica, cocculus indicus, camphor, opium, cannabis indica, vegetable astringents, hydrastis, coca, bitter almonds, laurel leaves, wild cherry, digitalis, coffee, buchu, uva ursi, essential oils and resins rather numerous, strophanthus, squill, convallaria, adonis, apocynum, aconite, staphisagria, veratrum, ergot, cinchona, wintergreen, several vegetable purgatives, gentian, quassia, calumba, taraxicum, berberis, serpentaria, charcoal, diastase, ipecac, essential oils and balsams, several aromatics, capsicum, menthol, thymol, several rubefaciants, sugars, several anthelmintics, and a number of substances noted as inert or of little value. Many vegetable drugs largely used are not mentioned. And yet, in looking over our own medicine case, we found only thirty-two vegetable drugs not listed, most of which we use rarely. So, then, pharmacology leaves us quite a respectable list after all; and we must confess to using more and more those drugs pharmacologically proven-out.

But what of the rest of them? Pharmacology does not say they are all worthless, leaving to future investigations the determination of these matters. Besides, were we to list vegetable drugs noted in other reliable works upon pharmacology, probably many more would be added to the list; in fact, we know from recollection, there would be.

So, then, the charge that pharmacology is robbing us of the vegetable materia medica is overstated. But pharmacology is robbing us of many of the *claims* formerly made for vegetable drugs, giving to each drug a definite and scientific place. We lost nothing by this, since definiteness is always a gain rather than a loss. And pharmacology includes many proximate principles not individually listed above and in which it is clinically better to use the proximate rather than give a lot of inert matter in order to get the remedy wanted.

There may be quite a pharmacologic future for many vegetable drugs now omitted; and the way to accomplish their inclusion is to determine how few, rather than how many, definite things are accomplished by them. Vaunted cure-alls receive no scientific attention. And that is the trouble with many debated drugs of vegetable origin.

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Cutting Off the Springs of Life.

In an article in *The Virginia Medical Semi-monthly*, Dr. Samuel Lile, Lynchburg, Va., says:

At a recent meeting of the Academy of Moral and Political Science, in Paris, it was reported that births in France for the past twenty years had fallen annually from 860,000 to 750,000. Thus it will be seen that in this length of time there must certainly have been quite a loss to the population of France. Just so with our own country, while I have no statistics to quote here, there is abundant evidence to show that, but for the tide of immigration, our population is decreasing even more rapidly than that of our sister republic across the sea. We admit about 1,000,000 newcomers annually, and at each census we show an increase of about 10,000,000, or 1,000,000 for each year, and this does not attempt to add to the number of immigrants their own offspring. What increases we could show, aside from the immigrants, would be to the credit side of these immigrants and from the uneducated classes of our native peoples.

Then it must show that our educated classes as well as our society people are not following these natural wants, that of filling their homes with their husbands' offsprings, but that in some way or somehow, the homes of such bear too heavily upon the minds of our women, that they are declining to do their God-given duty in this respect. This is a fast age and an age of luxury; can it be that the luxurious life is leading to profligacy, and that this profligacy will lead to the downfall of our nation, as has so often been the case with opulent nations in the past?

Assuredly! It is time for medical journals to cease propaganda for contraceptive methods, for it is our better classes who are only too rapidly adopting them.—EDDOR.

Calcium in the Treatment of Epilepsy.

Dr. John Bryant, Boston, in *Boston Medical and Surgical Journal*, October 7, 1915, after discussing the metabolism of calcium, asserts that the diet is very apt to be deficient in calcium. Analyses of brain substance have demonstrated the presence in this tissue of less than the normal amount of calcium, in certain disorders marked by hyper-irritability of the nervous system. The osseous systems of epileptics are thought to be deficient in calcium. Calcium has been used successfully in explosive conditions like tic and tetany. Then why not in epilepsy?

Using the official syrup of calcium lactophosphate in doses of one or two teaspoonfuls three times a day, and in many cases, the writer reports it to be quite effective in the *petit mal* type, reducing nervous irritability and improving the general condition of the patients. But nearly all types of epilepsy have shown some benefit from the syrup and Dr. Bryant is encouraged to continue his trial of this drug in all types of explosive neural manifestations.

Don't Try to Juggle with the Harrison Law.

This law is being rigidly enforced regardless of mere amiable intent upon the part of the doctor. Doctor, remember that your registration and recording are no protection against any form of illicit traffic in drugs. Don't run the risk of prescribing narcotics by mail, even if you know all about the patient. Always SEE the patient for whom you prescribe or dispense narcotics. Don't dispense through a third party, for all sorts of games are being worked on doctors, and you may quite innocently render yourself liable to arrest. Don't, under any conditions, allow yourself to become the source of narcotic supply to any person who may not use it medicinally. Your prerogatives in regard to narcotics are purely those of a physician in the legitimate practice of medicine among persons actually under your professional care.

Some harrowing stories are appearing in medical journals regarding physicians who have been unpleasantly involved in real or alleged violations of the law. Maybe some of these stories are overstated. Certainly, in some cases of technical violation in which we knew the facts, the authorities were very lenient. But you know, Doctor, ignorance of the law excuses no one. Also some officials are over-zealous. So be careful; be *very* careful.

The Legislative Situation.

Congress is in session; but it is so taken up with problems of defense, taxation, and political fences needing repairs before the coming presidential campaign that it is not likely that matters of medical import will receive much attention.

Only ten State legislatures meet this season; so it is an off year in tinkering with the rights of the doctors.

Last season efforts were made to cripple dispensing by the physicians; but, aside from strengthening in some of the States the anti-narcotic legislation, little came of it.

We can expect a degree of legislative support to propositions requiring records of *all* dispensing, whether by druggists or physicians, except in case of emergency or personal administration.

A few extremists will urge the passage of laws which will prohibit all dispensing except by registered pharmacists. We don't believe any legislature will give serious attention to such a proposition; but if any one does, we will consider moving THE MEDICAL COUNCIL office into that State; for there would be more fun editing a medical journal there than anywhere else. There would certainly be something doing, and a jolly good scrap would be on.

<p><i>While we, as physicians, desire to be scientific students and practitioners of medicine, and that is the primary purpose for which this journal is published;</i></p>	<h2 style="margin: 0;"><u>THE BUSINESS SIDE</u></h2> <p style="margin: 0;"><i>of Medical Practice</i></p> <p style="margin: 0;">"The laborer is worthy of his hire."</p>	<p><i>yet, for the welfare of our dependent ones and our standing in the community, we must secure a fair compensation for the services we render our fellowmen.</i></p>
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Our Armamentarium, from a Business Viewpoint.

FOREIGN-MADE appliances based upon the metric scale have given us infinite trouble when new parts or repairs were necessary. There is no disputing the fact that Europe makes some splendid instruments and appliances, but it is also true that just as good ones are now being made in America. Perhaps the European war has had something to do with this; but, at all events, the advantage is all ours in securing right at home the instruments and appliances so necessary to the modern practice of medicine and surgery.

In purchasing American-made instruments it is well first to ask the manufacturer if he carries a line of repairs and new parts. This is especially necessary in apparatus with valves and packing and in electro-therapeutic appliances. The latter class of manufacture should be more standardized than is the case, especially electrodes and connecting cords. It is most annoying to purchase such items and then to find that they fail to fit your machine.

The up-to-date electrical machinery is made to fit in with the general scheme of the operating room and surgically-appointed office, it looks efficient and is efficient and has as little excess of parts and surfaces to hold dirt as may well be. Judge by the pictures. The old-style stuff you don't want at any price; get the new model.

Except for old stuff held over from a previous vintage, there is little surgical junk now *on sale* in America; but there is a lot of old stuff *on hand*. Some time ago we went to a factory and asked for the sales department. A most engaging clerk met us and proceeded to enlarge upon the merits of some ancient models. When told that we had not asked for the museum but the sales department, we were promptly handed over to another clerk who was right up to the minute on surgical technic. We give this snap away because it needs to be exposed. Fortunately, very few firms have been guilty of such practice in the past, and we are aware of but two who have been recently. Neither of them advertise to any extent, and they are distinctly retrograding, which serves them right. Moral: Patron-

ize wide-awake firms that advertise; their stock moves and does not remain to grace a museum to catch the come-on.

Surgical Dressings.

American-made surgical dressings are the best in the world, and we are not aware of any firms now turning out bad material. The trouble with dressings is that often they are not taken care of properly after they leave the factory, especially in retail drug stores and doctors' offices. Buy them in original trade containers clean and unbroken, and keep them there until needed, and there will be no trouble. But pitching a pile of assorted bandages and other dressings into an unkenpt emergency bag, rummaging through it for what is needed, and throwing half-used bandages back into the general assortment is neither good surgery nor good business. Good dressings cost money; but it pays to buy them and then take care of them until used, handling them according to surgical principles and without waste.

Biologicals.

Hosts of doctors have rushed into the use of biologicals without knowing much about them; and they have rushed out again just as quickly. One man we heard of decided it was so good a business venture to specialize upon bacterin-therapy that he even began making his own vaccines at a time when the large laboratories were seeking for daylight in the matter of production. He dissipated a good practice over an obsession, for he failed to realize that one can't use these potent biologicals like the patent far-from-logicals for "coughs, colds and consumption."

No physician should use vaccines and serums unless he absolutely knows what he is doing, and knows it technically and thoroughly as a science and discriminatingly as a clinical branch. Such men are securing splendid results from the biologicals. Any well-informed physician of modern education can learn how to use these double-edged weapons intelligently if he will only apply himself to a real study of the subject. The trouble with these agents is not with the pro-

ducers, for the Federal Government inspects and licenses all of them, excluding all unscientific or carelessly made stuff; the trouble is with the doctors who don't know how to use them, or who fail to take care of the material after it is in their hands.

Read the literature sent out by the makers; it is not a hodge-podge of misinformation about what these products are "good for," but is accurate direction that *must be followed to the letter*, so far as the letter can safely be followed. But it is impossible to make biologicals fool-proof. Your stock of biologicals *must* be well taken care of. Watch the dates on packages bearing them, and keep in a clean ice-box such products as need to be kept chilled. Don't over-stock or use date-expired material.

One of the most foolish business mistakes a young physician can make it to stock up with an expensive assortment of biologicals when he is not assured that he is reasonably certain of having cases upon which to use them. And one of the most wise business moves he can make is to become expert in the use of them and let the busy practitioners know what he is prepared to do.

Official Medicaments.

Little need be said here except this: While the U. S. P. is a safe guide, the National Formulary is not. At least it *has not been*; but it is to be hoped the forthcoming one will be. The National Formulary was designed to help the retail druggist make more or less scientific substitutes for various proprietary products of mixed composition. It is a strange state of affairs that the National Formulary is legally recognized as on the same basis as is the U. S. P., while the original proprietaries imitated therein are continuously, and often rightly, under fire. If we are to have a National Formulary, it should be designed to serve the purposes of the large pharmaceutical manufacturers who make up formulæ in bulk and not to serve the retail pharmacy. If it is to serve the latter men, let it say so and not pose as anything but that.

New and Non-official Remedies.

This publication of the Council on Pharmacy and Chemistry of the American Medical Association is upon a far better basis than is the National Formulary. The products listed therein are proprietary, made by the best manufacturers of drugs in the domestic and foreign field, are of definite composition, and their makers aim to tell the truth about the products; they are not hit-and-miss "scientific substitutes" made in any old kind of a corner drug store. It is to be hoped, if the forthcoming National Formulary serves the medical profession no better than does the present one, that the Council on Phar-

macy will issue a supplement to the volume "New and Non-official Remedies" which will contain a formulary for the guidance of physicians in prescribing. This would be good business for the A. M. A. and for the profession at large.

These truly scientific proprietaries should be more largely patronized. Most of them are sold by the ounce, just like high-grade chemicals generally; they do not have suggestive names, and the physician can prescribe or dispense them without his patients being any more tempted to self prescribing than they are with calomel or quinine.

But it is poor business to be rushed off one's feet by these new things. Despite their being scientifically well-based, many of them fall down in practice, just like many new introductions to the U. S. P., have done. But if one follows up the better medical journals, it is impossible not to be impressed with the fact that many of these agents work out well in the hands of our most discriminating clinicians. Therefore, it is poor business to ignore the new introductions.

Mixed-Ingredient Proprietaries.

This field has been seriously abused, and it stands to reason that the careful physician should not think of prescribing any secret compound or one falsely labeled or described. Especially should we avoid the proprietaries using the physicians and the medical journals merely as an introduction into the patent medicine field, although it may reasonably be said that simple laxatives, household antiseptics and other such modern "simples" are legitimate articles of professional and lay trade. So long as the physician confines his recommendations of proprietaries to such items as flavored castor oil, mild antiseptic solutions, malt tonics, infant foods, mineral waters, and such like, he is not hurting his own business or catering to the fake patent medicine abuse; but when he allows himself to be a disseminator of package goods with catchy names and with which lay-directed circulars are packed, then he is foolish and is not serving either his patient or himself.

But mixed-ingredient proprietaries have just as much justification as have the mixed-ingredient prescriptions commonly written; for we all know how easy it is to memorize a few formulæ and write them for all comers as alleged extempore prescriptions. Writing for a favorite proprietary compound is just as scientific practice as is that.

The real business justification for mixed-ingredient proprietaries is easy to trace. Here are a few examples: Chemicals that readily decompose or are hard to combine extemporaneously, like the hypophosphites and syrup hydriodic acid, really should be package goods put up in a well-

equipped factory. Certain drugs that are nasty or messy in extempore compounding, such as hydrastis as but one example of many, are perfectly legitimate in proper proprietary form. There are many suppositories, medicated bougies, vaginal cones, oily and resinous substances, granulated effervescent products, sterile ampoules of many substances, solutions hard to prepare, preparations of rare drugs, as well as other products, wholly legitimate in proprietary form if honestly prepared, labeled and described.

The Drug Store.

A serious need in most communities with enough physicians to support it is a truly professional retail drug store, one that has wholly abandoned the patent medicine business and carries only such drugs and chemicals as are honest. With a competent man in charge able to make analyses and put up the many special products the physician may want, such a retail pharmacy would be of immense service to both the profession and the people.

The times are ripe for the physicians to institute such a move in drug-store reform and, with the aid of the American Pharmaceutical Association, press the matter vigorously. With such a store near at hand, the physician should secure many of his supplies there, find properly cared-for biologicals awaiting him, surgical dressings of all kinds ready for instant use, as well as laboratory solutions, the finer chemicals and a line of pure and reliable pharmaceuticals. All of the prescriptions he writes should be sent directly to such a store, none that he can control being allowed to go to the other retail stores catering to the patent medicine trade.

If the druggists' associations fail to reform the present abominable conditions of the so-called retail drug trade, the physicians should take a hand at reforming them.

If we could only get the reputable druggists together in such a move, getting them to clean up their own stores and start a genuine swatting campaign against the notorious cut-rate stores, perhaps such a rational form of chemist's shop might soon be available in every community of five thousand or over.

Business is Business,

even with the physician. Indeed, what YOU have found good business in your work may help your fellows in the profession more than you may realize. Perhaps they may not have thought of the very thing you should tell them in these pages.

Points in the Penna. Compensation Act of Importance to Practitioners Everywhere.

With lodge doctors, company doctors, Carnegie relief doctors and hospital doctors, each with their special line of graft, the cup of woe of the independent physician, especially in the industrial communities, is full to overflowing. And shall we add to this the grip of specialism that continually raises its presumptuous head and claims the earth and the fulness thereof?

How the young physician of the future is to maintain a livelihood without any of the special privileges above enumerated is beyond the writer's conception.

As if all this were not enough, there was added the compensation act, to take effect in January, 1916 (not many moons away), pussy-footed apparently but surfaced in reality with thorns that will touch the very soul of our average physician. It surely is time for the independent physician to arise in his dignity and assert his prerogatives. Where the Committee on Legislation of the Pennsylvania Medical Society has been hibernating while this bill was being framed and passed is not for the writer to say. Sufficient is it to remark that they were not where they should have been. Perhaps they do not realize yet the cloven hoof hidden in this bill that tramples the unfortunate victim of an accident into the tender (?) mercies of a corporation, body and almost soul; thus in fact and more in practice nullifying the free choice of a physician to the injured one.

Let us quote the paragraphs from sections 306 and 314 bearing on this matter:

"During the first fourteen days, after disability begins the employer *shall furnish* reasonable surgical, medical and hospital services, medicines and supplies, as and when needed, unless the employee refuses to allow them to be furnished by the employer. The cost of such services, medicines and supplies shall not exceed twenty-five dollars, unless a major surgical operation shall be necessary; in which case the cost shall not exceed seventy-five dollars. If the employer shall, upon application made to him, refuse to furnish such services, medicines and supplies, the employee may procure the same, and shall receive from the employer the reasonable cost thereof within the above limitations. If the employe shall refuse reasonable surgical, medical and hospital service, medicines and supplies, tendered him by his employer, he shall forfeit all right to compensation for any injury or any increase in his incapacity shown to have resulted from such refusal."

"At any time after an injury the employe, if so requested by his employer, must submit himself for examination, at some reasonable time and place, to a physician or physicians legally authorized to practice under the laws of such place *who shall be selected and paid by the employer*. If the employe shall refuse, upon the request of the employer, to submit to the examination by the physician or physicians se-

lected by the employer, the board may, upon petition of the employer, order the employe to submit to an examination at a time and place set by it, and by the physician or physicians selected and paid by the employer, or by a physician or physicians designated by it and paid by the employer; and if the employe shall, without reasonable cause or excuse, disobey or disregard such order, he shall be deprived of his right to compensation under this article. The board may at any time after such first examination, upon petition of the employer, order the employe to submit himself to such further examinations as it shall deem reasonable and necessary, at such times and places and by such physicians; and in such case, the employer shall pay the fees and expenses of the examining physician or physicians, and the reasonable traveling expenses and loss of wages incurred by the employe in order to submit himself to such examination. The refusal or neglect, without reasonable cause or excuse, of the employe to submit to such examination ordered by the board, either before or after an agreement or award, shall deprive him of the right to compensation, under this article, during the continuation of such refusal or neglect, and the period of such neglect or refusal shall be deducted from the period during which compensation would otherwise be payable."

"The employe shall be entitled to have a physician or physicians of his own selections, to be paid by him, participate in any examination requested by his employer or ordered by the board."

As may be readily determined by previous experience, the latter paragraph will be to all intents and purposes a dead letter. The poor victim will have all the proper suggestive influences about him to see that he shall not be unduly refractory. If he shall be insistent of his rights the choice of a physician by him is only for examination and not for treatment anyway. Again these examinations may be made quite an expensive affair, for they may be many, indeed. Imagine a poor "Hunky" struggling for his rights, if you please.

If ever there was a more diabolical attempt to abridge the rights of first the employe and second the independent physician, then the writer does not remember the chapter and page.

In a fair field and no favors many physicians will forge ahead. Open competition is all they ask for, and by dint of superior skill and industry they will succeed. On the other hand, there is a certain other class of physicians that curry favor and receive appointments that entitle them to practice upon those who, left to their own choosing, would certainly leave those physicians out of consideration altogether.

But for the rank and file of the profession to have their rights abridged little by little; their field of endeavor gradually curtailed, to see all this and not make a protest is more than red blood in free America can stand.

Physicians of Pennsylvania, how will all this work out? By sacrifice of time, patience, health and almost soul, the physician has gotten the confidence of a family who continue to employ him because of their supreme trust in his sympathy

and skill. An accident occurs and the family have thrust upon them, without choice, a paid agent of the employer. All that physician's industry has gone for nought and that family, taking the usual run of families, will soon know the family physician no more. Is this a square deal?

The corporations will have their paid company physicians, who have been outlaws professionally heretofore, clothed with the majesty of the law, to take care of their employes with an assurance that up to this time has been lacking. And the gall of it all is that these same company physicians will preach ethics in other fields to a queen's taste. It savors of the political leaders preaching party loyalty and fealty to the rank and file and proceeding at the same time to stealthily knife some steady regular, the hem of whose garment they may be unworthy to touch.

The medical societies as they exist are composed, by a great majority, of the members who are being hit by these facts. If they will not arouse themselves from their Rip Van Winkle-like sleep and protest, it is sure that the beneficiaries of these special privileges will not do it for them.—*Fayette County Mirror*.

Compensation Laws and the Doctor.

In about thirty States of the Union laws providing compensation for injured workmen are in force; and, in some of the States, more or less injustice seems to have been done to the medical profession.

Nevertheless these compensation laws promise to develop constructively, and they will doubtless eventuate in much good, even to the profession. Wherein and wherever the laws in force discriminate unfairly against physicians, we have proper occasion to enter protests; and there is every reason to believe these protests will receive due attention if they are made in proper form and spirit.

It will be a mistake if we oppose the principle of compensation, or proper enactment providing for it. The suffering and economic losses involved in injured workmen failing to receive prompt and proper medical and surgical attention is, very properly, a concern of the State. And there is every reason to believe that these laws will result in an increased volume of paid-for professional services. The proper distribution of this work among the personnel of the profession is where the difficulty lies—a difficulty specific legislation will not solve except insofar as it is so drawn as not to discriminate.

So long as physicians are privately employed and are not working under public salary, no law except the law of supply and demand will serve to distribute the work among the members of the profession. So, then, the physicians must get together themselves in solving this matter.

It is very human, of course, but the loudest outcry against compensation has, thus far, come

from surgeon specialists who wish to maintain their own local scale of fees, and from physicians whom employers do not regard as properly equipped to do emergency surgical work as it should be done. The men who have most occasion to complain—the capable physicians who lack the ability necessary to “work a pull”—are saying very little.

The Surgeon Specialist.

Surgeon specialists should realize that younger men and the general-practitioner surgeons have a perfect right to do surgical work below the scale of fees exacted by the expert; and that these men will receive valuable training and experience in surgery by virtue of the operation of compensation laws. The surgeon specialist must not expect to monopolize all of surgery. It is not likely that injured workmen or their employers will fail to avail themselves of superior skill when superior skill is needed. But much routine surgical work does not require superior skill, the average man of modern training and fair equipment being quite capable of doing it efficiently and creditably.

The Incompetent.

We were in the office of a physician in the Middle West and who was complaining bitterly of his loss of surgical work through the operation of the compensation law in his State. And yet this man had no means for sterilizing instruments except immersion in antiseptic solutions; his instruments were the old bone- and shell-handled style of years ago; his bandages were torn from an assortment of discarded sheets he kept stuffed into a drawer; his suture material consisted wholly of silk on pasteboard bobbins; his catheters and drainage tubes were so old the rubber was dead; and he did not own even a needle-holder, doing his surgical work with instruments from old-style pocket cases and worst of all, his most recent text-book on surgery was printed twenty years ago. His whole community realized he was not prepared to do surgical work, although he was generally and justly regarded as a very capable physician. And when the compensation law came along he was promptly out of the running, so far as surgery went. Do you wonder? Yet most physicians who have retrograded in surgery, fail to realize the situation. Compensation laws will *make* them realize.

So, in the long run, compensation laws will have a tendency to increase the number of men who are prepared to do creditable surgery; these laws will result in a greater volume of surgical work being done; and they will make it more and more necessary to be up and doing if one wants to make a good living from medical practice. The man who is up and doing will not be hurt; but the others will be. The moral is obvious.

Best Current Medical Thought

Acidosis and Influenza.

Fourteen deaths from acidosis, which occurred in an apparent epidemic form principally among children, have been reported from Boston and vicinity. *Boston Medical and Surgical Journal* calls attention to the fact that, along with this acidosis, colds, tonsillitis, influenza and so-called grippe and pneumonia have been rampant; and the Editor raises the question of their interrelationship, or the acidosis being one manifestation of the pandemic. Physicians who have been in position to observe these acidosis cases, will, we hope, send us reports thereon.

We can readily understand how gastroenteric forms of grippe may induce an acidosis; but it has been contended that there is an unknown specific infecting agent productive of acidosis. This is pure supposition.

The term “grippe” should be abandoned. Authorities in Germany contend, very rationally, that infection with the *B. influenzae* gives rise to a disease properly known as influenza and that no other infection should be given this name. The recent pandemic of so-called grippe in the United States was largely a streptococcal infection. Why not call it streptonitis, just as pneumococcal infection is called pneumonitis? Where, then, would grippe come in, and what is grippe?—EDITOR.

Streptococcal Pharyngitis.

Dr. Joseph D. Lewis, Minneapolis, Minn., in *The Journal-Lancet*, Jan. 15, 1916, contends that streptococci—viridans, hemolyticus and mucosa—and pneumococci are more or less constant inhabitants of the healthy human pharynx; and one becomes vulnerable to them when the general and local resistive forces are impaired, when, in the host, these bacteria become virulent.

The *S. viridans* is of low virulence and surface action; *S. hemolyticus* (often mixed with pneumococci and staphylococci) goes deeper and often causes pus cavities. This is the common organism of epidemic pharyngitis.

Complications are frequent and dangerous, one of which is Ludwig's angina. Do not depend upon the clinical picture for a diagnosis; use the microscope.

Rest in bed is the important element in treatment. Orthoform relieves the pain. Only non-irritant local treatment should be used, such as Dobell's solution. Ice packs are useful in the

early stages. A cold spray of 25 per cent. ichthyl containing a little glycerine and oil of anise is admirable in overcoming the edema. Use once an hour. Remember the possibility of diphtheria. Urotropin benefits some cases. The employment of vaccines is not of established utility. Surgical attention may be demanded.

The Detection of Gall-stones by the Röntgen Ray.

Dr. George M. Niles, Atlanta, Ga., in *Southern Med. Jour.*, Dec., 1915, after conceding that up to three years ago this was an uncertain procedure, contends that improved technic now makes it possible to detect 75 to 80 per cent. of gall-stones *in situ*. After full evacuation of the intestinal tract, a "soft" Coolidge tube is used in a series of plates, allowing only a limited area in each plate, which cuts out the fogging of the secondary rays. Under-develop the plate, which should be next the abdomen with the patient lying upon his face and leaning to the left.

As Deaver says: "The patient who is fair, fat and forty, and belches gas" is apt to be a gall-stone case.

Operative and Non-operative Treatment of Fractures.

In *Annals of Surgery*, the American Surgical Association's Committee on Fractures presented a report. Among other conclusions, it reported that neither the non-operative nor the operative method is to be recommended exclusively. Each has its indications, but non-operative methods are more certain of success in persons under 15, whereas in the period from 15 to 60 operative methods may succeed where non-operative ones may fail, especially when fragments are hard to control and keep in proper position. Operative work should be done not later than one week after the fracture occurs. Open methods may be used at any age period, except in senile cases, when efforts at reduction and retention have proved unavailing. A rigid plate applied directly to the bone or an Albee "inlay" is the fixation method of choice in operative cases. Open methods of fracture treatment should be undertaken only by experienced surgeons.

The committee disapproves of unnecessary manipulation and favors the reduction of fractures under anesthesia in nearly every case.

Urea as a Bactericide.

In *The Lancet*, Dec. 4, 1915, Dr. T. S. Kirk asserts that urea in 8 to 10 per cent. inhibits bacterial growth and is bactericidal in higher percentages. Urea is non-toxic, is highly diffusible, and acts upon bacteria better in the presence of blood and organic fluids than in water.

Clinically it proves to be an admirable first-aid dressing and it may be used up to full strength in wound dressing. The drug proves to be of especial value in dressing sloughing infected wounds. Its advantages are that it is apt to become caked in the wound and that sometimes it causes pain.

The General Practitioner and Nervous Disease Prevention.

Dr. Harold W. Wright, San Francisco, in *Calif. State Jour. of Med.*, urges the general practitioner to aid in the prevention of nervous and mental diseases. Specialists are shifting responsibility to other specialists. Therefore, prevention is largely the province of the man in general practice; the specialist ignores it.

Adolescence is the period during which best preventive work is done. Too much stress is laid upon heredity and too much reliance placed upon eugenic legislation. Malnutrition, more than many more noticed factors, is a cause of neuroses and psychoses. Congenital syphilis, however, cannot be over-emphasized as a factor requiring vigorous attention.

We know little about the glands of internal secretion, but such knowledge as we possess should be fully utilized. We should require mothers to nurse their children, artificial feeding being responsible for much nervous instability. Rickets induces many nervous affections. Indigestion, anemia and neuroses go hand in hand. We should instruct parents in dietetics and physical culture.

Psychological factors are many. Traumatism of the mind and soul should ever be avoided. These things are largely "up to" the home and school, but the physician should do his part. Look out for precocious emotionalism and sex deviations. Don't allow healthful activities to be suppressed in the child; and remember that environment is a very great factor. The "doctor of the old school" did more to prevent nervous diseases and insanity than are we to-day.

Well Worth Reading.

Dr. Bishop's paper, "The Rational Management of Narcotic Addiction," on page 39 of *this* issue, is well worth reading.

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Scars: Their Newer Treatment.

By DOUGLAS H. STEWART, M.D., F.A.C.S.,
NEW YORK CITY.

The author of this little paper may be allowed to state that all that is claimed as original therein are the scars, some of which he furnished for experimental purposes. But when the literature of a subject is voluminous then a so-called boiling-down and extracting its rudimentary essentials is not without value. It saves time and search.

If one wishes to lessen the extent of a cicatrix which is forming upon a clean wound, he bears in mind that the scar of a stitch is itself indelible and he thinks that adhesive plaster would be a substitute. Trial shows that the results obtained are most disappointing if the plaster is applied so tightly that the resultant traction jams the edges of the wound together and causes either over-riding or inversion, because both are pathological positions of impossible healing and must be remedied, either by art or nature.

Scarlet Red.

The skin was long ago termed the "Surgeon's Enemy;" it is a germ habitat, and the pit or ditch formed by inversion with its contact of sound skin against sound skin, roofed or sealed by the plaster, filled and macerated by the retained secretions of the sweat glands, and its contents maintained at about the temperature of the body; surely this is a pen picture of an ideal germ-nest. But suppose the strip of plaster was faced by another strip at the point of wound contact, it would there be of double thickness and non-adherent; and suppose again that this dou-

ble-thickness was perforated with a trunk strap punch, then ventilation and drainage would both be free. A linear wound painted with Scarlet Red ointment [offered by several firms.—Ed.] with its edges barely (but exactly) approximated by such a perforated plaster, will leave a hair-line scar. Septic wounds thus treated do badly.

Allantoin.

Imagine as a patient, a professional beauty who had sustained a facial wound. Put on that wound a few filaments of lamp wicking (never gauze), cover them with a little mound of Kaolin or Talcum, approximate skin edges carefully and retain with adhesive plaster. It will then be found that where the powder is will be no adhesion and the lamp wicking will furnish through and through drainage. Let the latter be soaked constantly with a solution ($\frac{1}{2}$ per cent.) of Allantoin-water (sterilized by boiling) and employing a dropper for the purpose. In septic wounds a solution of (2 per cent.) soda citrate, of (2 per cent.) table salt, and of ($\frac{1}{2}$ per cent.) Allantoin, produces such good results that it has been termed "Feeding embryonic tissues with the active principles of embryonic tissues."

When a wound is sewed with horse-hair no application either in infected or clean wounds has made such small scars for me as 1 to 3,000 Sublamin-Glycerin. A curious fancy that horse-hair does well because the skin tolerates hair-growth is a current sort of half truth. Equally good results may be obtained by the use of other materials because small calibre of thread and slight traction upon the stitch are the most important items for consideration.

Pressure.

The use of steady and constant pressure will reduce the thickness of scars, but intermittent force may fail because it is the single great cause of corns, consequently its effect upon a scar may be readily anticipated.

Fibrolysin.

In dealing with linear ridges, bars, etc., deep, multiple, cross incisions should be made. Space them one-eighth inch apart, let them bleed, and when the bleedings have stopped, clean up with Peroxide and normal salt solution. Place a lamp wick from end to end of the scar, cover with adhesive plaster tightly applied, have the wicking protrude one-quarter inch beyond each side of the plaster and wet the upper end with Fibrolysin. [Merck & Co., New York.—Ed.] Use about one ampoule per day for three days, leave the plaster for four days more, then remove all and repeat, or not, as indicated. A hypo syringe with a dull needle has advantages over a dropper, and the medicine should be dropped upon the wicking until the whole ampoule is used, or until the lower end of the wicking becomes damp.

The external use of carbolic acid appears to equal carboric snow in its good results. Superficial facial scars should have the former applied over a rather small area; when the site of application whitens, neutralize the caustic action with alcohol and five minutes later swab all off with glycerin. With both snow and acid the skin is apt to show a red mark which fades in the course of a couple of weeks.

Cautions

Fibrolysin will act at a distance if injected into any large muscle, therefore, care should be taken that some very desirable scar (laparotomy or other) is not softened without intent. Too heavy or too prolonged administration sometimes produced the symptom complex of headache, vomiting and fever. Of course, then, its administration should be stopped for a week; but it is quite usual to find that, under the aforesaid circumstances, its results have been brilliant. When used in small dosage into or under the scar any systemic disturbance is very uncommon.

A good procedure is to convert a broad scar into a linear one by an excision, the edges of which are brought together and held by Michel's Clips. Radium and the X-ray are still upon trial. Massage has a value. And the fundamental rule in scar treatment is that "haste and success are incompatibles."

We solicit articles similar to the above for next Supplement.

Hemophilia and Newer Drugs of Value Therein.

By DOUGLASS HAYES, M.D.,
TRACY CITY, TENN.

This is a subject worthy of far more consideration than it receives at the hands of our profession. Heredity is the main etiologic factor. I hardly think this is questioned in the least by those that are familiar with it.

Those of us that have had obstinate cases of hemophilia to contend with, know there is something lacking in the blood coagulation. One suggests that perhaps the trouble is occasioned by the walls of the vessels being defective, another suggests an over increase in the red corpuscles, while another feels it results from a deficiency in leukocytes. Be it as it may, we do know that the mother who is lacking in blood coagulation and who comes from a family of "bleeders" will hand hemophilia to her children.

From my own experience, I find considerable variation in this trouble, which differs from the views of many. It seems to be the opinion of the profession that hemophilia is confined to the male members of the family, and the female is practically if not entirely immune. I am of the opinion that many of the cases of post-partum hemorrhage met with, especially the so-called secondary post-partum hemorrhage that confronts the accoucheur at times, is the results of this more often than supposed.

The writer fully appreciates the fact that the greater portion of post-partum hemorrhages met with results from deficiency in the contractility of the uterus, long-continued labors exhausting the women. Yet hemophilia, in many cases, produces it; of this I feel sure. Many writers think the blond the greater sufferer, yet the brunette is not immune. I have had as many cases with the brunette as with the blond.

An Illustrative Case.

I was called about nine years ago to attend Mrs. J., age 36, third accouchement. Having never attended the family before, I questioned her direct about her previous confinements. She stated that both of her previous labors had been normal, but following them, she came near bleeding to death. Her labor being at this time quite far advanced, my attention was given to the delivery. The birth being normal, the cord was ligated and the child turned over to the nurse.

Having been warned by her statement as to the previous hemorrhages, I placed my hand over the fundus, which I found well contracted, and in a short time the placenta was expelled, the uterus firmly contracting thereafter. Sitting by her for a few minutes, compressing the uterus, I decided that I would examine the placenta and see if it was intact.

I released my hand to do so, and was warned by the woman requesting me not to leave her, I assured her that she was all right, and that it was only my desire to inspect the after-birth, and that I would not leave.

I found the placenta quite normal, even without a rent. I was in the act of depositing it in the night glass when she informed me that she was "flooding." Everything seeming so favorable, I questioned in my mind the accuracy of her statement, but I did step back to the bed and, on examination, I found her having severe hemorrhage; but the uterus still seemed contracted, yet the blood had gone beyond the pad protection, and was dripping upon the floor. Not being prepared, I was some time in arresting the hemorrhage.

Since this time I have delivered this woman twice. The second time I had post-partum hemorrhage again about forty minutes after the delivery of the placenta, I gave ergot in large doses that soon checked it. The last time, two years ago, I restored to the use of Coagulose, giving her 10 cc. while in the second stage of labor. She passed through with a normal labor, which was not followed with anything more than a normal loss of blood. So much for this woman, who by the way was a brunette.

Nose Bleed.

She has five children, three boys and two girls. The boys are 19, 17 and 12. About two years ago, I was consulted by the father relative to the son of 17 who, he said, had severe nose bleeding at times, the hemorrhage being so great that he would invariably grow weak from the loss of blood. I placed him on calcium and magnesium, and suggested that in case of return hemorrhage, that a cotton pledget wet with salt solution and gelatin be passed into the nasal cavity.

A few weeks following I was called to see the boy, the father informing me that he was having hemorrhage, and that he was unable to check same. I resorted to the Liq. Adrenalin Chloride (1-1000) packing both anterior and posterior nares. This arrested the hemorrhage promptly and the following day I placed him on the thymus extract. He has had no nasal hemorrhage since then.

Last May, the son of 19 while out hunting was accidentally shot through the knee, the limb being so badly lacerated and contused that I was forced to remove the mangled member.

Cases of this form, from a hemophilia family, are not favorable ones for surgical operations, but we are at times forced to do that which we dislike. After the boy had fully reacted from the effects of the injury he was placed on the table, and the limb amputated at the lower third of thigh. I wish to state, though, that I had previously given him a full dose of Coagulose. He stood the operation nicely, and reacted promptly from surgical shock. We had no trouble with him for three days, and I had given no more Coagulose, as I did not feel that it would be required; but on the third day the stump was found bleeding freely through the drainage tube.

I promptly gave him again an injection of Coagulose, and also irrigated the wound with a solution of it. Then, with the powdered Coagulose blown into the wound through the drainage tube, the hemorrhage was soon checked.

Coagulose, adrenalin and ergot [Parke, Davis & Co., Detroit.—Ed.] are three drugs that are of great value in hemophilia, and when the hemorrhage is not active, and as a preventive, I favor the use of thymus extract.

Iocamfen.

A new free-iodine preparation offered in liquid and ointment form by Schering & Glatz, New York City. It is a liquid trituration product of iodine, camphor, and phenol and contains 10 per cent. free iodine, the ointment 5 per cent. Insoluble in water, it mixes freely with alcohol, ether, benzol and vegetable and mineral oils.

These products are antiseptic and disinfectant, penetrating readily and resulting in a degree of phenol absorption; they present advantages in surgical emergency work, especially in dirty and infected wounds. When using, avoid water and all aqueous solutions, especially bichloride solution, with which it is incompatible. They are American products selling for fifty cents per ounce, and a little goes a long ways.

Painless Treatment of the Drug Addict.

Dr. H. E. Goetz, Knoxville, Tenn., in *Jour. Tenn., State Med. Ass'n.*, recommends Luminol (Merck & Co., New York) for this purpose. He reports 196 cases, giving the drug guardedly, 3-grain doses in women and 4-grain doses in men, and not exceeding 15 grains in any 24-hour period. Usually one-half grain per hour is sufficient, with magnesium sulphate before breakfast each day. Treatment with Luminol is continued for 6 to 12 days. When the rash appears stop the use of the drug.

Deterioration of Galenicals.

Frank R. Eldred, quoted in *The Lilly Scientific Bulletin*, says that as a class galenical preparations are surprisingly stable, the conclusion being reached by several laboratories, and that despite alarmist reports. Cinchona preparations may precipitate some contained alkaloids, and fluidextract of coca rapidly deteriorates. These are the two marked instances. Other well-made galenical preparations, except some tannin-bearing products, stand up very well indeed, even fluidextract of ergot, against which unwarranted charges have been brought. Hatcher has shown that many galenicals 20 to 30 years old had well retained their activities almost unimpaired. But all galenicals must be well made and then well cared for.

Ethylhydrocuprein (Optochin) in Pneumococcal Infections.

For more than a year the German medical press has teemed with almost as many articles on Professor Morgenroth's drug as it did a few years ago with salvarsan articles. As far as pneumococcal infections of the eye, notably *ulcus cornæ serpens*, are concerned, writers are almost unanimous in giving unstinted praise. It appears that the ophthalmologist is at last equipped with a drug which rapidly cures lesions that have proved refractory to every other form of treatment. And this cure is effected at little or no cost to the structures involved. In pneumococcal infections of the lungs, however, the action of this drug is less certain, and there seems to be a certain proportion of cases, particularly when treated late, in which the drug is totally ineffective. Of the most recent literature on the subject we would refer to a paper by Professor Axenfeld and Dr. R. Plocher (*Deut. med. Woch.*, July 15, 1915) on the treatment of pneumococcal infections of the eye. They state that at the ophthalmological hospital of the University of Freiburg the instillation into the eye of a 2 per cent. solution of optochin in cases of *ulcus cornæ serpens* was rapidly beneficial even in severe cases, the process of healing being accompanied by relatively slight scarring. As the optochin caused acute pain before its anesthetic action came into play, it was found necessary to give a preliminary application of holocain; cocaine was unsuitable for this purpose, as it injured the epithelium. The authors are opposed to the use of optochin in the treatment of *ulcus serpens* in general practice; for, though it is permissible to give a preliminary instillation of optochin before sending a patient to hospital, it is only in an eye hospital that the satisfactory treatment of this condition with optochin can be carried out. The authors further suggest that the prophylactic instillation of optochin before operations on the eye are undertaken would do much to prevent infection of the wound. Two papers by Dr. Georg Rosenow (*Berl. klin. Woch.*, April 19, 1915; *Deut. med. Woch.*, July 1, 1915) on the treatment of pneumonia with optochin deal with a series of 60 cases. In his second paper, in which he tabulates the details of his last 34 cases, he gives the following account of his observations. The drug was given by the mouth six times a day, 0.25 gram being given every four hours by night as well as by day. Thus, the total dose in twenty-fours was 1.5 grams. Other drugs were withheld, both because they were considered superfluous, and because they were apt to interfere with the chemiotherapeutic action of the optochin. Camphor, for example, has been shown to diminish the action of optochin on the pneumococcus; and when

cardiac tonics are called for, digitalis, caffeine, or adrenalin should be given instead of camphor. The optochin was given for several days after the temperature had fallen, and the total amount given in each case ranged from 5.5 to 16 grams. Of the 34 cases, only 2 terminated fatally. In one of these cases the patient was not admitted to hospital until the fifth day of the disease, when he was exceedingly ill, and all the lobes of the right lung were involved. A blood culture yielded many hundred colonies of pneumococci. In the second fatal case there was also a very virulent infection, which was totally refractory to the optochin. In no case was the optochin given before the pneumococcus was found. In 24 cases the optochin was given within three days of the development of pneumonia, and its direct action on the temperature was clearly demonstrable in 14 cases. In 6 cases this action was doubtful, and in 4 cases the drug seemed totally inert. In 9 cases the drug was given relatively late; it had no effect in 4 cases, and in 5 cases it was definitely beneficial. This shows the importance of giving the drug at the earliest opportunity. But even when the drug was given early it occasionally seemed to be totally inert, and in some cases a slight fall of temperature was succeeded by a rise, the fever thenceforth being unaffected by further doses. In none of his 60 cases did the author observe any ocular symptoms, and only in 2 cases were transitory auditory disturbances provoked. In spite of occasional disappointments, the author is convinced that optochin marks a definite advance in the treatment of pneumonia.—*British Medical Journal*.

Camphor From Shrubs.

The Bureau of Science of the Philippine Government is making a study of the plant known as *Blumea balsamifera*, known by the natives in the Philippines as "sambon" or "gabuen," and which produces camphor. The shrub is one of the most common weeds in the Philippines. It grows from 5 to 8 feet high, with a stem almost woody in texture, and has long been used by the natives of the Philippines as well as by natives of China for medicinal purposes. The Chinese in parts of Kwangtung and Kwangsi Provinces already distill considerable camphor from the plant, the chief drawback to the more extensive use of it being the amount of labor required to secure the gum. It is well to note in this connection that the Bureau of Forestry at Manila is introducing the ordinary camphor tree of China and Japan into the mountain districts of Luzon in large numbers for the purpose of building up future camphor production in the islands.—*Consular Report*.

Dried Milk for Infant Feeding.

The Hatmaker process, much like "Shooting food from guns" in the form of puffed wheat and rice, blows cow's milk forcibly between heated surfaces at a temperature of 280 degrees F., not only sterilizing it, but in two seconds' exposure, emitting a dry powder, which is all of the milk minus its water.

The Ambrosia Milk Corporation, 120 Liberty St., New York City, is using this process in the preparation called Mammala, which is pure cow's milk from which a portion of the cream has been removed, some milk-sugar added, and then condensed into a floccular powder. We find the product has a fine flavor, dissolves readily in water, and seems to be relished by babes and invalids who have used it under our direction. Long commended in France, where it is made, the product is coming into favor here.

Colloidal Iodine.

There exists some difference in opinion regarding the advantages, or lack of them, possessed by iodine in colloidal form; and probably clinical test will alone demonstrate the facts, in favor or against. Viel dissociates the metallic iodine electrically, which seems truly to present it in colloidal form, and the product is left stable in alcohol-washed oil containing a camph-phenol. The product is called Iodéol in a form suitable for injection, and Iodagol for external use. The American importer is David B. Levy, Inc., 96 Warren street, New York City.

Colloidal Sulphur in Rheumatism.

Loeper and Vahram (*Progrès Médical*, August, 1915) report that they have obtained exceptionally good results in the treatment of acute articular rheumatism by means of intravenous injections of colloidal sulphur. Their experience comprised seventeen patients, some of whom were under observation in one of the military hospitals in France. The drug was employed in daily doses of 33 to 66 milligrams. In every instance the pain was relieved within twelve hours after the injection and sometimes as early as two hours. The temperature began to fall on the day following the injection. In relatively mild cases one or two doses sufficed; in the more serious cases four or five doses were necessary; in the most severe types of this disease as many as ten doses were required to effect what seemed to be a cure. In five of the cases the sulphur was employed after the use of the salicylates had failed to make any impression upon the course of the disease or upon the intensity of the symptoms.

The intravenous injection of colloidal sulphur is followed by a marked systemic reaction. This

is manifested first by a violent chill which occurs forty to fifty minutes after the injection and lasts about twenty minutes and a rise of temperature. The latter reaches 38° to 41° C (100.4° to 105.8° F.) in the course of one or two hours and then suddenly falls to normal. This rise of temperature is more pronounced in cases of acute articular rheumatism than in those of the chronic type of this disease; it is also greater with the use of larger doses of the remedy. The injection of colloidal sulphur causes a rise in the blood pressure, an increase in the number of red blood cells, and a transient leucocytosis.

As to the mode of action of colloidal sulphur, the question arises whether this stimulates the resisting power of the tissues or whether its anti-rheumatic virtues depend upon its antiseptic power. There is apparently an elective though not necessarily a specific role played by colloidal sulphur in acute articular rheumatism.—*Medical Record*.

Obstetrical Outfits.

It is a comfort to know that in the home of the prospective mother, especially if living in apartments with few facilities, all necessary bed and vulva pads, rubber sheet, binders, gauze, etc., are ready at hand duly sterilized, as well as such antiseptics and other agents commonly needed. Van Horn and Sawtell, 15 and 17 East Fortieth street, New York City, are offering such outfits properly sterilized and packed.

A New Quinine Derivative, Oxytocic.

Herzog, in *Münchener Medizinische Wochenschrift*, describes a combination of quinine and veronal as being especially efficacious during the period of dilatation in labor. Reports upon 150 cases show this combination cannot create pains, but seems to sensitize the uterus to the natural exciters of the pains.

Sugar Tests.

Some of the newer tests for sugar in the urine are unduly sensitive, especially since, as shown by Folin, a sensitive test of his own devising reveals the presence of sugar in nearly every specimen of urine tested. Many observers have, in the past, concentrated urine and secured positive sugar tests from specimens which before concentration yielded no sugar reaction. It is probable that urine always contains a trace of sugar.

A New Liquid Disinfectant.

Hygienic Laboratory Pine Oil Disinfectant, devised by Stevens, of the U. S. Public Health Service, is made as follows: Pine oil by the steam or solvent process is emulsified with sapon-

ified rosin. These are heated together in an enamel-ware pail until the rosin is dissolved; it is cooled to 80 degrees C, and sodium hydroxid solution added and stirred with a rotary egg beater for ten minutes. A little water is then added, the preparation quickly cooled and stored in glass or metal containers. Full directions are given in U. S. Public Health Service "Reports" for October 8, 1915.

The product is dark in color, clear and oily, and it keeps well for two months. It has a phénol coefficient of 3.5 and forms a white emulsion with cool water. It may be used in any dilution up to 1:500, will not attack fabrics or metals, and is a pleasant and effective disinfectant. The strength used should depend upon the length of time it is allowed to act.

Our Crude Drug Supplies.

The sudden cessation of imports from Central Europe last August precipitated a panic in the crude drug market which became so thoroughly demoralized that no quotations could be made except for spot transactions. Those who consumed crude drugs in large lots, becoming panic stricken, bought up stocks for their own need regardless of prices. This panicky condition of the market, as you are all well aware, soon disappeared, leaving a range of quotations, however, much above those which rule in normal times. The vast scale upon which the war is being carried on, the immense hordes of troops thrown into the field and the huge sums of money expended in the prosecution of the war lead us at first to hope for its early termination. These hopes had something to do with our attitude towards supplies of crude drugs. We felt at the worst we would be deprived of one year's crop. The impression has gained ground that we shall have war for at least one, and probably several years longer. This conviction is echoed in the prices commanded by crude drugs of European origin, which have continued to rise in cost as the stocks have diminished in volume. We are now confronted with the need for prompt, energetic and concerted action to avoid any further curtailment of our already scant stocks.

A survey of the indigenous materia medica shows that if it were feasible to collect all the drugs which grow wild in the United States we should be able to supply our deficiencies in many directions. The increased attention which has been given of late years to the question of drug plant cultivation has pointed out certain directions in which, with but a little encouragement, we may hope to become independent of imported supplies. At the Detroit meeting the President was instructed to appoint a committee on crude drug supplies with the object of making a survey of

the crude drug situation and possibly pointing out a way to collect at least a portion of such drugs as are indigenous in this country but which have not heretofore been collected on a commercial scale. While I elaborated a comprehensive scheme for work of such a committee and asked several members to act as its chairman, the men appointed were unable to undertake the task and the correspondence with first one and then another possible chairman took so long that there was not sufficient time left in which to put into execution the plans which I had in view. I have therefore not appointed the committee, but recommend that the incoming President be instructed to appoint such a committee on the supplies of botanical drugs with the request that the members of this committee carry on a campaign of education throughout the United States as to the indigenous drugs which may be collected with possible profit to the collector and with advantage to the cause of medicine, soliciting the coöperation of the various State agricultural experiment stations and State agricultural colleges and of the United States Government. The Department of Agriculture has already done much preliminary work in this direction. Some of the State agricultural colleges have likewise taken up the subject of drug culture and drug collection. We are all familiar with the excellent pioneer work in the matter of drug culture which has been done by the School of Pharmacy of Minnesota and the School of Pharmacy of the University of Wisconsin.

The University of Michigan at Ann Arbor has recently acquired eighty-five acres of land which is to be devoted to experimental drug farming. The University of Nebraska at Lincoln has also just begun the development of a medicinal plant garden and the University of Washington at Seattle has lately expanded their small botanical garden so as to enable the institution to furnish information regarding such drugs as may be grown advantageously in that State.

* * * * *

We have, it is true, several firms which have been busy in this field for years. Two of these located on the Atlantic slope of the Allegheny Mountains collect a very wide range of indigenous drugs and the supplies which they have furnished have been an important factor in filling the needs of our manufacturers. The world's supply of cascara sagrada is drawn from the Pacific slope. There are a number of drugs grown in other sections and hitherto uncollected in any considerable quantity, the collection of which would be most helpful to the drug market and which ought to yield a fair profit to those who undertake it.

A note of warning has been sounded by Dr. W. W. Stockberger, physiologist in charge of

drugs and poisonous plant investigation of the United States Department of Agriculture against the anticipation of excessive returns from the growth or collection of medicinal plants. He rightly accentuates the need of a broad scientific knowledge of materia medica as the basis for a successful venture in the growth and collection of drugs.

It is not alone in drugs of botanical origin that we have suffered a shortage. Our most marked shortage indeed has been in those numerous and expensive chemicals derived from the coal fields. When the price of toluol was only 17 cents a gallon the coke furnaces of Western Pennsylvania found it more economical to burn the gases produced in coke making than to collect them and make further use of them, but when the supply of these products from Central Europe was shut off and the price of toluol rose to \$6 per gallon instead of 17 cents, and even at this high price it was obtainable only in small quantities and with difficulty, the manufacturers of coke began the reconstruction of their furnaces so as to save and utilize the volatile constituents heretofore wasted. But this reconstruction on a large scale is time-consuming as well as expensive, and while we hear of numerous large plants now in course of construction in which all the volatile constituents of the coke industry will be made use of, yielding an abundant supply of the basic materials from which carbolic acid, salicylic acid, and aniline colors and the synthetic chemicals generally are made, the actual production of this basic material on an adequate scale is still some months off and in the meanwhile there will be an increasing scarcity and a continuation of high prices for this entire class of chemicals.—President's Address, Am. Phar. Ass'n.

We have taken an active interest in this subject, particularly as regards our indigenous botanic materia medica; but we are becoming discouraged. We have talked with some of our leading pharmacologists, and they are not interested, wishing to limit rather than extend our list of plant remedies. Then, too, the Eclectic authorities, who have done so much to extend the use of plant remedies, refuse to be interested in exact pharmacologic investigation of the drugs they use.

The remedy, or so it seems to us, is to get Congress to give tariff protection after a certain date to American growers of medicinal plants; and then our pharmaceutical firms will be encouraged to do what medical men refuse to do—but ought to—study American drugs earnestly and upon a scientific basis.—EDITOR.

A Dangerous Incompatibility.

In the April issue of the *Bulletin* mention was made of an important incompatibility between quinine and aspirin pointed out by Professor Wilbur L. Scoville. Briefly stated, the incompatibility is due to the formation of quinotoxin, a poisonous compound. In the presence of water aspirin splits up into acetic and salicylic acids, which decomposition probably takes place when aspirin comes in contact with the water of crystallization of the quinine. The acids then convert the quinine into the isomeric quinotoxin.

This incompatibility may account for a death which recently occurred in Detroit. A woman died in convulsions shortly after taking a dose of quinine and aspirin. She had been sick for several days and had been taking these substances regularly. That the mixture may have been the cause of her death seems quite plausible, especially in view of the fact that physicians who were summoned to the house could find no evidence of other poison and decided that death was due to convulsions, the cause of which they were unable to learn.

If the quinine and aspirin combination was the cause of death in this instance, and it appears quite likely that it was, druggists should be on their guard against dispensing such mixtures. As both quinine and aspirin are popular home remedies they should also advise customers not to take the two in conjunction.—*Bulletin of Pharmacy*.

Digitone.

Physiologically assayed tinctures of digitalis present very tangible advantages, especially when one wishes to push dosage. Digitone (The Norwich Pharmacal Co., Norwich, N. Y.) is not only assayed but is fat-free. Not only is this care taken, but Digitone is sealed in glass "vacamps" from which the air has been exhausted, thus preserving activity indefinitely.

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Thiosinamine (Merck) in the Treatment of Arteriosclerosis.

F. G. Lydston speaks highly of this drug in extreme cases of arteriosclerosis. He begins with one-fifth grain, three times daily, in capsules, and gradually increases the dose to one grain, continuing for a period of four months.—*Denver Medical Times*.

Establishment of a Department of Hygiene, Sanitation and Epidemiology.

The H. K. Mulford Company announces the establishment of a department of Sanitation and Epidemiology, under the executive management of Thomas W. Jackson, M.D., expert in preventive medicine, sanitation and the study and control of epidemic diseases.

The most important subjects before the American people at the present time relate to the public health. Work in this field is frequently beyond the reach of the existing health and sanitary departments of the various municipalities and smaller towns, on account of limited appropriations.

The department does not propose to enter into competition with the constituted public health authorities, local, state or federal, but to aid and assist these authorities in every possible way. The work is essentially one of service and education, and will be developed along these lines. The resources and equipment of the Mulford Laboratories, Chemical and Bacteriological, will be utilized, thus placing at the disposal of the New Department the entire laboratory facilities and expert services of the H. K. Mulford Company.

Guaiacuin.

Noting the query of Dr. A. L. Gootcher, of Plumerville, Ark., with his report of a case, I will suggest the use of Guaiacuin pills (3 grs.) made by McKesson & Robbins. For many years I have found this combination very good indeed for amenorrheic young women as well as for dysmenorrhea in older subjects. Years ago my old neighbor of many successful years' practice advised me to use ammoniated tr. guaiac. Twenty years ago I had a sample of 500 3-gr. pills Guaiacuin pills sent me. These were formulated and manufactured to meet the indications for the much-discussed typho-malarial mixed infection fever of this region. Well, all that debate came and went and the subject of how to treat, or, what is typho-malarial fever? is relegated as a thing of a secondary well-understood fact. But during my use of this combination Guaiacuin, some of my patients reported metrorrhagia—some young women and some older ones. I was giving 2 pills (6 grs.) t. i. d. for ordinary cases of malaria and found, of course, I was on the wrong trail. But the experience gave to me the knowledge of this combination most valuable in menstrual irregularities. I consider it a safe, sane, and sinless prescription, for I don't believe it would produce abortion; at the same time, I have not ever used it in a case where I suspected pregnancy.

FRED M. BROUGHER, M.D.

Belen, Miss.

Carbon Disulphide in the Treatment of Cancer.

P. Louge, in *Presse Medicale* for February 28, 1914, is credited with the statement that injection of carbon disulphide into and around cancerous masses yields excellent results, nodules or enlarged lymphatics rapidly undergoing retrogressive changes under its influence. Pure carbon disulphide can, in man, be injected hypodermically to the amount of 15 to 30 minims (1 to 2 c.c.) without causing any unpleasant effect other than a sharp local pain, which gradually disappears.

Organotherapy in Migraine.

Henry R. Harrower, in *American Medicine*, October, 1915, reviews the literature favoring the view that migraine is an endocrinous disorder. He refers to Shoyer, in MEDICAL COUNCIL, who believes migraine to be an internal-secretion disturbance; to Kovalewski, who believes that increased thyroid activity is a factor; to Leopold Levi, who used thyroid as a remedy; to Charcot, who also employed thyroid in this condition; to Gauthier, who believed migraine to be of either thyroid or ovarian origin; and so his own views, for he believes both thyroid and corpus luteum to be remedies of indication.

Another Substitute for Salvarsan.

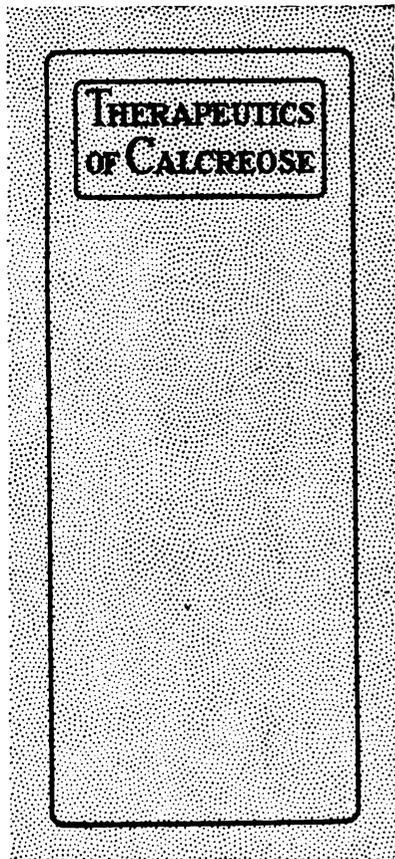
Captain Arthur Foerstein, R.A.M.C., in *The Lancet*, September 18, 1915, after commenting upon grave accidents following upon the use of salvarsan of French and British manufacture, proceeds to exploit Galyl, which is a derivative of arsenobenzol (2 molecules) linked with two phosphoric groups and contains 35.3 per cent. of arsenic and 07.2 per cent. of phosphorus. It is administered like salvarsan, in doses of 0.4 to 0.5 grm., with 0.3 grm. as a routine dose for repetition in men and 0.2 grm. in women, these repeated small doses giving better results than do large single doses.

Clinical results with Galyl have been most encouraging. The price is much less than that of salvarsan.

The Next Quarterly Supplement.

Look for our next Supplement in the issue for June. We are trying to make this work a real service to the readers, and only dependable and scientifically well-based products are noted. This department is *Pro-You*, not *Pro-Advertisers*. In fact, we discuss the newer drug news, whether the drugs are advertised with us or not.

THERAPEUTICS of CALCREOSE



THE ABOVE is the title of a booklet issued by The Maltbie Chemical Co., Newark, N. J., that will interest all physicians who are as yet unfamiliar with Calcreose in the treatment of

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We learn further that creosote has long been recognized by authorities—many of whom are quoted—in the treatment of diseases of the throat and lungs and in gastro-intestinal infections, while the frequent inability to administer creosote, because of gastric disturbance, etc., in sufficient dosage is pointed out.

One point dwelt upon throughout the booklet is the fact that *when creosote is chemically combined with calcium objections to the use of creosote are largely overcome*, and extremely large doses may be administered—through Calcreose—without difficulty.

The value of calcium, particularly in tuberculosis, is dwelt upon, authorities being quoted.

Laboratory and clinical evidence is introduced showing that the combination of creosote and calcium (Calcreose) holds therapeutic properties not held by creosote or calcium alone.

Nearly one-half the booklet is devoted to reprints of articles which have appeared in the medical press treating upon the successful use of Calcreose in the diseases in which it is indicated; for instance, Didier (*Denver Medical Times*) reports his success with Calcreose in a case of tuberculosis; a man who only weighed 76 pounds when treatment was begun gained 26 pounds in 6 weeks. Two years later the doctor was advised the man then weighed 160 pounds and that there was no evidence of his past trouble.

Many other cases of tuberculosis, successfully treated with Calcreose, are reported.

The booklet concludes with a résumé of "The Therapeutics of Calcium and Creosote," by Kolopinski, in *Monthly Cyclopedia and Medical Bulletin*, which is a valuable addition to medical literature, he having employed the product long and extensively and its therapeutic action being confirmed.

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COUNTY MEDICAL MAP

A Forum for the Problems of the County Medical Societies

The County Map aims to co-operate with the National and State Societies in promoting a wider interest in the County Societies, in increasing their effectiveness and in the interchange of plans successfully employed to effect these ends.

Members of County Medical Societies are invited to contribute to this department such matters as are of general and widespread interest.

County Societies publishing Bulletins will confer a favor by placing - The Medical Council - on their mailing lists.

Society Dead Wood.

It seems to the writer there are a few left on our roll who are only on to share in malpractice protection and to keep them eligible for life insurance examiners.

There are requests coming frequently of the standing of physicians and I think I will report back their membership and how many meetings they attend and the interest they show.

If you have anything worth knowing about, cease being a clam; come out and let us hear from you. If you are becoming a fossilized old fog, come out until some of our wide-awakes knock the scales from your eyes.

If things do not suit you, come in without knocking, bring your hammer and knock all you desire, but be careful when the mallet of Society experience deals you a return blow.—*Northumberland Co. Med. S. Notes.*

Unanimous Membership.

Doctor, did you ever think how nice it would be if every physician of the county were a member of the Medical Society. With a large and full attendance at each meeting, what a privilege in a professional and fraternal way would this give to us all. The clinical discussions of disease, remedies and methods, at such meetings would be of inestimable value. The sociability and good feeling of such a get-together sessions would be fine. Let each physician of the county weigh this and decide to help this monthly reunion work by becoming a member of the local society which makes you also a member of the State Medical Society and of the American Medical Association, besides protection in two ways.—*Call and Roster, Franklin Co., Pa.*

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April, 1916

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A service of truth, and only a service of truth, from cover to cover.

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Vol. XXI

Philadelphia, Pa.

No. 4

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Easton, P. G. (J. Roy. Army Med. Corps, London, 1914, XXII, 443): The chronic constipation of children and infants often yields most easily to liquid paraffin in small doses given regularly three times a day at first and reducing the dose

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Medical Council

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FOUNDER
THOS. S. BLAIR, M.D. }
EDITOR

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The Newer Teaching on Food Poisoning.

POTOMAINÉ poisoning was a term in great vogue until recently. True, cases of ptomaine poisoning do occur, but the ptomaines are animal alkaloids of simple structure and are not so toxic as was formerly thought to be the case, especially those formed in the presence of a free supply of oxygen. Sometimes it is hard to separate the bacterial toxemia and the ptomaine toxemia. Intestinal bacteria break up lecithin into cholin, and it, in turn, is converted by oxidation into muscarin, and by dehydration into neurin. Now cholin, muscarin and neurin, with tyrotoxin and mytilotoxin, are the principal toxic ptomaines, the amines and others being comparatively harmless. These toxic ptomaines are not very commonly formed until the fifth day of putrefaction; and the greatest danger is not from open food but from that contaminated with ptomaines formed where little oxygen is present. Such food does not smell as though tainted. For instance, canned meat may splash in the can from liquefaction of its gelatin by bacteria which results in the development of poisonous ptomaines, and yet it may have no unpleasant odor.

Certain ptomaines are formed in the small intestine, especially in conditions of stasis, and others are formed in the chronically dilated stomach; but these processes are due to bacterial action.

Diseased Animals.

The bacteria in a diseased animal may proliferate after slaughtering. Bacteria of the "typhoid-coli" group, especially the *B. suispestifer*, the organism of swine-fever, may cause serious illness in man, and even the toxins produced by the bacteria may induce a degree of toxicity in the meat, and cooking does not kill these toxins. Now many, if not most, of these cases are called ptomaine poisoning, whereas they are nothing of the sort. There may be a great many cases in one community, or among those present at a banquet. Cases of the sort which are adequately

investigated usually prove to be due to diseased meat rather than to ptomaines.

Toxins are poisonous bases or albumins, the products of bacteria. They are soluble in water and heat kills most of them, but not all toxins. High heat, such as is necessary in roasting is more certain to destroy them than is boiling or superficial frying.

Infected Meat.

Healthy meat will putrefy in time, and it usually shows evidence of it. Game is often kept until it is "high," which means it has started to decompose. While the corrosive action of sarcolactic acid on the sarcolemma does render such meat more readily digested, it is a dangerous practice. Less dangerous, though bad practice, is keeping Roquefort and Limberger cheese until they are putrid from butyric acid fermentation.

More especially is meat infected by *B. proteus*, which promptly develops an unpleasant odor; but thorough cooking removes most of the danger. Also meat is frequently infected with *B. coli*, which give no signs until putrefaction is far advanced. Such meat is dangerous. Cooking does not always remove the danger, as it does when meat is infested with parasites. For some reason, mutton rarely causes poisoning. The same organisms may infect fish, as may other organisms of the typhoid-coli group; but decomposing fish may generate mytilotoxin or ptomatropin, which are ptomaines, and add ptomaine poisoning to toxin poisoning. And shell fish—crabs, prawns, lobsters, cockles, mussels, oysters, clams—may have both of these plus sewage contamination, even with the *B. typhosus*. Mytilotoxism is the most fatal form of food infection. This and ptomatropin are exceedingly prostrating and rapidly acting ptomaines. Add the toxins of decomposition and specific sewage infection, and the victim is in serious danger of losing his life.

Botulism.

This is the sausage poisoning of Germany, more

particularly found in Wurtemberg; it is due to the *B. botulinus*, an anaerobe, which produces a paralysis of cranial motor nerves. An antitoxic serum against this serious form of meat poisoning has been devised in Germany. The disease is uncommon in the United States. But poisoning from eating the flesh of pyemic or septicemic animals, which does occur here, is just as serious, giving rise to choleraform dysentery, with green and offensive stools.

Milk and Milk Products.

Tuberculosis, typhoid, diphtheria and other diseases may be spread by infected milk. Many bacteria proliferate most rapidly in milk. This is a large question not necessary to discuss in detail here. Bovine tuberculosis and disease of the udders produce pathogenic milk; and certain milk poisons, galactotoxins, are saprophytic and induce the summer diarrhoea of infants. Tyrotoxicon (diazobenzene butyrate) is a dangerous ptomaine sometimes found in milk and milk products, especially cheese and ice cream.

Mushroom Poisoning.

The alkaloid muscarine is, supposedly, the toxic agent in mushroom poisoning, but some species which do not yield it give rise to gastroenteric symptoms, at least in some people. Probably the toxalbumins, particularly phallin, are as much of a factor in the poisoning as is muscarine.

Fruits and Vegetables.

The fruits and vegetables commonly used as food rarely give rise to poisoning, although they may induce gastroenteritis if consumed in excess or in a defective condition. Drying and canning fruits and vegetables are processes that need careful supervision. Dried fruits are necessarily exposed to the air after drying, and during the process of drying may be visited by flies and other insects, and the juices may sour or ferment. Hence, domestic dried fruits are apt to be defective. Commercially, it is a sanitary necessity to sulphur the fruit in drying, which should be done with most fruits with much substance and a minimum of sugar. Despite the pure food regulations, we make the above assertion from large experience in drying fruit and wide observation of the process. The consumer is safer in using sulphured fruit.

The poisoning sometimes noted from canned fruits is rarely from the tin vessels, but from bacterial invasion or the formation of aldehydes in the cans or jars. Fruit in cans and jars should be dated, for old fruit does not always stand up in the containers and softens from destructive disintegration slowly productive of aldehydes.

Treatment.

At once empty the stomach in meat, milk, cheese or mushroom poisoning, preferably with a tube; but emetics may be used if the patient is not too depressed. The stomach should be washed out, hence a tube would better be used at first rather than an emetic. Vomiting may not be sufficient to completely empty the stomach. Give a full dose of castor oil.

Surround the patient with warm blankets and provide hot-water bottles. Administer brandy, two ounces every few hours. The hypodermatic use of full doses of strychnine is usually necessary, and in the case of mushroom poisoning not inducing delirium give 1/50 grain hypodermic of atropine.

Give the patient ice to suck and apply hot fomentations to the epigastrium and abdomen. Starve him for twenty-four hours.

Don't allow much water at a time. If vomiting persists, wash out the stomach again. Opiates may be necessary in the later diarrhoea. If there is much loss of body fluid, inject warm or tepid saline solution high into the bowel.

Keep the patient in bed for several days on a diet largely of milk.

Some cases, especially sausage poisoning and that from sewage-infected shell fish, run a course like typhoid, and they should be similarly treated. In fact, some cases really do develop true typhoid fever. Other cases develop a chronic gastroenteritis, and they need appropriate treatment.

Few indeed are the cases of simple ptomaine poisoning; there is nearly always bacterial involvement. And in most cases of food poisoning ptomaines are not involved at all. During warm weather, one must be most careful in eating any form of fish or shell fish. Naturally it follows that, having been poisoned by any form of food, that food should be abstained from for a considerable period thereafter. Liver is a food that develops ptomaines very readily, and it should rarely be used at all in hot weather. Keeping infected food in the refrigerator does not always prevent its becoming highly dangerous. Don't forget that pasteurized milk may have the lactic acid bacilli killed and it may rot in place of souring. In closing, it is well to say that some of the molds are dangerous and render food poisonous. Ferments also play a part, particularly with fruits.

You Will Be Interested

In "The Business Need For Ethical Publicity" page 53—this issue.

Here the idea of the Physician's Exchange is worked out—and opinions for and against it are given by different physicians.

This will certainly interest you—page 53.

Is Morphin Addiction a Disease?

AN ABLE PAPER by Dr. Bishop, in last issue, makes a strong argument proponent of a rational pathology being necessary before a rational cure can be expected in the drug addictions. That a rational pathologic view of these cases has not been worked out is certainly proven by this earnest author; but that morphin addiction is, *per se*, a definite disease, is not so clearly proven.

Perhaps, if alcoholism is a disease; if the tobacco habit is a disease; if the coffee habit is a disease; then morphinism is a disease also. It is apparent to all that morbidity may be involved in any and all of these, that is, disease may develop during, and due to, the addiction, and often does so develop. It may even be conceded that a characteristic symptom-complex develops in most cases of morphin addiction. If other symptoms-complex may be characterized as definite diseases so may this one; otherwise it may not be classed as a definite disease entity.

Able essays have been written designed to prove that sexual immorality is a disease, and that criminal manifestations are, at base, definite disease. Yet these views have not aided materially in the solution of the problems of immorality and crime.

Indeed, a certain morbid sentimentality has been engendered in the public mind; and a far from reformatory self-pity has been induced by these views in the minds of immoral and criminal persons. Of course, there is a certain basis in fact in the views that immorality and crime are diseases; but it is unwise and against sound public policy to lay emphasis upon this minimum of fact.

Suggestion.

Unfortunately, the morphin addict is most impressionable, and is influenced keenly by suggestion. If he finds a physician ready to tell him he is suffering from a disease and not from a habit, that physician, beyond all others, "understands" him and his "awful disease." And soon it may be a "desperate DISEASE" and finally an "incurable DISEASE—in the mind of the man who rejoices in the kind philosophy that gives justification for the continuance of his morphin. The neurotic, whether morphin-induced or other, craves above all things a physician who "understands" him; and then, having found him, Lord, pity the neurotic addict!

Now this philosophy and theory may be true, at least in a certain sense; but it is certainly

unwise to tell the patient so, or even to "understand" him.

Perhaps the viewpoint of these cases is temperamental, more or less, upon the part of the physician; and certainly the treatment is temperamentally suggested. The brusque materialist who refuses to "understand" the addict, who won't generalize over anything with him, and who insists that the patient brace up and be a man, and quit the habit, really cures his addict cases, even if he does half kill them in doing it.

The psychic or religionist also refuses to "understand" the addict, expecting, instead, that the addict come to an understanding of the psychic or religious point of view, which regards the addiction purely as a habit. This may cure the habit, but not the pathology.

Probably the most rationalistic viewpoint is that of the man who regards morphin addiction as *both* a habit and a disease. The habit, so he believes, is to be choked by pretty definite and determined measures, while the disease is a factor in which every case is to be treated upon its own merits.

Environment.

In our own experience with morphin addicts, we believe the patients can be made into whatever emotional type their environment naturally predicates. Having visited various institutions devoted to the treatment of addicts, we would find at one place a house full of patients with a "habit," and another house full of patients with a "disease." So, after all, which is morphin addiction?

But the important things are prevention and cure of the addiction: whether it be a habit, or a disease, or both, matters little except as a solution of the problem may evolve a rational cure. Thus far, neither theory has evolved a cure that is truly rational. So, in the absence of something better, let us stick to an empiricism that brings results rather than to long for a scientific solution and meanwhile temporize with a soul-destroying and body-enslaving menace to our race. It is to be hoped science will conquer in the end; but "It's a long, long ways to Tipperary."

"Acute Nasal Sinus Suppuration," by John J. Kyle, M.D., is a splendid paper of timely interest—this issue, page 31. Many practical points in treatment are given.

Surgical Brain-storms and Railroading Patients.

THERE'S MILLIONS IN IT is enough to turn the heads of many, and some of them are surgeons. The thoughtful and earnest paper of Dr. J. W. Kennedy in this issue may just as well be supplemented by some statements of our own.

The medical profession at large looked with doubt upon the organization of the American College of Surgeons. Let us say here that its organization was a necessary move to offset certain abuses creeping into surgery in the United States.

There are surgical trusts in several of our cities, and they are doing poor surgical work, severally and in the aggregate. Whatever new operation seems promising for exploitation is exploited just as effectively and nearly as offensively as was the erstwhile "Twilight Sleep" by a class of men who are conspicuous for brain-storm and newspaper write-ups. True, they are excellent surgical carpenters, mechanics and engineers—more especially engineers; but what they know about diagnosis and surgical philosophy is—Oh, well; that's another story, and a short one!

A conspicuous newspaper man is alleged recently to have said that certain of our brain-storm surgeons who are railroading hundreds of patients through their operating rooms are weekly paying certain newspapers for reading notices of their work. If this is true, is it not a beautiful state of affairs?

These men lose professional dignity in the eyes of the conscientious surgeon, but they get the patients—and the money. Also they get important positions in certain big hospitals—big hospitals near to smaller ones where good and honest work is being done, but that are eclipsed and almost pauperized by an unfair competition.

Brain-Storms.

Brain-storm is easy to get and hard to avoid by the man obsessed with the psychology of grab; and he justifies himself in the sight of the heathen and some of the elect. His motto is "There's nothing succeeds like success;" and because he is successful in getting patients he thinks he is equally successful *with* them. From his own point of view his methods are admirable because they pull the business, and hence he is an admirable surgeon and his fellows too conservative for this modern age.

That he is unethical and is commercializing peoples' misfortunes for the sake of his own pocket does not occur to him. He figures his time

as worth so much per, and it is the part of less gifted and less successful men to examine the patients and make the diagnoses, for this is cheap work and the cheap man may do it. As for himself, he is an OPERATING SURGEON; and the profession, the hospital managements, the newspapers and his admiring lay friends must all contribute what is necessary to keep him busy cutting.

As to the details of how and by what devious means the business comes, he says: "I never concern myself with details. I leave all of that to my secretary and my assistants. Yes, I hear I am criticised by less successful rivals; but you will have to excuse me, for I have no time for nor concern with such trifles. My time is too valuable. Did you hear of my novel and epoch-making operation on millionaire Smith yesterday? No! You amaze me, for my retiring room was full of reporters yesterday."

The Hospitals.

Wonderful man! Is it any wonder the hospital managements come to truly think he is? They have simply caught the contagion of his brain-storm tactics and "Is not our hospital more busy than it ever was before?" They don't realize that they are helping to railroad patients, and the annual statistics are explained by casual reference to "the amazing proportion of desperate cases other surgeons had neither the skill nor the nerve to undertake, but that the Great Surgeon attracted to our wards. The less busy hospitals show better mortality records because they turn such cases away and they come here, where we save a much larger percentage of them than other operators would save." And he "puts it across," too.

Last month Dr. Warren, of Arizona, in discussing the Indian Medicine Man, said some things that apply here.

How to Reform This.

As regards reforming the surgeon specialist, the American College of Surgeons can do more than the profession at large. The Fellows of the College have an admirable code of surgical ethics; and, in time, doubtless they will find a way to make their code effective in restraining surgical brain-storm and railroading patients, as aided and abetted by the newspapers and misguided but well-meaning hospital boards.

The would-be surgeon specialist who shows symptoms of brain-storm must simply be sat upon by the whole profession and not be allowed to wriggle out from under.

Constructive Reform.

But the real *constructive* reform is in the hands of the profession at large. THE MEDICAL COUNCIL has been printing a good many surgical articles, and we are doing so because we don't want the profession to forget that they are graduated as "Physicians and Surgeons," not merely as physicians, or little-tin doctors with a string tied to them, and useful only to dish out little envelopes of combination tablets the drug stores don't happen to have on hand to dispense across the counter. Doctor, if you feel that is all you are, for mercy sake cut off the string! If you don't, some one, probably a brain-storm surgeon, will pull it for you.

But, seriously, this country is full of towns where a surgeon specialist could not get enough to do; and these places are largely dependent upon general-practitioner surgeons. Let a practitioner show he really knows surgery, and he will get it to do. If the profession went back to the conditions of twenty years ago, when most doctors did a share of surgery, the profession at large would be economically and professionally better off. And, what relates more directly to this present discussion, an immense number of capable surgeons would develop who would soon laugh out of court the brain-storm surgery most physicians at present don't have the nerve to attack. Then the brain-storm case-railroader would have leisure for a little healthy introspection and self-analysis he seriously needs to indulge. Then why not make him do so?

Doctor, it is partly up to you.

Visceroptosis a Surgical Hoodoo.

The surgical operation without disclosing a surgical disease is now explained: it is visceroptosis, which is bad enough in itself, but also gives rise to such different groups of symptoms that the surgeon is often put-to to recognize the actual condition. One group of visceroptosis symptoms resembles appendicitis, another gastric ulcer, or perhaps gastric carcinoma, and another group resembles gall-stone disease.

Especially as between carcinoma of the stomach and some cases of visceroptosis is it hard to differentiate. It is not so hard to differentiate visceroptosis from appendicitis and from gall-stone disease. But where one of these diseases exists parallel with visceroptosis, diagnosis is horribly involved.

Then, too, to differentiate between gastric ulcer and gastric cancer presents its own difficulties.

To our mind, the most promising method of

differentiation is the bismuth X-ray survey. Technic is wonderfully advancing and some men are becoming most expert. To date the differentiation between carcinoma and ulcer of the stomach is pretty definitely made by the X-ray expert. Let him now get busy on visceroptosis. If he does, and really succeeds, much unnecessary surgery will be avoided and the spell of the hoodoo will be broken.

The Complications of Pneumonia.

Physicians are coming to realize that purulent inflammations frequently complicate pneumonia, and that these suppurations occur in many tissues. Some times a true gangrene of the lung occurs, which is commonly not so serious as an empyema.

The term, "unresolved pneumonia," is going out, since nearly all cases supposedly "unresolved" turn out to be empyema. Early exploration and X-ray examination nearly always reveal this to be the case. Don't be content with one exploration in the absence of an X-ray examination, especially in prolonged pneumonia in a child. Early rib resection and free drainage is the only effective treatment. Serous effusions are nearly always tuberculous, not pneumonic; so don't mistake an empyema for a pleurisy or "pleuro-pneumonia."

Otitis media from pneumonia is a nasty suppuration, almost sure to result in deafness, with or without a chronic otorrhea, especially in children. A discharge from the ear in pneumonia demands instant attention, preferably from an aural surgeon, who will probably avert later trouble by incision of the membrana tympani.

Pneumococcal meningitis is a most dangerous complication. The few cases coming under our observation died. Vaccines and serums promise much, principally for the future.

Purulent pericarditis, and sometimes endocarditis, occur as complications in pneumonia. The prognosis is bad for the first, and may be more favorable for the last if no depressing drugs like the salicylates are given.

Joint infection with the pneumococcus is almost certainly suppurative, requiring opening and drainage. Don't allow yourself to be fooled by these cases, but explore and find out if there is pus.

Peritonitis, phlebitis, neuritis and nephritis are rare complications.

Don't await convalescence for the inauguration of necessary surgical measures in suppurative complications of pneumonia. The surgical operation will not be so hard upon the patient as will the continuance of the suppurative process.

Therapeutic Notes.

The kidneys eliminate unchanged 85 per cent. of ingested hypophosphites.

Cacodylates given by the mouth may give rise to offensive breath, urine and perspiration.

In dyspnea with very labored respiration, opium or its combined alkaloids gives better results than does morphin.

Years ago we said that the increased mortality in pneumonia was due to the unwise use of coal-tar drugs, which weaken the heart. We wish to repeat the statement and to emphasize it.

Benzoic acid in large doses (8 gm. per day) increases secretion of uric acid in the urine and decreases the uric acid content of the blood.

The hypodermatic use of atropin in large doses is recommended in pylorospasm. In this condition children tolerate larger doses than was formerly believed safe.

Gallstone colic results from an effort of Nature to expel the stone, and morphin retards this effort. Codeine or papaverin are to be preferred. Compound spirit of ether may also serve.

Scopolamin and morphin in combination, used as an anesthetic, is a treatment very strongly condemned by Bevan, and most surgeons and obstetricians are now in agreement with him, regarding "twilight sleep" as dangerous.

German investigators contend that scopolamin and morphin preliminary to general anesthesia is responsible for many deaths, even small doses ($\frac{1}{4}$ gr. morphin and $\frac{1}{150}$ gr. scopolamin) are claimed to add much to the risk of anesthesia.

Crile's anociassociation is not winning much support from others. Especially is it claimed that shock cannot be wholly prevented by means of novocain "nerve blocking." Novocain is well thought of, but the contention is made that Crile errs in his physiologic theory.

Italian investigators, more especially Rummo and Ferrannini, have proven that large doses of quinine by mouth for a ten-day period overcomes chronic mild fevers of the undefined type; and they claim from this treatment an antiseptic and antitoxic influence on the blood, reducing microorganisms.

Synthetic chemistry is being over-worked in therapeutics. It is to be hoped that the war, which is destined to promote American chemical industries, will also show our chemists that by-products of the dye and explosive-base factories should not be foisted upon the doctors. We have a wealth of resource without these things.

Announcements for May

The function of a medical journal is to be a true helper to the busy doctor in the field, not merely to entertain him. Yet human interest and red blood must permeate every page. The consistent reader of MEDICAL COUNCIL will realize we are trying to fill this field. Doctor, if you do not, thus far, realize that we are fighting for *you and your interest*, as well as for scientifically, practical medical science from the clinical and general-practitioner side, just get to be a consistent and persistent reader. Begin with this issue and then look forward to May. Here are some features for May:

"Ether and Post-Operative Pneumonia" is a discussion fresh from the operating room and hospital ward.

"What the Great War Has Taught the Physician" will supplement, by some searching and earnest discussion, the admirable paper of Dr. Foster in this issue.

"Chronic Constipation in the Aged," by Dr. I. L. Nascher, and "Senile Constipation From a Physiological Viewpoint," by Dr. Albert C. Geyster, are two allied papers of great interest and helpful to every physician.

Crowded out of this issue, but nevertheless just as valuable as anything herein, is "Abnormalities," an interesting discussion by Dr. Estill D. Holland, "The Clinical Significance of Acute Abdominal Pain," by Dr. Harvey F. Smith, as well as other papers. They will appear in May.

A series of brief papers on "Autotherapy," by Dr. Charles H. Duncan, is promised us. His paper in February interested so many readers, and so many wrote to Dr. Duncan for more detail, that he will tell in early issues the things physicians want to know.

"Serum Therapy and Protective Vaccination Against Typhoid" is a timely paper by Dr. S. R. Klein.

"Faradism and High Frequency Currents in the Treatment of Ordinary Constipation," by Dr. Samuel Floersheim, will enlighten many physicians who have not employed this effective form of treatment.

THE BUSINESS SIDE.

A further and very tangible discussion of the "Physicians' Exchange" will add interest in a debatable subject. Denver has a Physicians' Telephone Exchange, and it will be discussed at first hand. The "Medical Philosopher" has also sent to us from the far West some more breezy discussion of "The Ethics of Business."

"The Medical Business Outlook is Improving" is an optimistic consideration of present conditions. Dr. G. M. Russell has sent a more critical estimate of conditions we hope to crowd into May issue. He thinks physicians slip up horribly on diagnosis.

CONSTRUCTIVE REFORM.

"Sulphur and the Sulphides" will be an article upon pharmacology that will interest the physician from the side of practical therapeutics. The "Detail Man" will have something to say, and his points will be discussed as "Some Necessary Reforms Which Have Been Overlooked."

OUR ABSTRACTS.

"Surgical Scissors," so well begun in this number, will be continued regularly by Dr. Douglas H. Stewart. Be sure to read this, as well as "Practical Therapeutics," as abstracted by the Editor.

The following papers are contributed exclusively to this journal. Republication is permitted if credited as follows: MEDICAL COUNCIL, Philadelphia.

ORIGINAL ARTICLES

Sentences, like sunbeams, burn deepest when most condensed.

We are not responsible for the views expressed by contributors: but every effort is made to eliminate errors by careful editing, thus helping the reader.

Acute Nasal Sinus Suppuration.

By JOHN J. KYLE, M.D.,
Professor of Otolgy, Laryngology and Rhinology,
Medical Department, University of
Southern California,
LOS ANGELES, CAL.

During the past few months there has been a wave of infectious diseases not infrequently involving the sinuses of the nose and the upper air passages, extending from the Atlantic to the Pacific oceans, and designated as La Grippe or Influenza. In some localities the disease has shown manifestations differing very much from those observed in other localities, and in consequence it is presumable that temperature, humidity and altitude all play some part in predisposing to the epidemicity of nasal sinus disease. Nasal sinus disease up to a few years ago was looked upon as a self-limited disease, running its course very much like that of an ordinary coryza, and diagnosed as such, and ending either in recovery or in a condition known as chronic nasal catarrh.

Since the appearance of Onodi's epoch-making investigations, the relationship of the nasal sinuses to the intracranial and orbital structures in disease has become well established, and the pathology of sinus complications has become one for serious investigation.

Before taking up the discussion of the epidemicity of nasal sinus disease, I want to discuss some general observations on the nasal sinuses.

At birth, the frontal, ethmoid and sphenoid sinuses are absent. The maxillary is thus the only one present. The sinus is a slit in the superior maxillary bone and even in infancy may be the seat of infection. Like unto the middle ear, at birth it may be full of amniotic fluid, which sometimes fails to be absorbed readily and becomes in time the cause of disease. The other sinuses are primitive structures and are hardly discernible until after the third year of life. The ethmoid body, however, even before evagination of the nasal mucosa has taken place

for the formation of the cells, may be the seat of disease. Congenital syphilis, when it manifests itself in the nose, has a predilection to attack the ethmoid body. The nasal septum exerts a powerful influence upon the development of the ethmoid sinuses. Thus a thickened septum from congenital cause or traumatism may so interfere with free aëration of the attic of the nose that the cells will be flattened, middle turbinal deformed, and disease of the secretory surface of the cells assured.

Ethmoid Suppuration.

Suppuration in the ethmoid sinuses, when once established, is most difficult to cure. Not infrequently a suppuration may be existent for years and the patient make little or no complaint, until the nose becomes so blocked that it is difficult to breath normally. Again, a defect in vision may be the first disagreeable symptom pointing to the nose. The optic nerve is in close relationship with the posterior ethmoid cells and infection may spread to the optic nerve sheath on account of a dehiscence in the roof of the sinus, or by way of anastomosis of blood vessels. A unilateral blurring of vision, with large central scotoma or central blindness, with pain in the region of the eye, is highly suggestive of posterior ethmoid sinus disease. Atrophy of the optic nerve will invariably result if inflammation in the optic nerve continues for very long. It is remarkable the reparative change that takes place in an inflamed optic nerve from intranasal disease after an indicated inter-nasal operation, and unless the cells are opened and drained before atrophy of the nerve takes place, treatment will be of no avail.

The Nose and Vision.

Unless one takes cognizance of the anatomical relationship of the eye and nose it is difficult to realize the important part a diseased nose has upon the function of vision. Frontal and temporal headaches, continuous or intermittent, are frequently due to disease either of the sinuses or of the nasal septum, and such cases, when

examined, may show large middle turbinals pressing upon a thickened septum. The septum may be bowed high up or stand vertically, but much thickened. With a head mirror and cotton-tipped probe, after the nose has been anesthetized with ten per cent. cocaine, points of contact can be clearly demonstrated. It is in those cases with hard bony septum and equally hard middle turbinals in close contact that pain in the anterior region of the head is the paramount symptom. Many cases of ethmoid suppuration, which had their beginning in youth, in later life develop hay fever and asthma.

A simple swelling of the turbinals may cause a passive contact with the septum, due to some systemic disturbance, and respond to local and general treatment, but a hypertrophy of the bony structures of the turbinate body or septum will only disappear after a radical operation, i. e., submucous resection of the septum or removal of the turbinated body. In attacking the middle turbinate body, it is advisable not to try to remove a portion of the bone, but to remove the whole structure. In doing a submucous resection of the septum, it is necessary that the points of pressure or deflection are completely removed. These are naturally high up and therefore require the services of a rhinologist of skill and experience.

Polypi.

Nasal polypi are the result usually of ethmoid sinus suppuration. Polypi sometimes have their origin in the infundibulum and are due to frontal sinus infection; or have their origin in or about the sphenoid sinus. However, a polypus of the sphenoid body is rarely encountered.

A single polypus may originate from the nasal mucosa covering a turbinal, but a multiple number of polypi according to Killian, is always suggestive of ethmoid sinus suppuration. Those who encounter cases of multiple polypi would do well invariably to remove the middle turbinal body and expose the ethmoid cells with a Grenwald punch, otherwise a recurrence is altogether probable.

Meningitis.

Many cases of meningitis have heretofore gone the way of such diseases, without the primary cause of the disease having been ascertained. For a long time we have associated meningitis with a suppurating ear and have paid little attention to a suppurating sinus as a more important factor probably than a suppurating ear. Deaths by meningitis are not infrequent and are not always due to the meningococcus, though the meningococcus is the important factor in epidemics of cerebrospinal meningitis.

Streptococcus Infection.

The most virulent organism that we have found in nasal sinus suppuration and the one prone to the production of intracranial diseases, is the *Streptococcus pyogenes*. We have had one death from purulent meningitis following a frontal sinus abscess; one death from purulent meningitis following an acute abscess from the ethmoid cells, during the past month, and both due to infection from the *Streptococcus pyogenes* alone. The symptoms of acute frontal, ethmoid and sphenoid suppuration varies very much in individuals. There may be a slight rise of temperature in the beginning, general malaise, and pain usually located on the affected side. If it is a frontal sinus infection, in typical cases the pain is very acute. There is much tenderness. The pain is greatest in the morning and is designated "sun pain." There is more or less congestion of the conjunctiva. In other cases, the patient will complain of only a slight pain in or about the eye. There may be a slight swelling of the supra-orbital region, which passes away in a few days. The headache is that of a beginning typhoid fever and now and then such cases are diagnosed as suspected typhoid fever. And even the meningeal symptoms are sometimes attributed to typhoid fever. It is not until a careful inspection of the nasal cavity is made that pus is discovered filling the attic of the nose, and finally, by transillumination, are we able to locate pus in the frontal sinus. Classical symptoms of frontal sinus disease are well known to most medical men and there is little or no difficulty in diagnosing the disease. But in other cases, the symptoms are so obscured that frequently a meningitis, either serous or purulent, has become established before the seat of the disease has been discovered.

An acute ethmoid sinus disease may, on account of the peculiar anatomical structure of the attic of the nose, be prevented from draining into the nasal cavity. The mucosa round about the drainage channels becomes edematous, and in consequence the direction of least resistance may be into the orbital cavity, and not infrequently an acute suppuration in the ethmoid may break through the os planum and drain into the orbital cavity. From there the infection is carried into the meninges and not infrequently to the cavernous sinus, producing a cavernous sinus thrombosis. These cases terminate in death.

Sometimes the pus may drain forward and into the areolar tissue surrounding the eye ball and empty itself through a fistulous opening externally. These cases, after intranasal surgery, go to complete recovery. The disease is usually limited

to one side. Patient complains of stuffiness in the attic of the nose, tenderness of the eye ball, and tenderness of the internal rectus muscle. Sometimes puffiness of the conjunctiva may be noted in the region.

An acute suppuration in the sphenoid sinus has a tendency to empty itself spontaneously. Occasionally, however, there is a dehiscence in the bone in the roof of a sphenoid which allows infection to pass to the brain and basilar meningitis may occur. Pain may be located in the ear, back of the eyes, or in the temples. Patient may be violently nauseated at times.

Some of the cases were evidently acute exacerbations of a slumbering sinus disease.

So-called Grippe.

In all the so-called grippe infections involving the sinuses there is usually a slight temperature. However, temperature may be entirely absent. In a purulent sinus disease there is usually a dull boring pain in the region of the sinus involved. In maxillary sinus disease there is a blurring of the vision sometimes and a redness of the eye ball, a slight tenderness on pressure and tenderness of the alveolar process in chewing. In stooping over, the patient may complain of a great deal of tenderness and soreness in the region of the antrum. The antrum sometimes fills itself and empties spontaneously. The pain of a few drops of pus in the antrum may be as great as when the antrum was full of pus. It may be impossible in transillumination to tell whether or not the antrum is involved, and it is only by passing a trocar through the nose into the antrum and flushing the antrum, that we are able to tell whether or not pus is present. Inspection of the nasal cavity in cases of acute suppuration of the ethmoid or maxillary sinus will as a rule show thick yellow pus in the region of the middle meatus, and the same may be said of the frontal sinus. There is usually more or less swelling of the middle and lower turbinated body, and sometimes swelling of the mucous membrane covering the septum.

"Grippe" Organisms.

Among the organisms that we have encountered in pure culture were the *Streptococcus pyogenes*, the *Staphylococcus aureus*, *albus* and *citreus*, the *Pneumococcus*, *Friedlander's bacillus*, *Bacillus pyocyaneus*, *Micrococcus tetragenus*, *Bacillus coli* and *Micrococcus catarrhalis*. We have been surprised to find in so many cases a mono-bacterial infection and more particularly the *Bacillus pyocyaneus*. In one case only did we find the *Micrococcus tetragenus* in a series of fifty cases.

Sometimes we may have a mixed infection; that

is, there will be two or more species apparently producing the infection. After operation, the character of the infection may change. With this in mind, it is best to make a new culture from time to time.

The examination for the organisms producing the disease is made by passing a platinum loop into the nasal cavity and into the region from which pus, mucus, or muco-purulent discharge seems to originate. An agar tube is now contaminated with the pus and placed in an incubator. The time required for the growth of bacteria varies greatly. Sometimes the organism will not be found in pus discharging from the sinus only after a long period of time and frequent attempts to grow the organism. Sometimes the mucus discharged from the sinus will contain one or more organisms and without any pus cells. It is very necessary that one differentiate the character of organisms produced in the disease, for if in our therapy we are going to apply vaccines in the treatment of suppurating diseases of the sinuses, we must know the organisms producing the disease.

Vaccines.

There are stock vaccines that are of value in the treatment of acute sinus infections. However, most of those recommended are known as respiratory and contain certain organisms. These stock vaccines do not contain the *Bacillus pyocyaneus* or *Micrococcus tetragenus* and a number of organisms that sometimes do produce this disease epidemically.

Susceptibility to Infection.

The sinuses of the nose, in the absence of some intra-nasal obstruction, or chronic catarrh or mucous inflammation, are not predisposed to infection. Patients who are most prone to infection are those who have suffered a low form of mucous catarrh of the sinuses, inherited or acquired syphilis, or an inherited tendency to tuberculosis. They have been chronic sufferers from adenoids and diseased tonsils.

The deflection of the nasal septum is one of the most common factors we have as a cause of sinus disease. In the great majority of individuals there is more or less bowing or twisting of the septum high up, which interferes with free aëration of the attic of the nose. Those individuals with a perfectly formed nose and without any inherent dyscrasia, seldom have any nasal sinus disease, either acute or chronic.

Diagnosis.

The diagnosis of sinus diseases is in the majority of cases comparatively easy. As previously referred to, general malaise and headache, espe-

cially when it is unilateral or focused about the forehead, should indicate the possibility of either positive or negative pressure in some of the sinuses.

Treatment.

The treatment of acute sinus suppuration varies a great deal from that recommended for chronic sinus suppuration. In acute suppuration, with the exception of the maxillary sinuses, it is seldom necessary to resort to surgical methods, whereas in the treatment of chronic suppuration, surgery is usually indicated. In acute maxillary suppuration, it is almost always necessary to puncture through the inferior meatus and flush the antrum with some mild antiseptic solution, such as lysol or normal salt solution. One or two flushings is as a rule all that is necessary. As soon as good drainage is established, nature has a tendency to take care of the infection. The puncture of the antrum can be made almost painless by applying a twenty per cent. solution of cocaine with a cotton-tipped probe beneath the lower turbinate body. After once flushing the antrum, and the day following, the congestion of the mucous membrane covering the turbinated bodies and the septum has receded, drainage lessened, and patient is not complaining of pain, a subsequent irrigation may not be necessary.

Local Treatment.

The local treatment of a frontal and ethmoid sinus suppuration is much alike and consists in depleting the swollen mucous membrane round about the middle turbinate body with a solution of cocaine and adrenalin, about five per cent. cocaine and 1 to 10,000 adrenalin. A pledget of cotton moistened with this solution is passed high up into the attic of the nose and allowed to remain from ten to fifteen minutes. After the mucous membrane round about the opening of the sinuses has been shrunken, a suction apparatus should be used for the mechanical emptying of the sinus, and I cannot speak too highly of the cheap and satisfactory Brawley apparatus. The De Vilbiss suction apparatus has also some merit. It makes little difference whether the sinuses are full of mucus, or pus, or whether aëration is not satisfactory, the suction apparatus is indicated.

After the sinuses have been mechanically emptied, it is best to saturate a piece of cotton with twenty per cent. argyrol and place it high up into the attic of the nose. This ought to be repeated twice daily in ambulatory cases. Those cases that are confined to the bed, and in which there is poor drainage from the nose, can be given a solution of adrenalin chloride, camphor-water, ex-

tract of witch hazel, and normal salt solution in equal parts, and this can be dropped into the attic of the nose by first having the patient hang the head over the side of the bed or couch. The above solution should be dropped into the nose every two or three hours or whenever there is a stuffiness felt in the nose. If there is reason to suppose that there exists some tubercular or syphilitic dyscrasia, an alterative should be given. Dry heat in the very beginning, applied locally, in the form of hot water bag or electric pad, is always indicated, whether the infection is in the maxillary or frontal sinus. If the pain is pronounced in the beginning, a hypodermic of morphine and atropine is indicated. The gastrointestinal tract as a routine measure is given attention. Rest in bed is necessarily indicated. No case of acute inflammation of the upper air passages can go to as quick and satisfactory recovery as by rest in bed. Those who sleep out of doors should be placed in a warm and well-ventilated room. In summer time their sleeping quarters should be protected from strong drafts.

Vaccine Treatment.

In regard to vaccines. Stock vaccines, in the absence of any bacteriological findings, may be prescribed as a hit-and-miss proposition. Probably in the greatest majority of cases the infection may be from one or more bacteria, as found in the mixed respiratory vaccines. However, if one is able to make his own examination, or has access to a laboratory, it would be better to have a culture grown, and then if necessary he can use the stock vaccine or can have an autogenous vaccine made. Vaccines have a prophylactic value, and if given early may be helpful. However, after the pus has formed and unless good drainage is established, the vaccines will exert no influence. After a maxillary antrum has been irrigated, vaccines are indicated. If the tip of the middle turbinate is very large and interferes with the frontal sinus drainage, it is sometimes necessary to remove it even in an acute attack of suppuration.

Epidemics of this character are infectious and can be easily transmitted from one individual to another.

Pneumonia and middle ear abscesses are not infrequently a complication of acute nasal sinus disease. It should be a rule, in suppuration of any of these sinuses, that the earlier good drainage is established the less liability to deep complications.

702 Title Insurance Building.

A Plea for Practical Methods in Diagnosis.

From the Clinic of the Joseph Price Hospital.

By J. W. KENNEDY, M.D., F.A.C.S.,
241 N. 18th St.,
PHILADELPHIA, PA.

Here is constructive criticism by a busy surgeon we have known for years as an objector to some modern surgical tendencies. Read this paper; it is incisive and yet is fair and just.—EDITOR.

In conversation with a fine lot of young men with whom I come in contact and who are eager to take up abdominal surgery, I rarely say anything to them about the surgery itself but impress them with the importance of becoming diagnosticians. The young man who graduates and immediately becomes an abdominal surgeon without an apprenticeship, has not a surgical soul and will never make a surgeon.

After an apprenticeship of several thousand abdominal operations under the late Joseph Price and having done a large number in my own work, I still find myself crying out for that master surgeon's counsel.

Later in my discussion I will bring out the need for such an apprenticeship when I discuss the reprehensible number of cases which come to us for secondary work and are surgical omissions and commissions.

This ultraly scientific age has brought forth much that is of extreme and vital interest to our profession, but are we not forgetting many of the most valuable lessons of our past masters?

As much as it may seem uncomplimentary to a progressing age, I question whether or not the young graduate of this day is as good a diagnostician, from the clinical standpoint, as was the equally young graduate of a quarter of a century ago. Neither medicine nor surgery is an exact science, and those ultraly scientific means of recognizing disease, as yet, have not compensated for the loss of interest and knowledge which may be derived from a careful study of clinical history, physical signs and symptoms. To bear out the importance of this point, I am forced to relate my experience of twelve years' apprenticeship under Doctor Price.

A Practical Diagnosis.

Probably no man of large experience was more practical than he, and probably no one relied so exclusively upon diagnosis derived from a careful

clinical and physical examination of his patient.

During this long service under him, I never knew the Doctor to make a gross error in the diagnosis of an abdominal lesion. He was always sufficiently right, in that he never made a second incision and always entered the abdominal cavity at the right point through an incision that was only sufficiently large to remove the underlying pathology.

During my entire experience with him I never saw him introduce his entire hand into the abdominal cavity. I mention this to show the importance of a study of clinical history and physical signs and to condemn that wholesale introduction of hand and arm into the abdominal cavity for diagnostic purpose.

The Older Writers.

I advise a review of some of the older writers who wrote so intelligently and instructively on clinical history and physical signs. This neglect of life's history of disease comes from an eagerness to advocate that which is supposed to be most modern and scientific. This eagerness has made the enthusiast inconsistent and he is overlooking and forgetting the cardinal principles upon which diagnosis stands. Every time I have rejected a diagnosis which was acquired by a careful taking of the clinical history and confirmed by physical signs, and operated to satisfy the diagnosis determined by ultraly scientific and mechanical means of investigation, I have been in error.

Read the works of Trousseau and other contemporaries. The old style classical lecture was stimulating and enthused the minds of men to greater things, and I regret that many of our teachers are assigning lessons from text-books which they have written, or more probably compiled, and quiz the students over the assigned subject. This may be a convenient way to teach, but it lacks force and impression, and is a poor example to young minds in the habits of industry.

Non-Observing Internes.

Work without thought is wasted. In going through a large hospital some months ago, I asked an interesting interne what was the matter with at least half dozen patients under his care? In each instance he did not know, although he had been on duty over ten days in the ward. What was wrong? He was either not thinking or had so many patients he was abashed and dis-

couraged at the amount before him. This poor fellow might just as well have been in the wilds of Africa, so far as that material was of any worth to him. Exactly the same thing is wrong in many of the big clinics of our country. Men are doing so much work that it is impossible for them to be in touch with the individual case.

This is first most forcibly shown by the great per cent. of errors in diagnosis, secondly by multiple and extravagant incisions in order to make a diagnosis and remove the unexpected pathological condition. This is a perfectly natural outcome of what one might expect from any surgeon who is doing, or thinks he is doing, too much operating to take time to wash his hands and examine the patient. The very low mortality of abdominal surgery has brought forth some of the most reprehensible and unscientific means of acquiring a knowledge in abdominal conditions.

The Exploratory Incision.

Exploratory incision may have a place as a means of obtaining knowledge in abdominal conditions, but it is abused beyond human sympathy and is causing an atrophy of reliable means of investigation.

A sharp, clean knife when not wielded by a surgical conscience, has crippled many thousands of patients and caused a withering away of recognized and humane means of acquiring a knowledge of disease, just as definitely as the unused muscle withers from lack of use. This is a most important subject. I have seen the most reprehensible conduct along this line. You can not learn a more valuable lesson than that imparted by the teachings of Doctor Murphy, when you realize that this busy man is in personal contact with the clinical history of each patient.

Contact With the Patient.

No teacher can advance his ideas without being in contact with the particular case; all other operators are merely surgical carpenters and are known more from the great number of cases operated, than from any real progress they have given the profession. Experience is said to be a worthy teacher, but experience does not necessarily mean a great number of cases. I claim that refined and masterful surgical judgment comes from crystallized experience and not necessarily from quantity of material.

It is that relation between the mental picture the operator should have ere he enters the abdominal cavity and the revealed condition, which should be registered in the operator's brain and becomes crystallized experience and future judgment.

Wholesale Surgery.

Show me an operator who talks much about number of cases, and you have indicated a man who has given the profession nothing. Although I believe in the specialty, it has been a great satisfaction to know that any series of specialists cannot make a diagnosis. This has been my experience and will be the experience of any man who will follow the work of those operators who are depending upon others to think for them. I say that it has been a satisfaction because I should dislike to feel that the great majority of our profession who are not in touch with the specialist, could not practice medicine intelligently.

The Country Doctor.

Doctor Price told me he had crossed the Allegheny mountains one hundred and twenty times to operate for abdominal conditions which had been recognized by the country physician with but a single error in diagnosis. Will many of our big clinics with the railroaded patients compare with this?

The Young Surgeon.

We must have more interest shown in the young men. I always feel that the operator who is commanding a large clinic which is surrounded by a number of bright, eager young physicians who are not permitted under the instructions of the surgeon in command to do a large per cent. of charity work, that this operator is a parasite upon the profession and has out-lived his day of usefulness. The young surgeon is the future profession and is not getting his dues.

Surgical Adventurers.

Many surgical adventurers are not satisfied with the ordinary exploratory incision into the abdominal cavity, but surgical audacity has been carried to further extravagance even more lacking in the habits of industry from the standpoint of careful history-taking and examination of the patient, namely, the special organs are now laid open for inside inspection. The womb, the mother of the world, is incised for diagnostic purposes.

This, the greatest surgical tragedy from the standpoint of diagnostic investigation, has no place in gynecology and, so far as I know, is not practiced by the gynecologist. It is an insult to the specialty and is an exhibition of diagnostic ignorance of the most dramatic type.

Hysterotomy.

During my twelve years' association with as conspicuous a gynecologist as the world has ever known, I have never seen a case in which hyster-

omy was indicated for diagnostic purpose. Hysterotomy has its place in surgery but never from the standpoint of diagnosis. You certainly would not want to open the uterus if it were pregnant; you certainly would not want to cut into its fundus if it were malignant, where hysterotomy is indicated, the incision being made as far from the malignant zone as possible. No surgeon with gynecological judgment would open the uterus for a retension of blood, pus or water.

I have never seen a sloughing tumor within the cavity of the uterus in which hysterotomy was indicated. Again, the surgeon who opens the uterus to remove submucous or intermural fibroids, will find in nearly every case that after he has removed all tumors in sight, he has left a greater number of small growths. Myomectomy, even in the hands of the gynecologist, is of limited use and questionable grace. Certainly the general surgeon is not attempting to ask the gynecologist to reverse his curettage, open the fundus of the uterus ignoring a patulous cervix, while the infected contents of the uterus is removed through the abdomen.

The advocate of hysterotomy for diagnostic purpose must wash his hands and make a few more bimanual examinations. He will then find the necessity for this inhuman means of covering up his short-comings from gynecological standpoint will become extinct.

It is really occasionally necessary to examine a patient in these days of venturesome laparotomy.

Surgical Brain-storm.

Hysterotomy for diagnostic purpose is the wild-est of all the surgical brain-storms to date. All exploratory incisions should be therapeutic in termination. By this I mean that the surgeon should have sufficient evidence of some pathological condition ere he enters the abdominal cavity, and the exploration made to definitely reveal the lesion. The operator who feels that an abdominal incision has no potential element of harm, is not studying his or other's results. Over forty-five per cent. of the surgery in the Joseph Price Hospital consists of re-operations, and I have never opened but one abdomen but that I could demonstrate adhesions to the scar of the previous laparotomy. We must have a conscience and view exploratory incisions as the cart before the horse, which is an exhibition of lack of scientific knowledge. When we as surgeons relax into indifferent habits and practice methods which are along the lines of least resistance, it is not only that particular case which will meet abuse but all other lesions will suffer from a like negligence.

Surgical Teaching.

The busy operator must systematize and organize his work so that he is in personal relations with each patient. This is absolutely necessary for any operator to continue a strong man as surgical teacher.

If the teacher is not well informed from the standpoint of diagnosis, his advice from the standpoint of surgery or surgical pathology will soon lead the profession astray; therefore, we condemn all of those clinics which are not under control of the operator from the standpoint of clinical history and a personal relation of each case. To say that any operator is doing too much surgery to be in personal relation with each patient, is to admit that some of that surgery would be better done in the hands of another operator. It is from the excessive amount of surgery which is being done by the over-worked surgeon who is not thinking, just operating, that some of our most fallacious teaching has come.

When an operator says that he has had so many thousand operations and such and such is his opinion, that cannot be taken as final; he may have started wrongly and has been wrong ever since.

Is it any indication that I should leave the stump of an appendix when I know all America is wrong, when a more thorough procedure can be done with no mortality?

Fashion and the Heretics.

It is not always good surgery to be fashionable in surgery.

The heretics in our profession are responsible for our progress; if their ideas had been in fashion they would not have been heretics.

If it is necessary to incise the stomach for diagnostic purpose, I have not as yet seen such indication. If the ulcer was not in evidence from examination of the stomach walls, I question whether that patient had sufficient symptoms to be in the hands of the surgeon.

If I had no interest in my profession from the standpoint of diagnosis, the mere mechanics of surgery would be of little interest to me and I would spend the remaining days of my life with my beloved mother on the farm.

The principles on which much of our operative work has been established has come not only from our own surgery but has been confirmed by the enormous per cent. of from forty-five to ninety per cent. of re-operations. Any reasonable profession must know that this state of affairs must come from principles of surgery which have been founded on unsurgical grounds.

Dentistry and the Country Doctor.

By H. C. SPRAGG, D. D. S.,
HARRISBURG, PA.

The chain of evils following lack of proper mastication is a long one not remedied so well by medication as by the physician extending his knowledge and treatment to include certain dental attention, or having the dentist cooperate therein.

Persons suffering from malnutrition frequently have deficient masticating tooth surface, yet the physician may discount, ignore or forget the importance of this. The lack of teeth causes malnutrition and gastroenteric disorders, and aggravates cases from other etiologic source.

It was Fletcher, I think, who termed mastication "the first three inches of responsibility." This can be accomplished only by a sufficient number of good teeth, the responsible factor.

Oral Hygiene.

The hygiene of the mouth is important, since bacterial habitat of the mouth leads to rapid proliferation of organisms that, with depraved secretions and excretions, infect the whole digestive tract. I touch upon this from personal observation in a wide-awake community, and yet one in which physicians rarely refer their patients to the dentist for treatment of the teeth and soft-tissue adnexa.

Rural Dentistry.

The rural doctor is disadvantageously placed in handling these conditions, more especially acute odontalgia and alveolar abscesses. He should be familiar with the order of eruption of the deciduous and permanent teeth, and especially the importance of the six-year molar or first permanent tooth. At about six years of age, four being erupted, one appearing beyond each segment of temporary teeth, these teeth come easily, the child not being required to shed deciduous teeth to give space for these permanent ones. Forming the four corners of the arches, as it were, these teeth are important, the facial contour and masticating ability of the child being much dependent upon them.

Many supposed cases of ear-ache are treated for days, the pain really being due to decay, with exposed and inflamed nerves, in these teeth, especially in the lower jaw.

Abscesses.

I have observed cases being treated as tuberculous by physicians and in which pus-discharging fistulae under the jaw or in the cervix were really not of the tubercular origin but were due wholly

to decayed teeth originating an abscess which drained itself through a fistulous opening. These cases, without proper dental care and extraction of the decayed tooth, leave permanent scars. Physicians should not be ignorant of nor ignore such cases.

The fair-minded physician will agree with me that such conditions should not exist in city practice at least; but in the country, where the physician does not have a dentist to rely upon, they occur without censure being merited, for these cases are frequently not diagnosed or properly handled from lack of special training and facilities.

Relieving Toothache.

Equal parts of oil of cloves and chloroform may be used to saturate cotton, which is then packed into the cavity of the aching tooth, where it is held *in situ* by being temporarily sealed with cotton dipped in chloroform in which sheet gutta percha has been dissolved. This relieves suffering and adds to the doctor's fame.

Extracting Teeth.

The doctor regards extracting as minor surgery, but nevertheless it often presents many difficulties for all it is the most frequent surgical operation. There are many designs and makes of extracting forceps. Taking the S. S. White as an example, the following list numbers are suitable for the work of the general practitioner who does extracting: No. 265, upper bayonet, suitable for upper incisors and roots; 85 or 85a, for lower root and bicuspid; 108, lower universal molar; 10, known as upper third molar but useful in removing all upper molars, both sides.

To be a successful extractor one must have a thorough knowledge of the bony structures in which the teeth are embedded, shape of the roots and a fair knowledge of other conditions one finds described in anatomical text-books: then back them up with good judgment of conditions in each case.

When should a tooth be extracted? Briefly, as follows: when a tooth or part can be of no further use to the patient; when it cannot be retained without discomfort; when its retention interferes with the correction of more important teeth.

The forces exercised in the removal of teeth are rotation, traction and pressure.

Misery loves company, I am told; so doctors and dentists should fraternize. When I get up against a difficult case I feel blue; but when some physician tells his hard-luck story I feel better. We both have our troubles, and dentistry is no easy task, as physicians will realize who have to do dental work.

The Effect of the Present War on Methods in Surgery.

By GEORGE S. FOSTER, M.D.,

MANCHESTER, N. H.

Surgeon and Pathologist to the Hospital
Notre Dame de Lourdes.

It has been more than ordinarily interesting to note what the present great conflict in Europe is opening up in surgery. Such a wholesale destruction of human life and the wounding of so many must of necessity influence the entire surgical world to do its best. Up to the present time nothing new or of special note has been reported.

During the past quarter of a century surgery has made great strides; new methods of treatment have been brought forward; the finest of technique has been developed, and anatomical structures hitherto unmolested in disease because of fear to step forward, have now become every day subjects. The great war of Europe, great only because of its vastness, will afford a free opportunity for the qualifying of all the progressive ideas gathered during the past twenty-five years. It all means that every known method of special surgical treatment will be truly and extensively tried out. From such an extensive clinic one can but hope to obtain something, if not new, at least different. We have accumulated much knowledge for service, and if that service is rendered it will well establish or make obsolete this or that theory.

The hospital nearest the firing line necessarily receives the largest amount of emergency and radical treatment cases. Here we find that they are not relying on aseptic surgery; on the contrary, it is the antiseptic surgery that is giving the best results. This is, of course, not a point of restful choice but rather of compulsory election.

Men are brought in with frightful wounds, especially of the extremities and head. As a result, we find that statistics show that two infections are most prominent, tetanus and emphysematous gangrene. Both of these infections are a direct result of soil contamination. The severe rain storms and highly cultivated earth are conducive to the fluent production of both. The question immediately arises, how to meet the bacterial onslaught.

Tetanus.

In dealing with anaërobic bacteria, we must continually remember that it is the spore habi-

tat in the dust which we find first. This organism rarely enters the human body except in the stage of spore formation. If we act early and vigorously, we can do much to retard the development of these spores. When we concede that spore formation in the bacterial world is exactly like the caterpillar going into the cocoon formation for protection, we can sum this subject up very clearly. Once the organism is in its cocoon we must endeavor to keep it there. To do this we must keep up extraneous influences which are deleterious to the propagation of bacterial life.

Here is where the present war has shown us something for, although anti-tetanic serum has been used to some advantage, the reports from the war zone have taught us that anti-tetanic serum has been used in civil life when many times equally as good results could have been secured without this material. If the same amount of prophylaxis was exerted in the war zone as in civil practice in the use of this serum, the supply would soon be exhausted and the shipments could not keep pace with the demands. Therefore, we find that the surgeons in the fighting centers are using this serum only in cases where it is absolutely indicated.

Reports from writers whose conclusions are drawn from the closest observations lead us to believe that free drainage and strong antiseptics, such as tincture of iodine, alcohol and carbolic acid, give good results when used immediately. From these reports we find also that tincture of iodine is filling many places in emergency and first aid work. Again, we find that nascent oxygen is finding its place in the surgical work combating aerobic organismal infection, for the loosely combined oxygen of the oxyhaemoglobin of the circulating blood has a certain degree of inhibitory action. The surgeons are also passing nascent oxygen directly into the wound and it is allowed to flow continuously for a certain period each day. It would appear that, as an emergency war expedient, this serves very well.

In summing up, the reports show that the combined methods of using strong antiseptics or even germicides with the use of nascent oxygen give the best results, but when especially indicated the serum is brought into action.

Emphysematous Gangrene.

The gas-producing bacillus is proving a formidable foe in the surgical work of the war zone.

Here they are meeting an infection of tornado-like action, and if it is not met by strong emergency treatment it soon results fatally.

The foremost writers are recommending the use of strong germicides, such as tincture of iodine, carbolic acid and the like, free incision and seepage, combined with the free use of nascent oxygen. Peroxide of calcium and barium, sodium perborate and the like find some considerable field of usefulness in assisting in the work of combating the *Bacillus aerogenes capsulatus*. Peroxide of hydrogen is too bulky and too evanescent in action to be practical on the field and therefore has been abandoned for such work. Vaccinotherapy is not practical as a prophylactic nor a curative in this infection.

Awakening of Latent Bone Troubles.

The severe gunshot injuries received by the wounded have shown a marked tendency to awaken latent disease in the bone. The immediate injury will apparently do well and heal by granulation, but later, writers tell us, that some unrecurrent disease in the bone will get in its work and the victim develops some secondary trouble, such as a tubercular periostitis, osteomyelitis, or trophic bone trouble. This means either loss of life or limb, or both.

The war surgeons find that the reaction from wounds does not always die with rest and time. The healing of the present wound may terminate satisfactorily but later a secondary, previously dormant, infection sets in and another condition has to be met.

The Use of the X-ray.

The present war has fully demonstrated the usefulness of the Roentgen ray in the collaborative diagnosis and treatment of gunshot injuries to bone. In each instance, following the emergency application of strong antiseptics directly upon the injured area, the parts are X-rayed for the purpose of obtaining a conclusive and definite diagnosis of the injury to the bone. No one thing has served the surgeons better than the X-ray and much dependence is put upon the findings as to the *modus operandi*. It has been proved that as good pictures can be taken on the field as in civil practice.

Antiseptic Versus Aseptic Surgery.

In Europe it has been clearly demonstrated that this is a time of antiseptic rather than aseptic surgery as far as war is concerned. In civil practice we would not care to develop the antiseptic technique necessary on the battlefield, for we, who pride ourselves on having the régime of good asepsis, think it would be rather unnatural to use strong antiseptics to maintain

even a good average of successful results. We find that the present war is developing the antiseptic surgeon to a much higher degree than it is the much-more-to-be-desired aseptic surgeon. However this may be, we are content in knowing that by this antiseptic method results are obtained and lives and limbs saved. While accomplishing all of this we trust that the surgeons of the war zone will retain that culture for refined aseptic surgery, when they again return to civil practice.

Severe Extremity Wounds.

The rule in severe gunshot wounds of the extremities is not that of conservative surgery. Early amputation is reported as giving the best results. The "watch and wait" method is not tolerated. Many times, we are told, the base hospitals are so overcrowded and the call for the return of the men so insistent that an early return to either partial or complete usefulness is most desired. This may seem cruel, yet the present war has developed these conditions. It is resulting in some sacrifice of limbs but the saving of many lives, in a shortened period of both suffering and disability (confinement to the hospital) and in allowing an early return to some useful occupation at the front. "Return the men early," is the cry. They are either returned to the front or, if so disabled as to be of no use there, they are sent home to help earn a living for those at home.

Axillary Sup and Morphine.

The best means of prophylactating shock has been considered one of the first principles in the surgery of the present war. Possibly the French army surgeons have done the most in this direction. The writer of this article brought forward, in 1913, the use of what he termed Axillary Sup for prophylactating shock in civil surgery. This method is merely the instillation into the loose tissue of the axillæ of a saline solution, during the operation. A full description written by the author may be found in the August, 1914, number of *Surgery, Gynecology and Obstetrics*. It is with some sense of gratification that in reviewing articles from the war zone it is noticed that the Axillary Sup is being used extensively by the French army surgeons. Their decision in regard to its usefulness in cases where it is indicated is that it is the one thing which has saved many lives in extremis.

Morphine is freely used, being given hypodermically in graded doses, following out the suggestion of Crile. These two things have aided much in preventing early death as a result of surgical shock.

Head Injuries.

Short range bullet wounds seem to do a disproportionate injury to the semi-fluid brain substance. Following such wounds there is often noticed an oozing of the brain substance. Clear, penetrating bullet wounds in the skull are not trephined unless there are definite signs of compression. Most of the zone surgeons agree that skull wounds do better when the watch-and-wait-ready-to-act-quickly treatment is used. Statistics show that the majority of these cases succumb within forty-eight hours and that interference does not alter the prognosis. The surgeons have also noticed that much oozing means earlier fatal termination.

Shrapnel wounds from a height often cause compression without penetration. These cases are early submitted to an operation and all the compressing bone is removed. The brain is only contused; no oozing takes place (many times the dura is not lacerated), and the cases recover following the operation. This seems rather peculiar in contrast to the penetrating wound.

Abdominal Wounds.

Two well-defined abdominal gunshot wounds have been noted, the wound with relatively small point of entrance and exit, and the wound having a large point of entrance and small or no exit.

It has been noted that the first generally yield the lowest mortality if no immediate operation is performed. Possibly this is due to the very gentle handling which is insisted on. Morphine is given in frequent well-graded doses. This is supplemented by absolute rest. In this way the bowel is kept quiet, adhesions are allowed to form and the internal wound is healed over. This *modus operandi* is enhanced by the results which it gives, for the mortality rate is lower than by the early interference method.

All these abdominal cases are carried by land to the main dressing station. No jolting about in an ambulance is permitted which excites the patient and innervates the gut. Everything is in readiness to operate at a moment's notice.

Fowler's Position.

The posture of the abdominal cases has proved to be as important in war as in civil surgery. Fowler's position, either as described by the originator or as modified by some surgeons, has served well in these cases. The gravitating of the contaminated abdominal secretion to the lower arc of the abdomen has saved many lives in the war zone. This rule is especially adhered to by the French surgeons.

Morphine.

Contrary to a belief held by some people, we find that much morphine is being used to combat shock and alleviate suffering. War zone writers tell us that in the cases that are seen to be fatal, they use much morphine to make the end as peaceful as possible. When the shock is extreme, with its pronounced signs of restlessness, this drug serves its purpose. Patients in extremis will react more favorably under its influence if its use is continued for several days. It allows the patients to recuperate in a condition free from pain in so far as interpretation is concerned. The nervous transmission is so impaired that the reflex and trophic systems have a chance to assist with supporting influences.

Ochsnerization.

Today in civil practice, we find many surgeons who disbelieve in the efficiency of the "water only" method of treating abdominal conditions. Perhaps this is due in part to the natural swinging of the pendulum towards the search for something new. However this may be, the war zone writers tell us that Ochsnerizing the patients serves the purpose well. They believe in it and they practice it. This seems to prove that it is saving life, for the war zone surgeons would not use it if they did not think it was successful. They even go a step farther in the more severe cases and only permit a frequent rinsing of the mouth but no swallowing. They state that by using this treatment the intestinal activity is lowered and that supporting adhesions form earlier. The Murphy drop and Axillary Sup serve to quench the thirst. The former is used when the cases are not opened and the latter when they are operated on.

Peritoneal Involvement.

The main point in all these cases is to confine the contamination and soiling of the peritoneal surface to as small an area as is possible. If this can be done in such a way that not more than one-sixteenth of the peritoneal area is soiled and adhesions form early, the cases as a rule will recover without operative intervention.

Penetrating Shell Wounds.

These are ragged, torn wounds accompanied by a more or less extensive visceral involvement. Nature cannot protect these cases by an early healing through the medium of plastic adhesions. These cases have to be opened, the soiled area cleansed by gauze sweeps and free drainage instituted. Plastic adhesions form more slowly under these conditions and there is considerable shock. These cases require Fowler's position, much morphine and the Axillary Sup. The mor-

tality is high and the results not entirely satisfactory, for the cases that recover are greatly debilitated and are more or less of invalids. Most of these are sent home for civil duty as soon as possible.

One rather new procedure which the war has brought forward in abdominal injuries which require operation is worth mentioning and further consideration. When these cases are opened within six hours of injury all rents are discovered and carefully sutured, while the surfaces are cleaned with gauze sweeps. The peritoneum is then sutured up tightly, as are all layers up to the integument. The skin and subcutaneous layers only are drained. The surgeons tell us that if any sepsis follows these injuries, it will take place in the outer layers of the abdominal wall.

Conclusions.

The present war has brought forward nothing new or marvelous.

Tried and true methods are being used with only minor modifications.

The methods of transporting the wounded efficiently and without undue disturbance are being perfected.

It has been proved again and again since the war began that operating amphitheatres can be improvised, in all the most minute details, in a dug-out.

Antiseptic treatment seems to serve best and iodine has shown its worth.

It is the aim to discharge the wounded from the hospital just as soon as they can be of service either at home or in the field.

Chloroform still retains its place because of the relatively small amount needed. This permits its transportation for long distances.

It is to be hoped that some new ideas will be discovered as a result of the war which will serve in civil practice.

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Therapeutics from the Racial Standpoint.

The Indian.

By BACIL A. WARREN, M.D.,
 First Lieutenant, M. R. C., U. S. A., in Charge
 U. S. Government Hospital,
 LEUPP, ARIZ.

(Continued from March issue)

Ludwig's Angina.

Recently a Navajo Indian died from Ludwig's angina which was possibly induced by a retro-pharyngeal abscess. He was the possessor of a flock of several hundred sheep and goats and some horses. He had two wives, numerous children and among them several marriagable daughters. He was sick altogether several weeks and tried one medicine man after another until he had treatment from every one in this part of the country except one. They had arranged to change medicine men again and have this last one if the patient did not get well in three days and he was already on the ground watching the tricks of the medicine man who preceded him, but the patient died just before the three days were up, so there was nothing left for this last man to do except to dance, sing and groan at the patient's funeral and help to bury him.

Medicine Men Bury the Dead.

It is customary for the medicine men to bury their patients when death occurs. One of the main reasons for this seems to be that the medicine men are particularly well versed in the various and many superstitions which apply to sickness, death and dead bodies. However, these Navajos seem to be very much afraid of dead bodies and particularly when death occurs from being struck by lightning. If there are any white folks around the Indians will almost invariably try to get them to bury the dead for them, and failing in this will often leave a body just wherever death occurred for several days before any of them get nerve enough to go and bury it. In case of death by lightning stroke they say themselves that they positively will not touch the body at all or bury it, and there have been several such cases around here in which the body lay out in the blistering sun of the Arizona desert for four or five days before white people knew about it and buried the body.

Evil Spirits.

The Indians have a strong belief in evil spirits (demons), and sickness and death are very commonly attributed to them. In the case of an Indian who obviously died of an acute infection, probably streptococcal, the last medicine man on the case told me in confidence that the real causes of this man's death were three: First, he had helped bury, years ago, a man who was killed by lightning in the country north of here; second, he had been too near another man who had been killed by lightning, and third, years ago he had a little boy drowned in the Black Falls of the Little Colorado River and he had buried the body himself. In all three cases the demons in these cases had been after him all these years and they finally landed on him and killed him. This man was to have been buried by white missionaries (the Indians requesting it), only the Indians agreed to help. The medicine man who had last been on the case told the missionaries to be very careful and cover up all of their tracks as they left the grave, so that the demons of the dead body could not follow them and do them harm. The Indians who were to have helped bury the body failed to appear. After burying the body the missionaries went over to the hogan where the family had been living that morning when the father had died. They found the camp deserted, the folks having moved as soon as possible to a place a considerable distance away; and the missionaries observed that the ground in and around the hogan was swept well, not a track was in sight by which a c'in'di could follow any person. It is a curious fact that while they credit these demons with great and varied powers, they think they can not follow a person if that person takes the pains to cover his tracks well. In this case just spoken of the Indians had applied externally one of the few remedies which I have actually seen them use. It was the pitch from the pinon tree.

Indian Surgery.

In the case of Ludwig's angina, above referred to, there was much brawny swelling of the trapezius and other muscles of the back of the shoulders, neck and head. Neither an abscess nor any considerable amount of pus was demonstrable, although a postpharyngeal abscess, as before mentioned, may have existed. The patient either could not or would not open his mouth sufficiently to permit an examination of the posterior pharyngeal wall. At one time when the missionaries visited this man they found an Indian dancing around behind the sick man and jabbing at his swollen neck with a sharpened stick which

he had in his hands. He was making an effort to puncture the swelling as the sick man had requested them to do. Two other Indians were sharpening some rusty old knives preparatory to trying to open the swelled neck. They told the missionaries that the sick man had been trying since morning to get them to cut his neck and let out something which he thought was in there. The Indians asked one of the missionaries if he did not have a sharper and better knife with which to open the man's neck, saying that theirs were dull and no good. One of the missionaries, who is an educated and intelligent Navajo Indian himself, warned them that they should at least dip the knife into boiling water or hold it in the fire before using it to cut the man's neck. Then they said that the white doctor knew where the blood vessels, nerves, etc., were in all parts of the body and would know better where to cut than they, and that they would like him to come and do the cutting. The older missionary then told them that he thought it was really a dangerous thing for them to do any cutting there and persuaded them to wait until the white doctor could see the case. A very old Indian woman of the camp said that she had striven all day with them not to use those knives. She said they should use a piece of sharp glass.

Pieces of sharp glass, sharp-pointed pieces of tin and sharp knives are used by the Kiawa Indians in Oklahoma for doing what they call "cutting," but as a rule they do little more than scratch and dig up the surface of the skin a little and cause slight bleeding. The medicine men, though, sometimes precede or follow this scratching process with cupping by means of a horn. They also apply their mouths directly to the unbroken skin over a diseased part of the body and go through a sucking process until blood is brought either from the patient's body or, probably more often, from an easily bleeding point in their own mouths.

Tricks of the Trade.

A trick of the medicine men of both the Kiawa and Navajos is to diagnose some ailment as being due to the pressure in some part of the body of a coyote's tooth, a frog, a piece of beefsteak, or other small object. He will then with considerable ceremony place the patient in the midst of a group of the patient's superstitious and credulous friends (the group occasionally contains a white man as I know from personal experience), bare the part of the body supposed to be affected, apply his mouth there and suck for a considerable length of time, presumably long enough for him to draw the offending object

out of the patient's body, then he arises, makes various passes and gestures and then in full view of the spectators probably so as to have plenty of witnesses and advertisers, spits out the coyote's tooth, live frog, or what not, which he has, of course, all the time had concealed in his mouth. The medicine man now tells the patient that he will get well; and, since the patient has implicit faith in the trickster, he often does get well, and that very promptly, too.

I know of a physician in the Indian Service who tried this same method of curing disease among the Indians and made it work so well that he was for a time almost overun with patients who wanted a coyote's tooth removed from some parts of their anatomies. On the first case he pretended to remove a coyote's tooth from the Indians' body by the sucking process and he got complete relief for the patient. Of course, the Indian told this all around and the Indians seemed to at once assume that sucking out a coyote's tooth was the doctor's specialty.

The Indians seem to have three main therapeutic measures which they use in treating disease. These are singing, dancing, and incantations; "cutting" or scarification; and medicine. Outside of the three things mentioned there are also various other things used from time to time, as, for examples, the trick spoken of above and sweating processes, which are common among various Indian tribes.

"Sings."

The idea of the "sings," as they are called, is that there is a certain song that will cure a certain disease if that song is sung without a single error. These songs are known only by the medicine men in a language not understood by the other Indians, a dead language which the Indians believe was spoken by "the ancient holy people." There seems to be a sort of far-fetched analogy between this and the fact that we white physicians use a dead language (Latin) and the laymen, not being able to read our prescriptions, which are written in Latin.

A Reply to Dr. Bolton.

In answer to Dr. Bolton, of Coble, Tenn., I would suggest to examine pelvis thoroughly, and if no displacements are found, try a saturated solution of potassium iodide, 5 drops t. i. d.; increase 1 drop each day; start this treatment 5 days before regular period. Since his patient has an idiosyncrasy to the opiates, why not try acetanilid? I am of the opinion his patient has a displacement.

I. E. MOORE, M.D.

Louisiana, Mo.

Cancer of the Rectum.

By CHARLES J. DRUECK, M.D.,
599 E. Forty-Sixth Street,
CHICAGO, ILL.

It is obviously impossible in this short paper to take up an exhaustive consideration of the subject and I shall limit myself to the consideration of the insidious development of this disease and the necessity for the medical man constantly bearing in mind the possibility of malignant disease when interpreting almost any group of rectal symptoms.

Cancer is the most fatal and one of the most painful diseases we have to meet in the rectum. Its exact cause here, as elsewhere in the body, is obscure, and the theories advanced are so much at variance that the writer is not prepared to advocate any opinion. Statisticians and pathologists vary considerably in their reports. Carcinoma of the large bowel is a common disease, but the small intestine is only rarely the primary seat. The large bowel contributes about 95 per cent. of all cases of cancer of the intestinal canal, and of these the rectum claims 80 per cent. and the colon 15 per cent. Cancer in general is much more common now than formerly, but whether this is due to our modern living or is only apparent because of better diagnosis and more careful collection of statistics is to be determined. Heredity seems to be an element.

As regards the location of the disease, it is most frequently found about three to five inches within the rectum, the lower limit being on a level with the internal sphincter, next in frequency at the anus—Williams estimates three cases at the anus to forty within the rectum—and least frequently the growth is situated in the upper rectum, or sigmoid. The region extending up from the internal sphincter is not only the most frequent site, but also the most fatal, for at this point the disease more rapidly runs its course and is more liable to accidents on account of increased anatomical dangers of obstruction.

Varieties.

At the anus epithelioma is nearly always the rule, and is the same form as is so commonly seen on the lip. It begins as a hard, warty nodule at the muco-cutaneous border and not within the anus, and makes slow progress, for it does not ulcerate until late in its existence, nor does it spread up into the true skin. Microscopically, it contains the characteristic nests of squamous epithelium.

Within the rectum, the cancers belong to the columnar cell growths and resemble the histological structures of the mucous membrane from which they grow. They are adenocarcinomas and closely resemble the benign adenoma; but the glandular hyperplasia of the simple adenoma is restricted to the mucous membrane and grows up into the lumen of the bowel, while the carcinoma infiltrates the submucous tissues and spreads out in all directions. Microscopically the resemblance between the groups of cancer cells and the tubules of the normal gland are so great that the tumor may be mistaken for a benign adenoma, but in the margin of the growth quite atypical cells will be found.

These growths arise above the sphincter and are easily differentiated from the squamous variety. Early in its existence the growth may appear pedunculated, and clinically it is impossible to distinguish from simple adenoma until the tendency toward a broad infiltrating base shows the malignancy. Later ulceration occurs and inflammatory changes are superimposed, all being aggravated by the irritation of the feces. The cancer varies somewhat in gross and microscopical appearance and also in clinical history, according to the histological structure which predominates in the make-up of the growth. Thus, although the same elements are used, we find encephaloid, scirrhus or melanotic cancer.

Encephaloid Type.

The encephaloid cancer arises primarily in the crypts of Lieberkuhn and is enclosed in a connective tissue capsule which sends trabeculae into the mass, dividing it into lobules. The cells are large, round and nucleated. It is often vascular, with large veins coursing through it and on its surface. In the interior, extravasations of blood give the tumor a soft, mushy feel and it resembles brain tissue, hence its name, encephaloid, while in other instances it is spongy and shreddy like placenta. Later a large amount of cancer juice containing cells exudes on pressure, and if dropped into water it quickly diffuses, giving the whole a milky appearance. Paget considers this a valuable rough test in diagnosis. If seen early the cancer is movable in the subjacent tissues, but when seen later it is soft and friable upon an indurated base. These cancers grow rapidly and may even fill the whole pelvis, involve surrounding tissues, and secondary growths develop in neighboring organs. The glands are involved early and if the tumor is removed it soon recurs, although considerable temporary relief is obtained by its removal and the cachexia disappears for a time. Digital examination is deceptive because of the extreme

softness of the tumor and the apparent fluctuation imparted, but a little fluid aspirated will clear all doubt by showing cancer cells and blood. As the deeper structures degenerate they become cystic with a mucoid, glue-like, translucent yellow substance, which distends the tissues, and the growth is called alveolar or colloid cancer.

True Cancer, or Scirrhus.

Scirrhus or hard cancer is the variety most frequently met in the rectum. It arises in the submucous connective tissue as a hard nodule beneath the normal mucous membrane and radiates out in various directions, but principally longitudinally up and down the rectum. These new extensions can sometimes be felt as hard bands or processes—claws—from which cancer receives its name. This form of cancer is said to be more frequently on the anterior wall of the rectum near the prostate and infiltrates all surrounding tissues and eventually involves the bladder. The diagnosis of this form is made by its hardness and contractility, but its history is often necessary to differentiate it from simple fibrous stricture of the bowels. Kelsey reports a case of dysenteric diarrhea which resulted in a stricture and presented a typical clinical picture of scirrhus cancer, but had existed eighteen years. In the scirrhus variety the stroma is abundant and the alveoli narrow, with the cancer cells frequently small. Fatty degeneration of the cells often occurs and the stroma remains to contract. Secondary metastatic growths occur late and there is hope of a cure by early and thorough excision.

Melanotic Cancer.

Melanotic cancer is placed among the carcinomas by some pathologists and by others among the sarcomas. It is soft and medullated and has increased development of pigment. It is rapid and malignant in growth and often becomes generalized. Only ten cases have been reported, and only six had complete histories. Five were men and one a woman. The ages varied from forty-five to sixty-four. Microscopical examinations were made in five cases and these were all classed as sarcomas. The symptomatology was the same as any rectal cancer, with the exception of one case, where the stools were black, and also after making an examination the finger was blackened.

Symptoms.

Cancer of the rectum begins insidiously and often gains such development before the patient is aware of its significance that it is beyond hope of complete cure. He thinks he has hemorrhoids or some other simple rectal ailment and dis-

misses it from his mind because he objects to an examination. The mild character of the symptoms for some time is peculiar to cancer situated above the middle of the internal sphincter, because the bowel has so little sensitiveness that considerable growth and even ulceration may exist without causing much if any uneasiness. However, when the disease is below the sphincter, there is great pain and the suffering itself may be of assistance in making an early diagnosis. In all cases, very early in the history of the disease, there is an uneasiness in the rectum which grows worse each time the bowels move as though they had not completely emptied. There is also a bearing down and if the disease is near the anus this straining is sometimes violent.

The pain of rectal cancer is variable. Early in the disease it is usually not severe, but later it is often intense and is the most important symptom to be treated. If the anus is eroded, the pain is similar to that of irritable ulcer or fissure and begins as early as the growth pushes through the mucous membrane. Pain or cramp in the lower extremities is a bad sign, for it suggests encroachment on neighboring nerves either by stretching or pressure of the cancerous mass itself or of the infected glands. Later pain also occurs from irritation by the feces of the ulcerated surface, especially when the anus is ulcerated. Each condition must be carefully diagnosed, as each requires special treatment.

Slight morning diarrhea or, rather, several movements consisting of mucus and feces is the first inconvenience noticed. Later a sanious discharge containing shreds of broken down growth escapes, at first only during defecation, but later as the sphincters lose their usefulness, more or less continually and it excoriates the anus and skin about the parts. This discharge has the odor of decayed flesh and once recognized is never forgotten. It is similar to the odor of cancer of the uterus.

The ulcerations of the cancer that produce the fetid discharge are of two kinds, that above the stricture and that of the growth itself. Ulceration developing above the growth differs from the cancerous necrosis in that it is superficial in depth, has a clean, smooth base, and low, even edges. It results from pressure of and toxins absorbed from the retained and hardened feces that are lodged in the dilated portion of the rectum immediately above the obstruction. When the obstruction is relieved, these masses are found to be dry and almost stony in hardness and seem imbedded in the tissues and if removed leave ulcerated spaces beneath them.

Degenerating Cancer.

The ulceration of degenerated cancerous tissue is different. Early in the disease the normal mucous membrane is movable over the growth, but the cancer soon breaks down; this degeneration may occur at one or several places simultaneously and the mucous membrane is honey-combed with ulcerating spots through some of which the cancerous mass may protrude. Ulceration begins at the central or denser parts of the cancer and is not limited to the superimposed mucous membrane, but invades the deeper structures and in some cases extends into neighboring organs. The bladder is frequently opened and a urinary fistula produced, the urine escaping through the rectum; and sometimes the feces are forced into the bladder and through the urethra, causing excruciating pain. This is one of the most urgent indications for colotomy. The prostate or seminal vesicles in the male, or the rectovaginal septum in the female, may be destroyed. When the prostate or urethra are involved obstruction to urination begins, and if the disease extends to the bladder wall cystitis develops. Smith records a case where the disease opened into the hip joint. While the center is degenerating the periphery is advancing into new tissues. Around the edges the growth, together with the inflammatory reaction, raises the borders and gives the ulcer a crater-like appearance. The muscular tissue seems to have a greater resisting power and prevents somewhat the extension of the ulcerative process. The extension, however, progresses irregularly and creates a ragged edge.

Hemorrhage.

Hemorrhage from cancer occurs frequently but is seldom profuse enough to be dangerous, although anemia produced by the repeated loss may be an element in hastening the end.

Obstruction.

Obstruction is variable in its symptoms; sometimes advanced scirrhus cancer which has narrowed the lumen of the bowel until it will hardly admit the end of the finger will cause little or no obstruction. Not infrequently the passage of feces is never much interfered with, because ulceration begins early and the growth sloughs off enough to keep the passage open. When obstruction exists and is located in the lower rectum or at the anus, the feces are ribbon-like in shape or small pea-like balls or else the frequent efforts at defecation bring away small amounts of feces mixed with muco-pus and resembling a diarrhea. Blood is frequently mixed with the feces, suggesting a dysentery instead of the real disease.

Ulceration into the surrounding tissues with the production of an abscess and fistula allows the extravasation of feces and often a large dissecting abscess. The obstruction when present is similar to that of simple stricture and not in any way pathognomonic of cancer. The patient's history does not differentiate the disease and all depends on a physical examination, which requires great care and delicacy.

Cancer in this region is of rapid growth and if a patient asserts the stricture has existed for many years it is evidently not malignant, although it must be remembered that carcinoma may be engrafted upon any benign growth or ulceration.

Examination.

Digital examination is of great value in all rectal strictures, and in cancer it is absolutely necessary because here a hard nodular mass will be found which involves perhaps only one side of the rectum, while the other side is covered with normal mucous membrane; or the mass may encircle the rectum, leaving only a small opening in the middle. Its peculiar character on palpation is a hard, rough, irregular mass projecting into the rectum, easily differentiating it from simple stricture, which is smooth, or a tubercular stricture, which undermines surrounding areas.

Ulceration will probably be found in all cancer cases or at best with few exceptions, because they are rarely seen before this stage. Irregular masses appear to have been broken off roughly. Raised edges surround the ulcer and give it the crater-like appearance. The finger being well anointed and inserted feels this rough irregular edge all around the constriction and then suddenly passes into a wider channel above where frequently masses of hardened feces are found. Exceptionally, a softer polypoid mass (Encephaloid cancer), is found simulating a benign adenoma but having a broad base which infiltrates the submucous tissue. Every possible care must be taken in passing the finger through the obstruction where it surrounds the rectum, especially if near the peritoneal surfaces, for fear of tearing through the friable wall and entering the abdomen. The necrosis may leave a very thin partition at some one point or the ulceration in the bowel above the obstruction may be very deep. The finger must never be pushed hurriedly through a carcinomatous stricture and even soft bougies must be used with great caution. Numerous cases of rupture and sudden death have resulted from carelessness in making an examination.

Cachexia.

Cachexia appears earlier in cancer of the rec-

tum than when the disease appears in other parts of the body, probably because the ulceration and breaking down of tissue produces a constant absorption of toxins and septic matter, which brings on an emaciation even when there are few or no local symptoms. Metastatic growths in the liver, lungs, kidneys and other organs, of course, accelerate the general break down. However, in some cases, the appearance of vigorous health is maintained until late in the disease; any case of gradually developing obstruction of the bowel with progressive loss of weight and strength in a middle-aged person is always suspicious, especially if inquiry brings out a history of constipation or spurious diarrrhea.

Lymphatic enlargement is a valuable sign and may generally be found if properly sought for. There are, however, two sets of lymphatics involved in this region. One set arising from the anus and surrounding integument terminates in the glands in the groin, while those from the rectum proper end in the sacral and lumbar glands. Therefore in disease within the rectum the infected glands are to be palpated along the spinal column and deep in the pelvis because unless the external parts are involved the inguinal glands may be nearly or quite normal and a thorough examination of the deep systems will determine the advisability of operation or only palliative treatment.

Another point in diagnosis is that these enlarged glands or the cancer mass itself may produce pressure symptoms in parts quite distant or independent of the rectum. Pressure on the iliac vein will cause edema of the legs, a condition that occurs frequently in the later stages of the disease.

Treatment.

This gives the reader a general picture of the clinical features of cancer as found in the lower part of the large bowel, and the object of this article is to set out prominently such symptoms as will assist in a clear and early comprehension of this dread disease. What course of treatment shall be adopted depends on many things: which of the symptoms are most prominent, the position and extent of the growth and the involvement of other and perhaps vitally necessary organs. Upon these the surgeon must decide whether his treatment shall be removal with a hope of lengthening life and perhaps curing the patient, or shall it be simply alleviation of suffering. If the entire mass and sufficient perirectal tissue can be removed, the prognosis is relatively good; but in advanced cases the prognosis is bad, regardless of the operation.

Supernumerary Breast Tissue.

By J. L. BUBIS, M.D.,
1725 E. 82d St.,
CLEVELAND, OHIO.

Supernumerary or accessory breast tissue, also called polymastia, is not a rare condition; in fact, if most cases were recognized and recorded, it would be considered quite common. Statistics state that two and one-half per cent. of pregnant women have supernumerary breast tissue. In my practice during the last year, I have met with six cases.

Location: The supernumerary tissue generally occurs on the pectoral surface along the outer border of the breast. It may, however, occur on almost any part of the body. The other places are the shoulder above the deltoid, in the axilla, on the abdomen above the umbilicus, or at the costal margin. The buttocks, Scarpa's triangle, the labia majora, and the external surface of the thigh are among the rare places reported by various authors. Of the six cases I have seen this year, the supernumerary breast tissue in the first two cases occurred in the left and right axilla respectively; in the other four cases along the outer borders of both breasts.

Either sex may be affected, although it is much more common in the female. The structure and function of the tissue may be the same as those of a normal breast. There may be ducts which discharge through the normal nipple (Cases III, IV, V), through separate nipples (Case VI), or the tumor may be a mass of isolated breast tissue without ducts and nipples (Cases I and II).

There are several theories in explanation of this condition. Hirst thinks heredity may be a factor. Ashfeld states that portions of the embryonal material which form the breasts are carried by the amnion and are implanted on any portion of the external surface, while Morris believes that these gland masses are due to an abnormal modification of cutaneous glands "*in situ*."

Case Records.

Case I. Mrs. P., aet. 20, primapara. Previous to her confinement the breasts were large and pendulous, extending almost to the umbilicus. When lactation began, the breasts became much larger and along the outer borders, large, definite masses of breast tissue could be palpated. Pressure on these caused a flow of milk from the nipples and a decrease in the size and consistency of the masses.

Cases II and III are almost identical with Case I.

Case IV. Mrs. K., aet. 21, primapara. On the third day following the birth of her child, her breasts became engorged. At the same time there appeared in the right axilla a painful mass about the size of an egg, having the same consistency as the engorged breast tissue. The mass was slightly movable, the skin over-lying showed symptoms of a mild inflammation, and movement of the arm was restricted. Her temperature rose to 100 degrees F. the first day, but was normal after that. A tight bandage and an ice-bag were applied. Within a week the mass had decreased to half the size and at the end of several weeks a soft, boggy mass, the consistency of normal breast tissue, could be palpated in the axilla. Lactation in both breasts continued normally.

Case V. Mrs. F., aet. 26, duo-para. The history and course was the same as that of Case IV. The supernumerary breast tissue occurred in the left axilla, and in her first confinement six years previously, she had the same experience.

Case VI. Mrs. R., aet. 19, primapara. Examination showed two nipples, one above the other within the same areola. Milk could be expressed through either one, depending on the part of the breast which was compressed.

Conclusions.

1. Cases of supernumerary breast tissue are not uncommon.
2. A sudden appearance of a painful, tender mass in the axilla during the first few days of lactation is not an acute adenitis of the lymphatic glands but a misplaced piece of breast tissue stimulated to activity by childbirth.
3. Rest and ice will quiet the tissue. I have heard or seen no cases of suppuration following this temporary stimulation of the lost, dormant tissue.

The Neglected Ophthalmoscope.

Next to the microscope, the ophthalmoscope is the most simple, accurate, useful, yet neglected of instruments used in medical diagnosis, as it enables one, by reflected light, to inspect the ocular interior. The actual technic of employment is simple, as described in all textbooks; but there are certain sources of error: (1) You fail to see the eye-ground, due to improper position of light, patient and examiner, or there may be an opacity; (2) the examiner loses the red ground on near approach to the patient, due to wandering from the straight and narrow path of the reflected beam of light or a contracted pupil; (3) you fail to get a clear image, due to uncorrected errors of refraction in the eye of the patient or examiner. These errors adjusted, and with patience and practice one learns to appreciate the ophthalmoscope.

Cincinnati, O.

F. A. GRAFE, M.D.

OUR OPEN FORUM

A department of Current Comment, Instructive Case-Records, Short Original Articles, Clinical Discussion and Matters of General Interest.

Contributions to this Department should be short, pithy, kindly in expression, of true scientific value, and carefully prepared.

This department of the MEDICAL COUNCIL is open to free exchange of proper opinion, criticism and matters of professional interest. Space precludes printing all letters in full, but so much of those received as will interest or instruct our readers will find place here.

The Control of Hospitals in the Greater Interest of the Profession.

The question of the appointment in the usual way or selection after competitive examination of applicants for hospital positions and staff service is a matter needing wide and courageous action. By present methods, in some hospitals, many bright men are practically debarred.

Hospital competition in cities of 30,000 and over is compelling many good men to seek hospital service or enter non-medical employment. The disappointed ones, unless men of iron, are apt to stoop to chicanery and illegal practices, and that not wholly of their own volition but because of unjust conditions brought about by unfair hospital administration.

Is there not much hospital extension beyond the real needs of the public? Once hospitals were emergency institutions; now they are in active competition with even the general practitioner, let alone the specialist. These things inflict needless sacrifice upon the men not engaged in hospital service, and they often fail to serve the public.

Advances in medical standards and attainment seem only to aggravate the conditions obtaining in the hospital situation and render less tenable the position of the private physician. Some abuses would be corrected by placing all hospital positions upon a basis of competitive examination. Hospital reform and professional freedom should go hand in hand. It will be accomplished by the profession itself and not by lay boards of management or trustees, and certainly not by the politician, lay or medical. We depend too much upon business men to manage our hospitals. I favor a reorganization of hospitals, short terms for trustees and their popular election and medical members preferred, and a competitive basis of attainment for surgeons and physicians in hospital service. Favoritism of some special college should not be permitted. Ward service should be a promotion from out-patient service.

Worcester, Mass.

R. C. FISH, M.D.

Wanted: Diagnosis and Treatment.

I have a peculiar case that I am laying before your readers for information that may possibly be of help to me.

C. P., aged 40. Works in shoe factory and has rather an easy job. Father now living, aged 78. Good health. Mother died at 56. No history of any inherited disease except rheumatism that has annoyed him a little for some years.

Now enjoys good health in every way except at night; between 2 and 4 o'clock in the morning he is attacked with pains in the upper bowels that extends through to the back, and causes a suffocative feeling that produces dyspnea and great shortness of breath and compels him to get up and spend the remainder of the night in a chair. This helps him somewhat, but he gets no great relief until he gets to work in the morning. He now is all right until the next night, when the same condition prevails. He has been this way for 4 months. In connection with this, he has a rash that appears over nearly the whole body, arms and legs. Itches severely.

He has tried two physicians ere coming to me. They diagnosed rheumatism of the bowels and treated him accordingly, but with no benefit.

My treatment has been calomel and soda, intestinal antiseptics, elix. soda salicylate, sulphur co. tablets, and rheumatism phylacogen. But little benefit thus far.

Will say his urine shows no albumen or sugar. The urine is very acid, with a spe. grav. of 1032. Pulse: systolic pressure is 125, diastolic 90, pulse pressure 35, pulse beat 90.

Any help will be gratefully received.

J. H. BOWEN, M.D.

Dolgeville, N. Y.

Uterine Mechano-Therapy.

I have read with a great deal of pleasure the article by Dr. Frances A. Harper, of Pittsburg, Kans. This reminds me of the time I began the practice of medicine not so many years ago. A few doors above me there lived an older doctor whose name was almost like mine and it was most natural that some of his referred patients would get into my office by mistake. I would listen to their story, which mostly ran: They were sent by Mrs. So-and-So and that he cured her of her trouble without any operation and she came to see, after all big professors told her she needed an operation, whether I could cure her without any operation, as I did Mrs. So-and-So. I, of course, told them that I did not know Mrs. So-and-So, and that they probably wanted my colleague up the street and when, in the course of time, I became more firmly known to the older doctor, I would ask him how he treated some of his female patients. Mechano-therapy was his

hobby, and they would get well and stay well. However, he would go into these matters with me in full details, stating just how he did this and that, not leaving half to your imagination, so I fear with Dr. Harper's paper, just where the packing, where put and how big a packing and many other little things have been left out of the paper. I feel that if the writers of papers will go more fully into details, their colleagues will get better results when they try out these treatments. I fully agree with the writer that too many women go to the operating table who could get good results, by medical, electrical and mechano-therapy applied to selected cases. Keep up the good work.

C. H. J. BARNETT, M.D.

Philadelphia, Pa.

Dr. Harper presented in MEDICAL COUNCIL for March and July, 1913, quite full technic, as well as contributing articles to other journals. Perhaps she still has some reprints. If interested in details, write to her, enclosing stamp.—EDITOR.

What Can a Doctor Do Except Practice?

On page 58 of February, 1916, MEDICAL COUNCIL, Dr. Charles F. d'Artois-Francis, of Brooklyn, N. Y., asks, "What is a doctor good for, aside from medicine?"

On page 438 of MEDICAL COUNCIL for November, 1913, he will find his question partly answered. This paper I prepared after very much inquiry through friends, and through inquiries inserted in MEDICAL COUNCIL and *Clinical Medicine*. I received letters from all parts of the country, even from Canada, and I assure you I derived a great deal of pleasure in reading these letters.

The practice of medicine would seem to unfit a man for anything else after spending several years in it, because of the close application to his profession and lack of opportunities to pick up even the rudiments of any other business. Lack of time, too, makes it difficult for a physician to make a study of anything outside his profession. I often tell my patients "I am here in the office one minute with no immediate prospect of going out, when an emergency call comes in and the next minute I am away with a grip in my hand." The physician's life is so unsettled, he cannot even be sociable, sometimes, he is so hurried. This sets him out as different from other men and he cannot reap the benefit of a friendly acquaintance with many people. He loses the opportunity to get into something outside of his profession because when such a chance is open he is not thought of by those who might be instrumental in aiding him. It would seem that the public expects "Once a doctor always a doctor."

I hope Dr. Francis will publish the result of his inquiry. He might as well know in the beginning that he will be disappointed in the number of replies, as I was. Apparently it is only occasionally that a physician will take the trouble to make inquiries along this line, although many will tell you they are disgusted with the practice of medicine.

Last evening a telegrapher was in the office and he spoke as do some physicians. He would like to get away from the work he has been following for probably eighteen or twenty years but does not know what he could do to make as much money as he does in the work he is in.

C. F. ABBOTT, M.D.

103 S. Main St., Elmira, N. Y.

Autotherapy and the Young Mother.

Allow me briefly to comment on the article appearing in the February, 1916, issue of THE MEDICAL COUNCIL by Dr. Charles H. Duncan under the title of "Autotherapy In Its Application to the Young Mother." In its final analysis, autotherapy is but the application of a simple law of nature that Dr. Duncan has apparently discovered and utilizes in a wholly original manner.

I have long been familiar with Duncan's teachings and am using autotherapy successfully in all kinds of bacterial infections. I have verified Duncan's claims in puerperal infections many times in both hospital and private practice.

In regard to the method of curing the nursing child, I prefer to use the technic he has advocated in other articles in preference to the hypodermic injecting of the mother with the toxin-complex active in the infant.

In snuffles, rhinitis, bronchitis, otitis-media, pneumonia, etc., of the nursing child, I grind thoroughly the discharged mucus from the nose (say from 5 to 10 drops of mucus with ½ ounce of sugar of milk). I give the mother 20 grains of this every 15 minutes for 8 doses on two consecutive days; there is but little or no systemic disturbance in the mother, but the child will show marked improvement within 48 hours after the treatment is begun and will usually make a rapid recovery.

I find that in ophthalmia neonatorum if Duncan's autotherapeutic treatment of the mother is employed, it will not only cure the mother quickly but will passively immunize the child by its taking the antitoxins to its own toxins developed in the mother and passing to the child with its mother's milk.

Dr. Duncan's method of autotherapy is revolutionizing our ideas of medicine and is but the beginning of a new era of medical thought.

Pottstown, Pa.

A. C. SHUTE, M.D.

CONSTRUCTIVE REFORM

For the Practical Benefit of the General Practitioner

Camphor, a Re-Credited Drug.

AT ONE TIME used for a host of diverse conditions, camphor fell somewhat into discredit upon the incidence of more exact therapeutic technic. Nevertheless its empiric use was followed by so many favorable results that its re-investigation was undertaken. It is again a prominent remedy, both the natural and synthetic camphor being available. German authorities declare the synthetic product the more toxic; therefore the natural camphor should be preferred for internal administration.

Toxicology.

In excessive doses camphor produces dimness of vision, languor, cerebral disturbances, depression and finally violent delirium and convulsions. The higher areas are overstimulated and the toxic action is not due to irritation of the cord. Death is by paralysis of the cerebral cortex.

Pharmacology.

Camphor is rapidly toxic to many of the lower forms of life but is not classed, by itself, as a potent antiseptic. It is rubefacient externally and carminative internally.

The respiratory center is directly stimulated, as is the central nervous system as a whole to a greater or less degree.

The normal circulatory system is irregularly affected and seldom to any marked degree; but in pathologic conditions the drug admittedly has effects best considered under its therapeutics. But certain experimental data regarding camphor are just what is wanted regarding many other drugs, and the data is here given.

A rabbit deeply under the influence of chloral may be awakened and restored to activity by a subcutaneous injection of camphorated oil. Even when anesthesia is profound the respiratory rate is increased and the reflexes return from these injections.

A cat's heart when perfused and showing fibrillation is restored by the addition of a little camphor to the perfusion fluid. Rapid heart action is slowed, and sometimes there is an increase in force.

These experiments show camphor to be scientifically indicated in cases of respiratory and cardiac depression due to drugs of the chloral

group and the action of some fevers, especially in cardiac fibrillation.

Therapeutics.

Cardiac weakness in many conditions is well met with camphor, which may be given in the form of Curschmann's solution, made as follows: Two parts of camphor are dissolved in three parts of sulphuric ether, and seven parts of olive oil added. The dose is 10 to 15 minims every four hours for an adult; twice this in emergency. In severe heart involvement, as in pneumonia, 5 to 20 minims of a 20 per cent. solution in olive oil may be deeply injected under the skin. It may be given frequently and over long periods. In the bronchopneumonia of children, when a heart stimulant is needed, inject camphorated oil in 10 per cent. solution, giving 10 grains of camphor in twenty-four hours and never exceeding 20 grains.

Monobromated camphor, in 5-grain pills, is useful in the nervous form of epidemic influenza, lumbago, chorea and *petit mal*, as well as in irritated sexual states.

Camphor water is a mild carminative and expectorant, but is chiefly useful in eye washes. A strong spirit of camphor known as Rubini's essence is diaphoretic and has a merited reputation in the early stages of coryza and "colds."

Spirit of camphor is effective in choleraic diarrhea with collapse, as well as in minor gastroenteric affections.

These indications for camphor are upon a scientific basis; but it is used empirically in many other conditions, such as hysteria, nervous headache, asthma, bronchitis, erysipelas, whooping cough and nervous vomiting, and often with success.

The external uses are well known and do not need discussion, especially since the drug is used in a host of combinations with other agents.

Discriminate.

Don't bring camphor into discredit again by using it as a cure-all; but discriminate, and use it in the well-worked out indications indicated in this article, and you will find it a most useful agent. Remember that children do not tolerate it any too well.

Therapeutics by the Back Gate.

NATIVE MEDICINES by the thousands have knocked at the back gate of medicine, and a few of them have proven of value; but most of them have simply cluttered medical literature, to its infinite confusion. Nowadays most of our remedies come in by the front door of experimental therapeutics. Yet there is a strange belief, shared even by many physicians, that some greasy and untutored savage has "a reason" for the faith that is in him regarding the native herbs and weeds he uses in his rude practice. In this country the Indian doctor is quoted far and wide as wise in herb lore.

Just to show what a flimsy claim this is we have hunted through literature for the prominent Indian remedies of today and found out what they are botanically. The following data dedicated to the uses of the patent medicine man may be interesting to the trained physician as illustrative of what native medicine is capable of doing.

Indian Medicines.

The Apache Indians have a "sacred yellow pollen" which cures everything. It is the pollen of *Scirpus lacustris*, a form of bullrush. It is inert and is somewhat like lycopodium but not so inflammable. Several forms of *Opuntia*, a species of cactus, is a sure remedy for sore eyes. It contains a mucilage which does the same thing for an inflamed eye as does a flaxseed. *Euphorbia prostrata* is rationally used by several Southwest tribes to induce vomiting and purging, which it does very effectively, although highly irritating and utterly unfitted for safe medicinal use. *Clematis drumondii*, a flowering vine which in improved form is found in our gardens, is similarly used. It contains an acrid principle apt to induce chronic gastroenteritis. *Chrysothamnus greenii* is used in bringing out the rash of measles and other exanthems and for pains in the chest. Its hot infusion is aromatic and has the properties of any hot tea made from an aromatic bitter—the hot drink does the work. *Rumex hymenosepalus*, a form of dock with astringent properties, is a "sure cure for consumption." When it fails, *Ephedra viridis*, a useless bush, is the next try-out, and sugar is added to its decoction when procurable.

Diarrhea medicines are many, chief among which may be mentioned *Eriogonum alatum*, a sorrelwort with albuminous seeds. It is not a bad make-shift medicine for the wilds. *Covillea tridentata*, a weed which grows in wet places in the desert, is made into a sort of poultice, and is

a famous Indian cure for rheumatism. It is as active as slippery elm. *Fouquieria splendens*, the source of Ocatilla wax for candles, is applied hot for all sorts of wounds and sores. It is a protective of the same value as beeswax. *Pereskia wrightii* is another application to sores and wounds. It contains pipitzochoic acid, which dyes a yellow color but has no medicinal value. Various species of *Cereus* are applied to open wounds and sores. *Cereus grandiflora* is the cactus used as a heart remedy in Homeopathic and Eclectic practice. All forms of *Cereus* are rich in mucilage and coat over a wound, acting as a protective covering, but one proliferating bacteria rapidly.

The sovereign headache cure among the Indians is *Hedeoma reverchino*, a mint resembling pennyroyal. It is applied locally and has slight analgesic properties. All forms of itching are cured by *Phyllanthus emblica*, which yields an astringent berry used in place of galls in making ink. It contains tannin. But why mention more of their drugs? For some reason the Indian hesitates to use as remedies the plants he knows will kill animals; perhaps his reasons are wise ones. So he sticks to plants that do about nothing.

Don't Laugh at the Indian.

But the laugh is on the white man rather than the Indian, for it is surprising how many white people are using these same inert plants as medicines—getting their therapeutics by the back gate. But white men in the East are behind the date in Indian therapeutics and are using the herbs the Indians, in their wisdom, have rejected long ago as disapproved by their Council on Pharmacy and Chemistry. Probably the New and Official American Indian Pharmacopeia will be ambling along to the East through some of our up-to-date proprietary remedy makers, and this long-suffering editor will be receiving scientific (!) articles about them. Who knows? Stranger things have happened.

The Serious Side.

We are friends to botanic medication and want to see our indigenous plant remedies credited for all they will really do. But let this credit come scientifically, through the front door. We have too long taken our plant drugs in through the back gate. Constructive reform demands a change in our tactics.

<p><i>While we, as physicians, desire to be scientific students and practitioners of medicine, and that is the primary purpose for which this journal is published;</i></p>	<h2><u>THE BUSINESS SIDE</u></h2> <p><i>of Medical Practice</i></p>	<p><i>yet, for the welfare of our dependent ones and our standing in the community, we must secure a fair compensation for the services we render our fellowmen.</i></p>
<p>"The laborer is worthy of his hire."</p>		

The Business Need for Ethical Publicity.

GROUP ADVERTISING of the profession in any community is a possibility we see in the direction of ethical publicity which would avoid personal advertising on the part of the individual physician. It could be accomplished through a Physicians' Exchange.

Over-production and wasteful competition forces advertising campaigns to increase the consumption of up-to-standard type, reduce production of "seconds" or "culls," stimulate demand on the part of the public, and establish the dominance of certain brands. The California Fruit Growers' Exchange, the raisin, bean and walnut exchanges of the same State, the selling agencies for perishable merchandise, such as cut flowers, and coöperative advertising of sanitary laundries, are among the instances of group advertising that helps the whole organized trade that is prepared to market standardized goods, gives a service of worth to the public, and aids every individual buyer and seller involved.

A man with a ten-acre orange grove in California or Florida can't afford to advertise on his own account in Boston, Philadelphia, Cleveland and Omaha; but he can afford two cents per box to advertise, along with other growers in his Association and through the Exchange, that his and their oranges are of standard and reliable pack, bearing the brand of his Association and the brand and guarantee of the Exchange. Such advertising as this enormously increases business, giving both buyer and seller entire satisfaction.

The Physicians' Exchange.

A reliable brand of medical service is an important matter to the people; and they have considerable trouble finding out about it. But they have no trouble learning of the quack, the irregular and incompetent, the patent medicine cure-alls, and the whole class of pseudo-scientific preyers upon the sick. The reputable and capable doctor won't advertise; and, as a mere business proposition aside from ethics, he can't afford to advertise effectively, using enough space to command attention. He has no goods to sell, and he can't by himself push a general propaganda by

means of paid-for advertising. But a Physicians' Exchange could do so.

A General Propaganda.

Suppose a display advertisement appeared in the daily newspapers of your town twice a week, telling the public the things the profession wants to tell everybody, don't you think it would wake up your town to the fact there was a hustling medical profession there ready to give better service than the quack, the irregular or the patent medicine? Of course it would. It would give no names of individual doctors at all; but the Physicians' Exchange, composed of the ethical and honorable physicians of real attainment, would boost for business for the whole membership, and would have an office with a telephone operator there to give reliable information to all calling personally or on the wire. She would not "knock" anybody, or be allowed to favor any individual, but she would be a clearing house for professional information.

Exchange Doctors must be standardized, as it were; or, rather, up to the standard of professional attainment. The Exchange would stand back of their grading, and to possess a certificate of membership in the Exchange would have a tangible value. The Exchange would guarantee ethical and honest service from its members, or would discipline them for lapses. If a member wanted to retain his affiliation, he would be compelled to give his patients a square deal, as well as his fellows in the profession.

How It Would Work.

Mrs. Brown would call up Dr. Thompson and fail to get him. Then she would call the Physicians' Exchange, asking the operator to locate Dr. Thompson and deliver a message to him. Exchange would know that Dr. Thompson was at his club; but he would be at once notified that Mrs. Brown had urgent need of him.

Mr. Jones arrived in town a stranger and in urgent need of attention to his eyes. The Physicians' Exchange would give him the names and addresses of the three capable eye specialists in town and would locate for him the one selected.

or an alternate selection in case the first could not be found.

These are but two of many forms of possible service to the public which would be rendered by the Exchange, all of which would be along the line of directing business into the hands of the ethical and capable men, just as a telephone exchange directs business to its subscribers and without playing favorites.

The Exchange would act as a collecting and purchasing agency, saving for its members probably as much as would pay the expenses of the Exchange office.

Publicity.

Suppose a great incidence of malaria occurred in your town. The Exchange would at once run a three-column display advertisement in the papers, something like this:

A Public Message on Malaria.

By THE PHYSICIANS' EXCHANGE.

An unusually large number of cases of malaria have been recently reported to the City Board of Health, and physicians generally are finding two types of cases, one light, and the other hematuric (causing blood in the urine).

Diagnosis is of the utmost importance, and it can be accurately accomplished only by a careful laboratory examination of a few drops of the patient's blood procured by a painless pin-prick. Come to our office and laboratory for a test.

Then, with an accurate diagnosis, you will go to the physician you select from the directory, or to the one you customarily employ. The operator at the Exchange will find if he is in and make an engagement for consultation.

Don't Neglect Malaria.

Not only are you incapacitated yourself, but you infect mosquitoes (which carry the malarial organism) and they, in turn, infect the rest of your family and the neighbors. Malaria reduces efficiency and lays the foundation for other ailments. Don't trifle with it, but drop into the Physicians' Exchange and get a free leaflet of information upon how to prevent and suppress malaria.

Don't Take Patent Medicine

or patronize the saloon. Neither whiskey nor patent medicine will help you, and they may do harm. Avoid self-prescribing. Merely taking quinine home from the drug store to "cure" your malaria is just as rational as taking artist's material when you can't paint. Send for your physician. If you have no regular family physician, call up our office for information, which will be courteously given to you free of charge; and, if you wish, we will procure a capable physician living near to you and send him to your home. He will charge the usual rates, and we hold ourselves responsible for his being a capable and courteous practitioner. None other are listed at this office. Every attention given to your preferences.

If You Want to Know

something pertaining to health, sanitation or sickness, drop in and consult our popular free library. Stay and read as long as you wish. The attendant will give you impartial information if you want to know whom to consult for further skilled help or advice. STEP IN NOW AND BOOK UP ON MALARIA.

THE PHYSICIANS' EXCHANGE,
Suite 1, Commercial Bank Building,
Opposite City Hall.

Never Closed

Bell Phones.

That sort of publicity would be systematically kept up, and paid for by the membership. Dues would range somewhat, according to population of your town and the extent of service rendered; but each member would probably not have to

pay over five to ten dollars a month for a service that should return many fold. It pays to advertise.

We would be glad to receive comment upon this plan to boost business and serve the public.

Physicians' Telephone Exchange.

The Physicians' and Surgeons' Telephone Exchange is now in active operation, and is rendering a unique service to its members and their patients. It is urged, however, that the members should co-operate by sending out to patients their notices of membership, supplied by the Exchange, in order that they may thereby be insured against lost calls, and may also insure the best and quickest service for their patients in case of emergency. The Exchange number is Main 1624, and the office is open night and day.—*Denver Medical Bulletin.*

Might Fall Down in Details.

Your letter and advanced proof came to hand yesterday and I immediately went over them carefully.

In reply to your request will say that the plan, if carried out as outlined and doubtless intended, would be of advantage to all.

But will it be possible to find any woman or girl with enough executive ability conjoined with sufficient honesty to be absolutely impartial to attend to the central exchange?

If she can be found, then the Physicians' Exchange is a foregone success. Otherwise, the plan is likely of much abuse and some of the members of the Exchange will not receive what they pay for.

As to the advertising feature of it, as proposed it looks good to me although the details are not given clearly.

But I never could understand why a physician ought to put his light under a bushel. And I have noticed that those who howl *ethics* the loudest in the medical societies are those who get the most and biggest pages of unpaid-for advertising.

Illustrative of the extremes, those same howlers will go to, I cite the case of a prominent physician in this State who inserted his professional card in a local newspaper and followed his name thereon by the words "Nervous Diseases." Following the appearance of this bit of ethical heresy, he was summoned by the august tribunal of the State Society and all but expelled from membership.

Yet the very same man who prosecuted his senior confrère with so much fanatical zeal was the subject of a column write-up in the daily press a day or two afterwards. Medical phariseism, I should say.

L. C. McELWEE, M.D.

1221 N. Grand Ave., St. Louis, Mo.

Send \$3.00 for four years' subscription
Saves a dollar. So much more convenient.

Publicity Needed.

If there is anything the matter with the medical profession it is attributable to inadequate publicity.

Nowadays everybody but the doctor advertises in the advertising columns—bankers, churches, charity, everything.

The idea of publicity set forth in the very interesting article suggesting a physicians' exchange is excellent. The only question is, whether such a plan should be attempted by any body of physicians other than the County Medical Society. The County Society has some standing. If it sees fit to support the idea, don't you think the thing would have a more dignified character than it would if conducted as a separate physicians' exchange? [Yes.—EDITOR.]

Our great weakness as a profession is that we have remained taciturn for years back, while our traducers and enemies have labored industriously to belittle us in the eyes of the public. In other words, we have closed our eyes to the importance of being heard, and as a natural result the public now fails to discriminate, for instance, between the "rub doctor" or the "optometrist" and the skilled physician—at least a considerable share of the public. As a result, too, our legislators, men, for the most part, of indifferent educational qualification cannot see why the medical profession should be such a "dog in the manger," and so we have all sorts of deplorable laws admitting uneducated persons to the practice of medicine under some new trade name.

Your idea is the best of evidence that the profession is awakening to the realization of the weakness of this policy of high-souled silence. The mere discussion of the proposition is bound to do good.

It may be too late to undo the harm already done. We of the ranks have come to a pretty perilous position in the world. That one-time institution, the family doctor, hardly knows whether a given family is his over night in these bustling times. Some phenomenal new kind of "doctor" round the corner may be all the rage tomorrow.

We need publicity, and all we can get. The smug mask of complacency has been tried long enough. It has failed to save our face. Now let us try a little vulgar printer's ink, and see what that will do for the sick profession.

WM. BRADY, M.D.

Elmira, N. Y.

In Line of Progress but Difficult to Manage.

Points made in the editorial relating to the business need for ethical publicity indicate a new line of cleavage and one representing progress. Nearly all these points, however, may require extended elaboration on the part of willing hands.

A statement in the daily newspapers of a town telling the public things that the profession wants to tell and published at regular intervals would cultivate the sort of thought on the part of the public which would lead away from the advertising charlatans.

A physicians' exchange, assuming that it will have the sympathy of lay press editors, would present a feature in keeping with the spirit of a progressive town. Difficulty would be encountered, however, and a very great difficulty, in managing physicians who have been licensed by the State, yet who are known by their colleagues to be really badly equipped. Then, again, there would be young doctors, well equipped, but not as yet sufficiently experienced to make them quite trustworthy in matters of judgment. Next to spirituality, the capacity for good judgment is a most important acquisition of the human mind—perhaps.

The physicians' exchange, acting as a collecting and purchasing agency, would unquestionably, if well managed, prove to be of benefit, not only for the profession, but for the public. Such an exchange furnishing messages for the lay press on subjects of direct interest could be made newsworthy to these lay editors, yet remaining impersonal, would instruct the public without calling out opposition, as a rule.

At the present time there is a great deal of publicity in matters medical that is paid for and published by an undesirable element of the community. Publicity of the right sort, to the same degree, emanating from a physicians' exchange, would mark a distinct change in progress.

ROBERT T. MORRIS, M.D.

616 Madison Ave., New York City.

Would Smack of Commercialism.

Replying to yours of the 18th inst. regarding the advance proof, "The Business Need of Ethical Publicity," it gives me great pleasure to express my views and I wish to thank you for the courtesy. The consideration of ethics in our profession is timely and important.

The unfortunate selfishness prevailing among many in our profession is the sole responsibility for unethical acts. It seems there is no other way to remedy this other than a continual reminder of our ethical duty and "by our own discreet, well-ordered life alone reprove the erring."

I wish every physician throughout our country would read the great life of Leopold Auenbrugger and Jean Nicolos Corvisart; through their lives we find the most impressive testimony for medical ethics. I do not believe such an exchange as the article suggests would be of advantage in promoting the dignified standard necessary to the true scientific progression of medicine. We will not have in our profession men, in the true sense of the word, worthy of its title, until it is abso-

lutely understood that one who enters the profession of medicine makes a financial sacrifice and to pursue the work as conscientious duty demands; that it takes all time from other investigations, thereby confining his time and life to the one thought, humanity. There is no such another profession; ours stands pre-eminently above all others. It has but life to deal with.

I am one of those who contend that no form of commercialism has a place in the profession of medicine, and the quicker we adopt the motto "for humanity alone" the quicker humanity will get the protection that they should have. The exchange has the smack of commercialism, a business-like organization, and while innocent in its purport it gives the quack a pseudo excuse for his diabolical advertisement and, too, through the establishment of it we would acknowledge, to some degree at least, that we have been driven to it through the activity of the quack and patent medicine advertisements, their unfair dealings and unethical procedures; therefore, your plan would suggest our having originated it from them. My reasons expressed are but a synopsis of what may be said. I consider it sufficient, however, to give you an idea of my views.

With kindest wishes and a special appreciation for your efforts along these lines,

COWLEY S. PETTUS, M.D.

Bankers' Trust Building, Little Rock, Ark.

Brief Views.

Dr. G. L. Barger, Raymond, Ill.—In towns large enough to afford it, I believe the investment good as to business; and as to the moral influence, I believe it will return manifold what it will cost.

Dr. W. H. Hopkins, Norwood, O.—Your idea is all right; it rings good and true; it will throw all the work into the hands of a few, and the others can get something else to do. I have lost all hope of doctors treating each other honorably.

Dr. E. P. S. Miller, 2001 W. Lake St., Chicago, Ill.—Don't do it. The telephone operator might make a mistake and Dr. A. would say she favored Dr. B. on a certain "dark and stormy night." The profession could advertise collectively by an educational program, but perhaps it would be better done by the city or county medical society. Doctors are often more "touchy" than musicians, especially the half-baked musicians.

NEXT MONTH.

Quite a number of equally interesting letters, both for and against, are in hand for publication next month. Look for them; they will interest you. We merely aim to "start something" and seem to have succeeded. It would, indeed, require wide discussion to determine the merits and demerits of a "Physicians' Exchange." If any such plan has been tried, we hope readers will send us reports on results.—EDITOR.

Some Practical Points in Business Ethics.

By THE MEDICAL PHILOSOPHER.

A PRACTITIONER from a small western county seat had dinner with me the other day. The conversation turned to some of his obstetrical experiences, and I happened to ask if he didn't find the new pituitary preparations a wonderful help in his labor cases. I was surprised to learn that he did not view them with much favor, for said he, "They cost me too much money." This was more than I could understand, for an ampule costs about a quarter, or less, so I pressed him for an explanation. "Oh," said my friend, "there's less chance of complications and, you know a forceps case means an extra ten dollars."

I have not got over my surprise yet. Apparently it was not that this practitioner did not know of the possibilities of this comparatively new remedy; he felt that it might make his work too simple and his fees less. How absolutely wrong this position is! Might not the medical profession just as well antagonize the present-day hygienic control which has stamped out typhoid in most places and made an epidemic of it in this country a disgrace? Has it not virtually cut off a large source of income to many doctors? Or, looking at it from this remarkable standpoint, ought we not to become anti-vaccinationists, for the more disease there is, the better is the doctor likely to fare? The medical profession is peculiarly placed. Progress is continually reducing the doctor's opportunities for remunerative work, yet he studies and works the harder to find out how much more of the work to which he has become accustomed can be obviated by better prophylaxis and care.

Incidentally I have heard frequently that this very method in obstetrical practice is making splendid "advertising" (of the legitimate and ethical variety, of course) for those doctors who use it carefully and with success. The mothers and the grandmothers, especially, tell "how easily Mary came through it this time; all because the doctor injected some medicine which seemed to bring the baby like magic"—it's so, too.

Business and the Laboratory.

QUITE RECENTLY I met a "laboratory crank," as he somewhat proudly told me that he was sometimes called. We had a splendid conversation, and one experience that he told seems worth reproducing for the real stimulus that it contains.

I'll try to do it as nearly as possible in his own words:

When I hung up my shingle, a number of years ago, I decided that the safest thing for me to do was to be "different." Most of the doctors in my town were doing general practice and, seemingly, none too well, either. I had had an opportunity, when I was in college, to earn a little money on the side by doing laboratory work and gradually had accumulated a fairly good outfit of tools. So I set up as a "specialist" at the start, and occasionally found a rare chance to turn an honest dollar by staining a smear or making a quantitative glucose for some of the other doctors; but such dollars were mighty few and far between.

After a while—I hate to tell you how long—a patient consulted me. It was almost a novel sensation; but before many minutes I found out that I was going to have a fine chance to ring in the laboratory. The woman had a chronic gastric affection, and a very long story about her numerous other ills. I learned that she had been to at least seven other doctors in town, and almost as many more outside. After taking the history and making a fairly thorough physical examination, I remarked that as her troubles seemed to be centered in the stomach, it might be well to give her a test meal and examine the stomach contents to see just how well, or how badly, the stomach was doing its work. I casually remarked that the cost of such a test would be five dollars, and hastened to assure her that the advantages to be gained from it were well worth the money.

It seemed that this "extra," as she called it, scared her more than the thought of the stomach tube, which, by the way, I had to explain, as she was curious to know how I was going to recover the breakfast before testing it. She left the office without making an appointment, saying she would "think it over." I heard nothing more for several weeks. Then, through a coincidence, I met a relative and asked what had happened to Mrs. X. I learned that she had just had another of her "spells"—toxic crises, as near as I could guess—and had just about made up her mind to go to Chicago and consult a physician there, naming him. Now, I have a great deal of respect for his knowledge of gastro-enterology; but I very emphatically informed that relative that the lady was making a great mistake. I proceeded to add logic to my assertion. I assured

him that one of the first things that he would demand would be a report on the examination of a test meal, and it would cost her just as much, or more, for the very same thing for which she had refused to pay me five dollars. In addition there would be twenty-five dollars, or thereabouts, for the consultation, and as much more for car fare and other incidentals. I well remember that I made good use of that accidental meeting, and before I was through, the man was convinced. He left my office and made straight for the obstreperous patient's home. He was successful and she was converted. I had a visit with her by 'phone, and next morning she had her test—tube went down like a swallow of water—and we spent half an hour going over the various findings together in my little laboratory.

Well, sir; do you know I cured that woman? She left that office, after the first test (She had two others and paid five dollars extra for each one, mind you) she went from my place convinced that I knew what I was about; that the examination of the gastric contents was a wonderful procedure (It is strange how great an impression is made by the reddening of phenolphthalein, and vice versa) and that I had diagnosed her case correctly. The psychic value of that experience may have had a lot to do with her cure, for in those days I knew mighty little about practical therapeutics. Anyhow, she got well, and it took a long time for the novelty of the experience to wear off, for that woman told dozens of people just what I had done and flavored it by adding what she had just been about to do herself.

So much for the doctor's story. There's no denying it, the laboratory is a great adjunct to practice—psychologically and practically.

Managing Consultations.

I am quite sure that we send too many cases to the consultants, especially where medical diagnosis and treatment is required. We should make every difficult case an opportunity of extending our own fund of information, and instead of losing our prospective fees be prepared to earn them by spending a little extra money on medical books and journals, not to mention a couple of weeks or more each year at some medical center.

I had an experience some years ago which taught me a lesson about sending patients to surgeons and allowing them to get *all* the money. Here it is: A little girl had a bad gastric ulcer. It bled frequently and left her in bad shape. The best—I use the word "best" advisedly—medical care had been given her; and surely a man in the

active practice of medicine is just as capable of carrying out the suggestions of the leading gastro-enterologists as the internes in a city hospital, even though the information be secured from a library. She had a serious hemorrhage, which indicated an operation I did not feel competent to do. I took the girl and her parents to the city, and a gastro-enterostomy was done. She got better. The surgeon got five hundred dollars, I think it was, and the parents had no money left for poor me. They had had to borrow a part of the surgeon's fee and hospital expenses, while my months of service, and even my car-fare to the city, remained unpaid. After many years it is still unpaid.

(To be continued.)

Let the Doctor Buck Up and Forget Psychology.

Dr. Morris' running comment upon Dr. Zaring's "Psychology of Patronage" is well put and illuminating. It always has seemed to me that there is altogether too much whining in print over the doctor's lack of adequate remuneration and appreciation; too much for the profession's good reputation with the lay public. Of course, there is a strictly "business" side to medicine, just as there is to every other vocation that earns money; but "business" is not the whole of it, nor even its chief element. Only quackery runs the profession "for the money that can be made out of it"; that is the line of demarcation between reputable practice and charlatanry.

Fundamentally, "the relief of suffering and the cure of disease," is humanitarian work, and that phase of it cannot be ignored in practice, hidden behind greed of gain without calling down public contempt upon the profession, a fact which holds the quacks down to so small a minority. "You can fool *some* of the people all the time," a fact which gives charlatanry its full measure of support. And the doctor who devotes his mental powers to study of the "business" arts beyond a fair degree of industry in collection of such fees as his patrons can pay without distress, though he may be sharper enough to win out at the game, steps down into the ranks of quackdom and does all in his power to discredit his profession in the public estimation. There is a wide gap between, "The workman is worthy his hire" and "Business is business."

I am an old doctor (Ann Arbor: '78), laid on the shelf by the infirmities of age, but I read the journals still and try to keep up with the procession. I never have had any patience with the men who chronically whine for lack of remuneration and appreciation by the lay public. If experience proves them to be misfits, let them get out and into some other business; they are a

burden upon the profession's standing in the community. If they can't get out, then let them face the situation like full sized men, adapt themselves to the necessities as best they may, and smile. That was my own experience. I regarded myself as a misfit, but I did succeed in making a living and in holding the respect of the brethren—enough, at all events, for them to elect me to the presidency of the Nebraska State Medical Association in 1900. I never got rich, except in my two sons, who are the stay and pride of my age.

There is food for thought in Dr. Remy's "The Business Problems of Medical Charity," but there is a psychological obstacle in the way of its entire success in practice; an obstacle, which, as it appears to me, will be difficult of removal. The indigent do not feel that gratuitous medical service is charity, alms. Right or wrong, they feel that what they receive is their due on the score of humanity (of course, I refer to them as a body), and the moral sense of the community justifies the feeling. Try it some time. Refuse to go to an urgent case on the ground of "no pay."

I knew a doctor in a smallish eastern city who adopted the rule of refusing emergency obstetric cases unless "you are prepared to pay for the service when the case is completed." He was an able doctor; delightful address and conscientious in his work, but at the end of five years had to pull out to another location for lack of business.

In his new location he abandoned his rigorous rule and won out. There is another objection to the suggested plan. Every one, and none more so than the poor, insists upon having the "best" doctor, and rebels against having his choice dictated to him. In a critical case, the patient's mental rebellion may easily be the factor determining a fatal issue. Nevertheless, Dr. Remy's suggestions are worthy of consideration. In time something practical may be evolved from them.

Ainsworth, Neb. WM. B. ELY, M.D.

The above is what we have long felt like saying, since it represents our personal view very accurately indeed. But an editor makes a mistake in promoting too much his individual views; he is a servant to the fellows in the profession, and it is his duty to represent THEM, not himself. But, to be personal for once, long association in medical society work, from private to president, has impressed us with the view that the doctors who "face the situation like full sized men, adapt themselves to the necessities as best they may, and smile," as Dr. Ely says, are the ones who attain to true professional success. Don't forget to smile.—EDITOR.

You Should Read—

"Cancer of the Rectum," by Charles J. Drucek—page 44 of this issue. It gives some very necessary points for the physician to keep in mind when interpreting almost any group of rectal symptoms. You will find this a valuable article.

Best Current Medical Thought

Surgical Scissors.

As wielded by Douglas H. Stewart, M.D.,
F.A.O.S.

The scissors of an editorial office are bright, keen, polished and practical. Let us hope this space may imitate them. Surgical scissors, from a literary standpoint, are instruments for picking brains. Originality is their vice and intelligent plagiarism their virtue. Such plagiarism is deliberate and intentional. Its sources will be found at the head of each article. May its quality be helpful!

Burns, Minor Surgery and Office Surgery.

Wm. Francis Campbell, *Med. Times* Feb., 1916—*"The term minor surgery is a very indefinite one, as a so-called minor surgical procedure may become major, in one second, if the wrong structure is unexpectedly cut."* Leave the aseptic technique to the hospital operating room, as it cannot be carried out with one pair of hands. It requires at least two, and three pairs are better. As confirming this it may be mentioned that the present war has taught us that under unfavorable conditions the antiseptic technique easily gives the better results. This is true of the battlefield, the factory and the ordinary physician's office. Let the man who is operating in patients' houses become expert with a good antiseptic technique, and there will be small fear of his failure; but he who attempts to obtain and maintain asepsis, without the services of a carefully trained staff of assistants, all working in a properly prepared environment, may not often secure what he seeks; but anxiety and mental unrest will find him and mark him for their own.

Immediate Perineorrhaphy.

Alfred Baker Spalding, *Surg. Gyn. and Obs.*, Feb., 1916—*"The time to cure prolapse is not when the uterus has prolapsed but when the woman begins her first pregnancy. When labor ends it is wise to agree with Tait and to remember that laceration is the almost inevitable result of the first labor."* Confirmatory of this is the common hospital experience that the patients who today show the most unfortunate sequelæ to pelvic-floor lacerations, are those whose attendants decided that there was barely a scratch, just a nerve

relaxation, so slight that it might be considered possibly rather an advantage in succeeding pregnancies; when the fact is, that it would be infinitely better to sew up every woman whether it were necessary or not. But such a procedure would be bad indeed for the gynecological specialist.

Two steps are essential in the suggested operation: First, packing the vagina; second, search for and location of the levator ani muscles. After the latter are found and stitched securely together, any good surgical carpenter might easily complete the work. In private practice, if the pack be antiseptic, the operation should go well, but if a futile attempt at asepsis be made then sepsis will necessitate the removal of a good many stitches. The delusion, held by many, that it is possible to prevent pelvic floor laceration has added more misery to the patient than credit to the accoucheur.

Non-Fatal Fracture of the Axis.

Fred. W. O'Brien, *Boston Med. Surg. Journal*, Jan. 20 1916—FRACTURE OF VERTEBRÆ WITHOUT CORD SYMPTOMS, Percy Willard Roberts, *Surg. Gyn. Obs.*, February, 1916—Absence of cord symptoms is not rare, but it is overlooked until deformity and weakness compel attention to the seat of the trouble. Here is a possible source for hypothetical malpractice suits. The first man "upon the job" is at such a tremendous disadvantage when compared with his successors who view the case after a lapse of months or years. His defense would appear to be that even the ordinary X-ray plant is not dependable here, but that a machine of high penetration is requisite for clear demonstration. Later, the rounded, deformed spinal curve becomes evident and diagnosis becomes easy. Absence of cord symptoms, after spinal injury, does not exclude fracture, but pain or pressure on moving the head or on bending the spine should be cause enough for a suspicion which becomes grave if weakness or dizziness are volunteered by the patient's complaints.

Continuous Electric Light in Experimental Arthritis.

W. E. Simmonds and J. J. Moore, *Archives Internal Medicine*, January, 1916—RADIANT LIGHT AND HEAT IN THERAPEUTICS, editorial *Am. Journal Electro-Therap. and Radiology*, Jan., 1916—Suppose a patient has an attack of arthritis immediately after labor, or after a major operation. That patient's condition is deplorable and ordinary therapeutics slow in affording relief. But the writers found that in their tests with

rabbits, arthritis was prevented or mitigated. The incandescent light is not a bactericide, yet long exposure of infected wounds or suppurating surfaces to its influence produces the effects of heat and hyperemia, and these forces will arrest germ growth, in time.

Suspend a (16 to 50 c. p.) lamp from the ceiling by a string. Expose a painful joint to its rays from 7 A. M. to 7 P. M. From 7 P. M. to 7 A. M. use any proper bandaging and the whole procedure will be found a most valuable and especially of the weather-sensitive variety. The same holds true of wounds, fractures and sprains, analgesic adjuvant to any plan of treatment. The penetration of tissues obtained by long exposures to heat is incredible. Moeller, many years ago made experiments to prove that the heat rays easily penetrated the bones, and this whether ultra-violet rays were present or absent. But when the heat rays were filtered off and ultra-violet rays (alone) were applied no central disturbance was observable. Splints, plaster-of-paris and other dressings need not necessarily be removed.

For the benefit of the few who have never employed an electric incandescent lamp as a pain reliever, it may be well to add that the natural tendency is always to place the lamp and its reflector too close to the patient. If the heat is distinctly felt, that is sufficient. More than this is uncomfortable, dangerous (fire) and adds nothing to efficiency; which last depends on duration, but not on intensity, of exposure.

Minor Surgical Gynecology.

C. E. Ruth, M.D., F.A.C.S., *Am. Journal of Obstets.*, Feb., 1916—Immediate repair of the cervix fails because the lessening bulk of its soft edematous tissues loosens the loop of any non-elastic suture material, which may form the stitches. Edema of the labia in perineal repair should be prevented by making numerous punctures with a cutting needle so that all swelling shall be prevented by ready escape of serum. Preliminary curettage serves no useful purpose. In some cases gentle cervical dilatation, removal of secretions, and application of tinct. iodine to the entire uterine interior is good practice.

Vaccine and Serum Therapy.

Edwin Henry Schorer, B.S., M.D., Dr. P.H., page 97—"In some infections the bacteria remain localized and at the point of localization may become so surrounded by tissue and other cells as to be protected from the antibodies, which are not able to reach them because of increased viscosity of the blood, pressure on the blood and

lymph vessels, stagnation, anatomical conditions, and so on." This is commonly the cause of failure with stock vaccines in boils (furuncles, carbuncles). After a few such failures the practitioner exhibits the autogenous bacterins, and when these fail he condemns all serum therapy.

How easy it is to administer the juice of one lemon and two oranges with or without sugar and water! Mix these juices and administer them daily; then the viscosity of the blood will be decreased and the failures will be fewer. If in addition to the aforesaid, these juices be applied locally and abundantly to the lesion, many cases now reckoned failures will become brilliant successes and this without change in the bacterin, but just continuing its administration.

If one should ask any number of surgeons "Why should pus be evacuated?" he will obtain most curious answers, the sum and substance of which would be "Because it should," whereas it should not—not always. Only when it can be replaced by serum which contains large amounts of antibodies, while pus contains relatively few; when it lets out or frees the tissues of such bacteria as have been engulfed by the leucocytes and when it lets up heavy pressure and thereby relieves pain and acts upon the blood vessels as a man would who stepped off a garden hose upon which he had been standing. Access of serum containing antibodies is the great desideratum, from which the poor policy of opening a boil or abscess "too soon" may be understood. It seems as if nature built up a rampart before she fired her weapons. Hence the redness, heat and swelling are evidences of her defensive plans under cover of which she discharges her antibodies against her invaders. Each step is but a necessary preliminary to that discharge. Too early incision relieves hyperemia, but hyperemia is essential to insure access of serum to infected areas, and nature is obliged to replace that hyperemia before she can eject her invaders. The time thus lost means "time lost," exactly.

Stiff Joints.

At the February meeting of the German Orthopedic Society in Berlin, one of the most practical and interesting subjects discussed was the treatment of joints left stiff after the wounds themselves had healed. Professor Hoestmann, of Koenigsberg, maintained that he had achieved success, in eighty per cent. of bullet, shrapnel and other war wounds, by the use of hot air, massage and mechanical methods, including splints, etc.

If a stiff joint is exposed to such an incandescent lamp as mentioned in the previous section. If such an exposure is of a half hour,

or longer, duration and then if that joint is submitted to massage or passive motion, while still subjected to the light and its heat, many intractable cases will yield and rigidity will become motion. Heat, to be effective, must be either dry or wet; consequently submerging a part in water, maintained at as high a temperature as can be endured, and massaging that part while submerged, gives good results, especially if washing soda has been dissolved in the water. The strength may be guided by taste. When the soda can be distinctly tasted the strength will be exact enough. The relaxation obtained by long immersions is sometimes incredible. A hand, for instance, may be smeared with vaseline to prevent maceration and kept submerged in plain hot water for several days. Baths of a week's duration are not uncommon in certain hospitals (whole baths).

In dealing with stiffness, two things are always required, in massive amounts, viz., patience and judgment. The point is, that moist or damp heat is of relatively small value. To obtain capital results the extremes of wet and dry are best. Whether one or the other is selected, or one is used one day and alternated with the other the next day, are details which are governed by circumstances. Bandaging and including an electric heating pad in or upon the bandage, making a coil of rubber tubing and passing hot water through that, are hospital expedients, not free from danger and by no means "fool-proof."

Intra-abdominal Use of Oxygen.

Dr. G. Kirby Collier, Sonyea, N. Y., presented a paper in *Surgery, Gynecology and Obstetrics*, Oct., 1915, that appears so valuable it is here reproduced in full:

The use of oxygen intra-abdominally following surgical procedures was, we believe, first introduced in America by Dr. William Seaman Bainbridge, of New York. While attending the Clinical Congress of Surgeons of North America in New York City in November, 1912, it was my good fortune to see a number of abdominal operations performed by Dr. Bainbridge, in the greater number of which oxygen was used intra-abdominally.

We followed one of his patients to the ward, and noting the very rapid recovery from the anesthetic and the apparent absence of shock, we decided to try this procedure in a series of cases.

Its technique is most simple: The ordinary tank of oxygen with its wash-bottles, as is found in every operating room, a length of rubber tubing and glass tubing, are the only appliances necessary for the procedure. The rubber tubing is attached to the wash-bottle through which the oxygen passes, and a few feet from the wash-bottle a rubber coil, placed in a basin of hot water to

keep the oxygen at a temperature of 100 degrees F., or thereabouts, is attached. To the end of this coil it attached sterile glass tubing with the proper angulation to permit of introduction into the abdominal cavity and to prevent interference with the proper closure of the wound. Before the closure of the peritoneum is completed, this glass tube is introduced, being sewed tightly into the wound. Then the remaining layers of the abdominal wall are closed in the usual manner, the glass tube still remaining in position. During the entire time oxygen is allowed to pass in slowly. After the complete closure of the abdominal wound, the oxygen is continued until there is a very considerable distention of the abdomen, when the tube is gently removed, the small opening left quickly closing and not permitting of the escape of any of the oxygen. This procedure is very simple and requires no extra time, as the sterile glass tube to be introduced into the abdomen lies on the instrument table, and the connection is readily being made by one of the nurses while the surgeon closes the abdominal wound.

We have now used oxygen intra-abdominally in twenty-five laparotomies, and the results have been most favorable in all.

The lessening of shock, the absence of nausea and vomiting, and the early recovery from the anesthetic have been the most marked features of its use, and we have not in any case seen any untoward effects.

The absorption of the oxygen is quite rapid, and even though there might be some apparent embarrassment of the respiration due to overdistention of the abdomen, we have never felt that this was an element of fear, owing to the rapid absorption of the gas.

The distressing post-operative results, so often seen, have been eliminated in those cases in which oxygen has been used, and we believe there will be a more widespread use of this valuable adjunct of the surgeon.

Practical Therapeutics.

Laryngeal Tuberculosis.

Joseph B. Greene, M.A., M.D., Asheville, N. C., writing in *Southern Medical Journal*, November, 1915, says laryngeal lesions are frequently not discovered in the early stages by general practitioners. Nearly half of the tuberculous develop laryngeal involvement, and then the prognosis is very grave. But Dr. Greene believes many early cases can be cured and some developed ones arrested.

Local traumatism is a frequent cause; so surgical work in the mouth, nose and throat should be carefully considered in a tuberculous patient, and deferred if possible. Chronic catarrhal pharyngitis and laryngitis should have careful attention.

Infection of the sinuses should have immediate attention. Alcohol and tobacco should be inter-

dicted. The general treatment should be along approved lines. An atmosphere relatively free from dust and smoke is important. Rest of the larynx is imperative. Twenty to 75 per cent. solutions of lactic acid should be applied locally, beginning with the weaker solution and only in the ulcerative form. Two to 10 per cent. formalin in water or glycerin may be applied in either the infiltrated or ulcerative stage. Apply cocaine spray before using either of these, and avoid any excess of solutions.

Orthoform lozenges allays the pain, as does also the injection of 75 per cent. alcohol solution, with 1 per cent. novocain, into the internal laryngeal nerve. The cautery should be used in selected cases, and the removal of the epiglottis helps some cases.

Bromides in Epilepsy.

A controversy over the use of bromides in epilepsy has been running in *The British Medical Journal*.

Dr. Chas. A. Mercier does not know if epilepsy is one disease or several, and he disagrees with Dr. Hume Griffith that arsenic prevents the development of bromide acne. He admits that bromides reduce the frequency of the fits in some cases, but that the deterioration of the mind induced by bromides is too high a price to pay; and he contends that in the majority of cases bromide does not reduce the number or severity of the fits. He also differs from Dr. Stephens, who advocates bromide with chloral in certain cases.

Dr. David Walsh is afraid of bromism, with its tissue degenerations and chronic poisoning; and he fears the bromides may, in many cases, do more harm than does the epilepsy if intelligently treated.

Dr. Richard Coates upholds the use of bromides in the patient who develops epilepsy in young adult life and who comes at once under treatment before the disease becomes established; but he would, in such cases, continue the drug for only a year or two.

Dr. John Frederick Briscoe agrees with Dr. Mercier, although he sometimes temporarily "assists" a case with bromide or even a little chloral. He urges diatetic treatment.

Dr. W. Aldren Turner collected the records of numerous cases and concluded that bromides are useful in mild cases with fits at long intervals and no mental symptoms. In some more severe cases bromides partially inhibited the fits. But in fully one-half of all cases bromides exerted no influence upon the seizures. He thinks if bromides fail in one year's treatment the drug should be discontinued.

Dr. J. A. W. Pereira has lost faith in the bromides and says they do not cure epilepsy. Fits

almost invariably coincide with a falling barometer and cease in pyrexial conditions. Relaxing the arterial tone prevents seizures. He gives sodium nitrite with potassium nitrate and bicarbonate.

Others took part in the discussion, the general trend of which was that bromides are used entirely too freely. There was a belief that epilepsy is not understood as it should be; that each case must be treated on its own merits; and that bromide undoubtedly injures many cases. On the other hand, the query constantly arose: What are we to do?

Subcutaneous Injection of Distilled Water for Multiple Ulcers.

By G. Arbour Stephens, M.D., B.S., B.Sc.
LONDON.

The patient was a woman, aged 63, who had been suffering for over six months from ulcers of the thighs and breasts. On the front of the left thigh were six ulcers, $1\frac{1}{2}$ inches in diameter, separated from one another by narrow bands of skin and with edges undermined. They were discharging considerably and looked almost gangrenous. On the back of the right thigh was a healed ulcer, $2\frac{1}{2}$ inches in diameter, whilst on its anterior surface was one of similar size, but showing no signs of healing. On the right breast was an unhealed ulcer and on the left a nearly healed one of similar size.

Mercury and iodides had been tried internally and *lotio nigra*, red wash, and fomentations externally had been tried with no success, so I suggested that a subcutaneous injection of distilled water be given, and if necessary repeated two or three times. At the same time the patient was given 3-grain doses of calcium iodide three times daily for four weeks. After the first injection, which was given on August 19th in the loose tissue below the shoulder-blade, her general condition was greatly improved, whilst the ulcers looked healthy and healing. The second injection was given on August 26th and the third on Sept. 13th, by which time nearly all the ulcers except that on the thigh had closed and the smaller ones were covered with healthy skin. At the same time the patient's general appearance was greatly improved.

No blood test was employed, so it is difficult to state definitely that the ulcers were syphilitic, but the appearances were very suggestive.

Some months ago I wrote on the value of injections of distilled water in syphilis and have had a large number of good results since then. The theory advanced was that the surface ten-

sion of the corpuscles was so affected as to allow of the more ready mobilization of the necessary antibodies, and, I would add, improve their diapedic powers. Much depends on the rate at which diapedesis occurs, and in a disease such as the one herein reported an increased rate of diapedesis seems to have been induced, with very successful results.

The local treatment employed was petrol for washing the wounds, and when completely evaporated boric acid powder was dusted on the wounds. Two years ago I advocated the employment of petrol, and since then its value in the local treatment of wounds has been thoroughly tested and proved.

Water is of no value for cleaning wounds in which colloidal matter has accumulated, whilst petrol, which dissolves fats and alters the surface tension, produces a clean wound very quickly, and provided it is allowed to evaporate freely there is no pain. —*The Lancet*.

Treatment of Acute Diffuse Pulmonary Edema.

Dr. J. Lawn Thompson, Washington, D. C., in *Va. Med. Semi-Monthly*, suggests this treatment:

When thrown in contact with a case of this kind, at once give a hypodermic of morphine sulphate, gr. $\frac{1}{2}$, and atropine, gr. $\frac{1}{50}$, the atropine to be repeated in half an hour's time if rapid subsidence does not occur. As there is invariably high blood pressure, *phlebotomy should be at once performed, 12 to 14 ounces being withdrawn*. It is most gratifying to note the immediate change that manifests itself as soon as the blood begins to flow. (The blood is almost black and clots at once.) I cannot lay too much stress upon this part of the treatment in all cases of high blood pressure. Do not postpone it, as you will be well satisfied with the results and you will have the gratitude of the patient and his friends. Some writers recommend phlebotomy in event of other measures failing, but in a well-marked case there is no time for taking the blood pressure, and I think a sufficient number of cases have been collaborated to establish the fact that high blood pressure is the rule, and immediate venesection is the proper method to pursue. Catheterize the patient, examine the urine, though this may mislead one—however, act according to the finding—free purgation, hot water bottles and blankets complete the treatment during the attack. The patients are usually found in a sitting posture, gasping for breath. Put to bed as soon as he is able to assume a recumbent position. Nitroglycerine, gr. $\frac{1}{50}$, four times a day; atropine, gr. $\frac{1}{100}$, three times a day; a strong saline every other day to induce free watery stools; absolute rest, both mental and physical; careful diet will keep the patient in fairly good condition. Should the definite lesion causing the seizure be demonstrated, of course, one would treat accordingly.

The
COUNTY MEDICAL MAP
 A Forum for the Problems of the County Medical Societies

The County Map aims to co-operate with the National and State Societies in promoting a wider interest in the County Societies, in increasing their effectiveness and in the interchange of plans successfully employed to effect these ends.

Members of County Medical Societies are invited to contribute to this department such matters as are of general and widespread interest.

County Societies publishing Bulletins will confer a favor by placing - The Medical Council - on their mailing lists.

A Doctor's a Doctor.

Here is a particularly vivid presentation of a neglected subject and that appeared in Blair County Medical Bulletin. It is so good, and so true, that we reproduce it in full.—EDITOR.

Yes, and a horse is a horse—to some people. Other people recognize a shade of difference between that swayed-back, spavined old nag which the rag man has to drive with reinforced oaths, and the well-trained, well-groomed racer whose graceful carriage and arching neck proclaim not only his origin and pedigree, but also his determination to win the race without the incentive of a spur. There's a *difference* in horses to those who can discriminate. What a melancholy pity it is that there are so few who can discriminate between doctors!

She was an elderly charwoman, from that walk of life where drudgery and need so obtund the powers of observation that the faculty of comparison cannot develop. So, three months ago, when she arose from her floor-scrubbing with a sharp twinge and a little swelling in her breast, she stopped in to see a "doctor"—one, it happened, who attended his County Medical Society meetings and who therefore knew the early signs of that insidious destroyer, cancer, which has so much occupied the attention of the Pennsylvania State and County Medical societies of late. He told her that a trifling little cut would remove the suspicious lump and leave her to enjoy in health the balance of her days; that it was not a thing to be trifled with at her age; that he would take her to the hospital, some miles distant, in his auto, and be with her when the surgeon performed the little operation. Operation? On her? She rushed out in that unreasoning panic born of ignorance. The word "Hospital" meant to her only restraint, pain, suffering, death; she could not picture its art of scientific healing, its

repose, its convenience and the angel-like ministrations of its white-gowned Daughters of Peace.

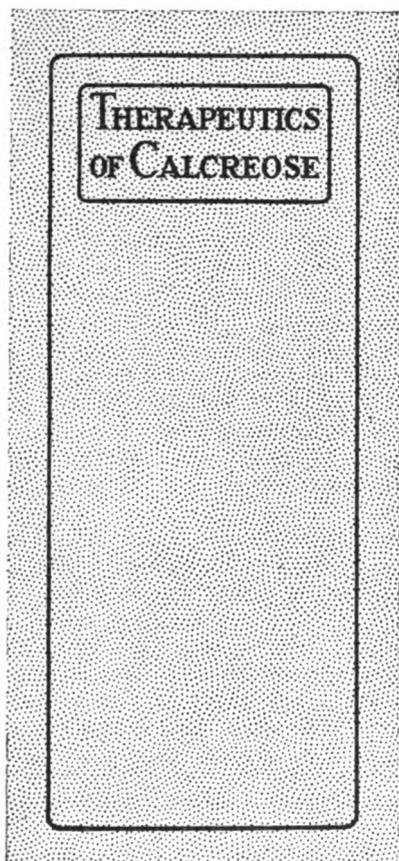
A few weeks later she returned, because the "other doctor" was out of town. She was radiant in his assurance that it was not cancer, and he certainly knew; for cancer makes a lump as big as your fist, he had said. Cancer was raw-looking, he told her, bled sometimes and was very painful; on the breast it drew the nipple in, and people who had cancer got thin and brown in the face. He *knew!* He gave her an ointment with which to rub it, four times a day, and the lump she thought was getting smaller, but those "wax kernels" under her arm all seemed to be running together, and she wanted some medicine to cure them. * * Oh, the pity of it! A doctor's a doctor!

Suddenly and with incredible rapidity a growth which was the size of a chestnut assumed the proportion of a coconut. Under the baneful breath of his ill-considered advice and under the almost criminal manipulation with his fiendish ointment the cancer mass had broken down, and involved the entire breast. Twelve weeks after her first visit to physician No. 1 she made her third call upon him; the breast was a raw, angry, nodular, painful blood-weeping mass and the nearby arm was all but powerless. In desperation she now was willing to go to the hospital. The surgeons said "Too late."

Yes, a doctor's a doctor! They both belong to the same medical society, but the records show that one has not been there for seven years. The library he has is the books he used at college; the medical magazines he gets are mostly sample copies. He buys even his "ointments" in two-pound cans to save the expense of individual packages, and has the patient return the empty half-ounce tin container in which he peddles the

(Continued one leaf over.)

THERAPEUTICS of CALCREOSE



THE ABOVE is the title of a booklet issued by The Maltbie Chemical Co., Newark, N. J., that will interest all physicians who are as yet unfamiliar with Calcreose in the treatment of

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From this booklet we learn that Calcreose is a reddish brown granular powder and that it is a chemical combination of creosote and calcium. In the process of manufacture 50 pounds of creosote is used in making 100 pounds of Calcreose.

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One point dwelt upon throughout the booklet is the fact that *when creosote is chemically combined with calcium objections to the use of creosote are largely overcome*, and extremely large doses may be administered—through Calcreose—without difficulty.

The value of calcium, particularly in tuberculosis, is dwelt upon, authorities being quoted.

Laboratory and clinical evidence is introduced showing that the combination of creosote and calcium (Calcreose) holds therapeutic properties not held by creosote or calcium alone.

Nearly one-half the booklet is devoted to reprints of articles which have appeared in the medical press treating upon the successful use of Calcreose in the diseases in which it is indicated; for instance, Didier (*Denver Medical Times*) reports his success with Calcreose in a case of tuberculosis; a man who only weighed 76 pounds when treatment was begun gained 26 pounds in 6 weeks. Two years later the doctor was advised the man then weighed 160 pounds and that there was no evidence of his past trouble.

Many other cases of tuberculosis, successfully treated with Calcreose, are reported.

The booklet concludes with a résumé of "The Therapeutics of Calcium and Creosote," by Kolopinski, in *Monthly Cyclopedia and Medical Bulletin*, which is a valuable addition to medical literature, he having employed the product long and extensively and its therapeutic action being confirmed.

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stuff. And yet a few people of means and of some social pretense employ him. Would that his self-satisfied ignorance had been visited upon those of his patients who have *judgment* to exercise if they *would*, rather than wreaked upon the wretched soul who was ground under the iron heel of poverty!

He evidently belongs to the County Medical Society only because of the protection it affords him in malpractice suits; he certainly has no other apparent use for the organization. Just think of it! If he were to be tried in the court tomorrow for some error in judgment far less ghastly than the crime recited here, physicians from our society would appear before the tribunal to certify that he was a graduate of a reputable medical college, licensed by the State and county, a member IN GOOD STANDING of our medical society. But would you *dare* to testify that he practices medicine in full accord with the professional standards of the community? Would you be courageous enough to say that he did *not* so practice?

For the protection of those physicians who burn the midnight oil to keep abreast of the Art of Healing, it should require something more than a state license and five dollars a year to belong to the County Medical Society. Just because a man succeeded in passing a state examination in medicine as taught twelve years ago, it must not be inferred that he is competent to practice

in the advanced knowledge of today. To be "in good standing" requires *simply the payment of annual dues*. What a sad commentary it is on commercialized medical standards that other requirements are not considered necessary for "good standing." There is no virtue in a dirty five dollar note *per se*: A mere willingness to invest it should not entitle the holder thereof to companionship in a scientific brotherhood when he lacks the mind of the student, the heart of a man and the soul of the seeker after truth.

In 1846 this County Medical Society admitted to membership only those physicians who had been in practice for ten years. Perhaps we could not conveniently return to that old and well considered regime, but we *can* adopt a by-law that if a member fails to attend and take part in at least 50 per cent. of the meetings each year he shall be permanently dropped from membership—and *not* reinstated simply because itching palms stretch forth their sinuous lines to grasp a betrayal fee.

No longer should the workers in the hive of medical industry stand sponsors for professional drones. By so doing they impeach their own integrity and give the lie to their entire lives which, bound by the ancient Oath of Hippocrates, shall be spent in the dissemination of knowledge, in the alleviation of distress and in the teaching of each other. *IS* a doctor a doctor?

(Helpful Points continued one leaf over.)

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Philadelphia, Pa.

No. 5

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Ether and Post-Operative Pneumonia.

SURGICAL HAZARDS are many, some of which call for careful medical discrimination. The surgeon not versed in therapeutics is apt to pass over lightly certain factors in the after-care of his patients. The various pneumonias of the surgical ward are instances in point.

In modern operating rooms there is little danger of a pneumonia resulting from exposure, though it may occur in home operating. Foreign-body pneumonia may occur from inspiration of vomitus or secretion from the mouth during anesthesia. Hypostatic pneumonia may result from too long maintaining of the patient in the dorsal position, either on the operating table or in his bed. Septic pneumonia occurs only indirectly through the blood-stream carrying infective agents. Hemorrhage during operation, alcoholism, cachexia and a poor circulation may, each of them, predispose to post-operative pneumonia. Pulmonary edema may occur and give rise to an erroneous diagnosis of pneumonia. Indeed, the diagnosis of ether-pneumonia and post-operative forms presents difficulties, since there are widely varying degrees of involvement in each of the forms described above. Many cases are too slight to be called aught else than bronchitis.

Ether-Pneumonia.

Ether vapor irritates the respiratory tract, especially in long anesthetics and in an environment contaminated by gas flames from lights and sterilizers. The first evidence of irritation is great increase of secretion, although hypersecretion is not necessarily indicative of an impending bronchitis or pneumonia. The first dangerous symptom of involvement is cyanosis; but in most cases ingress of air is not interrupted sufficiently to cause cyanosis. Many cases are called "ether-pneumonia" that are not truly such, as a genuine case gives rise to considerable pyrexia, and sometimes to hyperpyrexia. These latter cases are apt to result fatally.

Prevention.

Be sure good ether is used. Sometimes ether decomposes and becomes irritating. Cleanse the

mouth, throat and nose before giving an anesthetic. Defer operation, if possible, if the patient has any respiratory affection. Keep the patient warm and dry and frequently change his position.

Treatment.

The treatment is much the same in the various types. Dry cupping is commended highly by Fowler, along with the pneumonia jacket and cold air. Four cases have recently occurred in a ward in which we have a similar patient at present, and the cold-air plan could not be carried out advantageously. In a measure, oxygen takes its place. Camphor in oil, as noted in the article on camphor in last month's issue, we believe to be the best remedy. Carbonate of ammonia in infusion of digitalis has served well. If there is mild pulmonary edema, full doses of belladonna serve well. In severe cases in a plethoric person, venesection gives almost immediate relief. Look out for edema in an aged person.

Watch for Chemical Changes.

For some unexplained reason these cases of post-operative pneumonia are apt to occur in groups in a hospital. Just where the fault is may be hard to locate. As regards ether-pneumonia, it may be that the researches of Baskerville upon the chemical changes occurring in ether throw light upon the problem. We can't be too careful of ether and its storage. It is best kept in small sealed cans, not in large ones or in glass.

Warming the ether before administration has been suggested, but nothing seems to have come of it. The newer anesthesia methods may offer certain advantages in these surgical hazards, but most of them are too complex in general practice. So the best we can do is to be careful.

It seems to us these post-operative pneumonias require special study they have not yet had, so far as we have been able to learn. They are most disturbing as a surgical hazard and impose a great strain upon recuperation after operation.

The Pancreas.

A Neglected Factor in Disease.

ACU TE PANCREATITIS, discussed by Dr. Smith in the February issue and referred to again in his able article in this issue, has recently attracted much attention by reason of its serious nature. There are hemorrhagic and suppurative forms, the latter either following the first or cystic, biliary or malignant disease. Physicians are apt to forget the pancreas, and a hemorrhagic acute pancreatitis may be diagnosed as an intestinal obstruction. It is well to remember that when stercoraceous vomiting and peristaltic waves do not occur one should suspect the pancreas. Acute pancreatitis comes on quickly, and may be very quickly fatal, not at all like an ulcer. The spasm, exquisite tenderness, and pain requiring enormous doses of morphin, followed by shock and glycosuria, should make one send for the surgeon in a hurry, as it quickly goes on to gangrene, which is indicated by increasing fever, and marked leucocytosis. There is, of course, a tumor mass, but the abdomen is so tender that palpation usually is unsatisfactory except under anesthesia. Perforating ulcer gives warning; acute pancreatitis gives very little.

Chronic Cases.

And yet the suppurative cases may become chronic and not be promptly fatal, and these cases are hard to diagnose. The tumor, however, may usually be palpated satisfactorily and repeated differential blood-count throws light upon the case. Unfortunately, these chronic cases have few definite symptoms and are associated with various biliary, gall-duct, arteriosclerotic and malignant states. Watch for fatty stools, continued nausea, vomiting accompanying by epigastric pain, progressive loss of weight and strength and glycosuria. Positive Cammidge tests are stressed by the laboratory worker, which is a test of the functional capacity of the pancreas. We place little reliance upon it, since it merely indicates the condition, of carbohydrate metabolism. Gruner, in *The International Medical Annual* for 1915, page 438, discusses these functional tests very definitely.

Malignancy.

The mass, in malignancy, is immovable and irregular in outline; there is chronic jaundice; glucose is found constantly in the urine; there are symptoms of pressure upon various contiguous arteries, and the usual symptoms of malignancy. Yet these cases are often difficult of diagnosis until after emaciation and cachexia are so far

progressed as to render a hopeless prognosis inevitable. These are nasty surgical cases.

Cysts and Calculi.

Rounded, fluctuating tumors in the epigastrium to the left of the median line are apt to be pancreatic cysts. Pain appears long before one can palpate the cyst, and the anatomical relations are so complex that exact diagnosis as between such or other cysts, echinococcus of the left liver lobe, aortic aneurism, distended gall-bladder and hydronephrosis is most difficult. Sugar is usually present in the urine. The rupture of the cyst into the peritoneal cavity may be the first warning of the definite nature of a painful affection that baffles the most skilled clinician.

Pancreatic calculi are also very painful in their manifestations. The pain radiates to the left side of the spine or left shoulder blade, whereas in biliary colic it radiates to the right.

Diabetes and the Pancreas.

The association of pain with glycosuria always alarms us. Then, if a differential blood-count shows high leucocytosis, look out. Sometimes we feel that most cases of pancreatic disease never go to the surgical stage, being associated with the condition crudely known as diabetes. Perhaps the Allen treatment of diabetes may prevent many cases of pancreatic disease, for this starvation treatment seems really to be effective.

Somebody should make a careful study of functional diseases of the pancreas. We know altogether too little about the pancreas. If we knew more, particularly of its functional derangements, these surgical diseases of the pancreas would be less frequent. The study of the internal secretions of the pancreas should be promoted, as also the symptoms engendered by its functional derangement.

We know the importance of functional gastroenteric disorders and how their intelligent treatment prevents the development of organic disease. The pancreas belongs to the gastroenteric system. Perhaps, like in the bile-duct, bacteria may pass up from the intestine to the pancreas; and the same use of intestinal antiseptics that prevents bile-duct involvement may have equal service as regards the pancreas. And it is well, whenever glycosuria exists, to keep the pancreas in mind.

Surgery has a hard task with the pancreas. Perhaps this is due to the absence of a more definite and specific therapeutics.

What the Great War Has Taught the Physician.

SURGERY is to the front in war time, and preventive medicine comes into its own; therapeutics fills a minor rôle, and even more so now than formerly. After the war is over and thousands of war-worn soldiers return to civil life and to families long under strain, then therapeutics must be militant, for it is called upon to heal what surgery can not reach and to build up a new generation to be sacrificed in the next war. Let us hope the next generation will not have such an heritage!

Modern Preventive Medicine Scores.

The records of the great war now raging dishonor political civilization but place a halo upon the brow of the sanitarian, the advance agent of the coming and better civilization. It is indeed remarkable, that typhoid has not decimated the armies, that gastroenteric disorders have not claimed thousands, that malaria has not been rife, that typhus was so soon controlled in Serbia, that venereal diseases have been kept in check, and that contagious exanthems have been little of a factor in camp and trench; but modern preventive medicine has scored the greatest victory of the war in tremendously limiting the incidence of such morbidity.

If, in the exigencies of war, these things are possible, how much more should they be in times of peace? Herein is a lesson all governments are learning, and that physicians need to take to heart, for much will be expected of them after the war is over. It will, doubtless, then be considered a reprehensible thing to have typhoid spread and the other preventable diseases occur except sporadically.

Medicine Breaks Down.

The special correspondent of *Boston Medical and Surgical Journal*, writing from France, said:

"But there has been one unquestionable blot on the picture, and a serious one,—the handling of the army *medical* cases. This has really been something too awful, and if the history of this side of the question ever comes to be written, it could be fitly entitled: A treatise on how *not* to take care of the medical cases of an army in time of war. The fact seems to be that the organization of that branch was hopelessly bad even in time of peace, and apparently so utterly bad that it broke down so completely that everyone connected with it is so thoroughly disheartened as to be incapable of an effort to improve it so long as the war lasts. Later on it will have to be made over from the bottom up. The surg-

ical clan were swamped, carried off their feet, at the beginning; but they pulled themselves together and, as above remarked, are now doing fairly well. As regards the medical side, there seems to be but one opinion."

Fragmentary reports from other nations at war are of similar import. The physician finds it hard to shake off the vestige of mysticism still obsessing the average therapist and he is more of an individualist than is the surgeon. We may as well admit this and strive to attain to the team work of the surgeons and the materialism of the pathologist. Surgery keeps its eyes to the front and medicine is beginning to do so.

The Lesson of Experience.

Those of us in hospital association in the medical wards become keenly appreciative of the fact that therapeutics lacks something today, and that it always has lacked something; and the record of the present war, and our own Spanish-American war, make us begin to question ourselves to see wherein we lack and wherein therapeutics falls short. Surely the thirty centuries of medicine must have settled some therapeutic problems! How shall we winnow the wheat from the chaff? Winnow it we must, selecting that which is reliable and rejecting the rest. This is as a hospital man sees it; but it is very hard to get the private practitioner to see things in this light. Think of it! There has not been a new medical discovery thus far in the war and that is of therapeutic import. And whatever triumphs medicine has had in war-torn Europe have come from the application of those things the laboratory has worked out. This may sound pessimistic, and we wish it were not true; but it is, and we must take the lesson home to ourselves.

What Shall We Do?

First of all, we must *admit* facts. The man who is most apt to do so is the modern and well-informed physician. Then we must *face* the facts just as they are. Finally we must *arrange and classify* the facts, so we will know just where we are. Having done this, we are in position to re-orient medicine. Preventive medicine is established; so let us determine, as regards each disease, what preventive medicine can do therein and what is left for treatment to do, for preventive medicine has a real place in the management of actual morbidity as well as in its prevention. The whole of immunology is projecting itself into

the therapeutic domain, and it will do so more and more. Also the dietetic *treatment* of disease is in its infancy, and the hygiene of the sick room is a factor of growing importance.

Therapeutic Technic.

Surgery is great because of its technic; without it surgical philosophy leads to few triumphs. And therapeutics must develop a technic. Giving medicine should be the smallest part of case-management, but the most accurate part, for effective drugs are two-edged weapons; therefore they should be used accurately or not at all, for they may do harm. Therapeutic technic, as it is developing, is semi-surgical, or, at least, it coöperates with surgery, using various forms of appliances to reach the diseased area, injecting remedies subdermally or intravenously, and using physical measures in proper relation with drug and biologic medication.

Drug Medication.

Drugs have a place, each effective one having its own narrow range. Yes, we mean just that; each drug has, properly, a narrow range of real effectiveness. It is our business to learn just what that range is. Take opium, quinine, digitalis, mercury, salicylic acid and belladonna as representative agents, and we recognize a narrow but definite sphere for each of them. Perhaps that is *the* reason why each one of them is so useful. And less definite but active drugs may each be useful in some narrow range of activity. Here is the field of drug activity and usefulness, and the only field left. Let us recognize this fact. Our newer agents—salvarsan, pituitrin, adrenalin, aspirin, chloretone, dionin, emetine, picric acid, pollantin, scarlet red and the serums and vaccines as illustrations—each has a very narrow but definite field. Were most of the old drugs but recently introduced, and they also would have narrow fields. Therapeutics has inherited a tremendous incubus of junk. This we need to unload, doing it kindly but firmly.

War an Iconoclast.

Yes, therapeutics and the medical service have fallen down in the war. This is the lesson it has taught the physician. Perhaps the experience will do us good. It will if we take it to heart. And it will, Doctor, for you and I if we begin *right now* to practice medicine as it is *taught*, not as it is practiced. If we do, and this country ever needs our services in war time, perhaps the medical service in the United States will have a more glorious record than we now read of in Europe.

Botanic Remedies.

Discrediting the botanic drugs is a big contract. Viewing medicine at large, not purely from the American point of view, there are nineteen countries with well-based pharmacopeias, and they recognize 550 botanic drugs. There are 78 botanic drugs recognized in 16 of these pharmacopeias, which pretty well covers the important list of world-wide commerce. There are 230 drugs recognized in but one or two pharmacopeias, 29 of them being found only in the U. S. P. Among these latter are: Bloodroot, cottonseed oil, malt, oil of pimento, oil of chenopodium, sabal, slippery elm, stillingia, yerba santa, crampbark, leptandra, calendula, berberis, pereira, sassafras and sumach berries. We attach importance to most of these; but so does Mexico to her native drugs, Japan to many that are esteemed there, and India to many tropical species. So who is to judge?

Here is a place wherein it is hard to internationalize medicine. Each country has its own plant remedies; they are, often, especially adapted to the uses of the people, are readily procured at moderate cost, and sometimes suddenly assume importance, as is instanced in our own oil of chenopodium as an anthelmintic. Doctor, don't get on a high horse and denounce the botanics; you may have to take back after while some of your present denunciation. There's an awful lot we don't know yet.

American Botanic Drugs.

The Philadelphia College of Pharmacy has an interesting green-house in which American drug species are grown, and the College has experimented with over 300 plants. The Universities of Minnesota, Michigan, and some others, are conducting interesting experiments along the same line. H. K. Mulford Company and Eli Lilly & Co., are placing the cultivation of American botanic drugs upon a safe commercial basis, and the U. S. Government is aiding in every way to promote our interests in this direction.

We look for some valuable advances in therapeutics as an outcome of this work. Styles change in therapeutics, as in other things, and it is more than probable that our most balanced scientists will show the doctors of America that we are not so dependent upon Europe for our drugs as has been thought to be the case.

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Diphtheria Antitoxin in Large Doses.

LARGE DOSES of diphtheria antitoxin rarely harm a person suffering from the disease, and always less harm results from an initial large dose than from repeated smaller ones. The large hospitals and the men who see most cases are a unit in advocating a dosage sufficiently large in the beginning of the disease to render complication improbable. This can be accomplished only by neutralizing the toxin present, and the size of the dose must be determined by clinical conditions. Children, being more susceptible, require doses little below those appropriate for adults.

Carefully kept records in numerous hospitals show a definite decrease in the mortality rate as the dose increased. Boston City Hospital, for instance, reports this: Before the period of antitoxin 43 per cent. died; under small dosage, 11.48 per cent. died; under large dosage, only 7.6 per cent. died; counting all classes of cases.

Toxin and Toxon.

Ehrlich advanced a theory that the growth of the diphtheria bacilli in the body early produces a toxin, which is provocative of the acute conditions; but that later a toxon comes into being, and it causes the late paralyses. The affinity between the toxin and the antitoxin is great, but it requires a relatively larger amount of antitoxin to neutralize and separate from the tissues the toxon; hence a surplus over and above what is necessary to neutralize the toxin should be given of antitoxin, else the toxon may not be neutralized at all. Clinical experience bears out this theory as well as the necessity for large dosage.

A Basis for Dosage.

An average recommendation derived from comparing the figures of several investigators recently reporting, gives this: For immunization, 25 units per pound of body weight; mild cases, 46 units per pound; severe cases, 230 units per pound; for adults, less in proportion to weight. This is an average figure, many men advocating larger dosage, even up to 300,000 units in severe cases.

The Practical Side.

Don't be afraid of antitoxin in large dosage, but hesitate over repeated small injections. Most doctors give doses wholly inadequate. The average case does better on 6,000 to 10,000 units than upon smaller doses, and one such dose promptly clears up the great majority of cases. When both tonsils are well covered with exudate for a day or two before antitoxin is given, it will take 30,000 to 60,000 units to clear up the case promptly.

If, in addition, the palate, uvula and nose are involved (probably the third day), at least 100,000 units are demanded for adequate results. These doses are not commonly repeated and, in fact, no more is usually given, these large doses being sufficient to "jugulate" the disease.

Moribund Cases.

Few cases of diphtheria are absolutely hopeless under very large antitoxin dosage; but it may have to be given intravenously. A moribund case should receive the first twenty-four hours 150,000 units, or 100,000 units intravenously. Repeat the next day if there appears to be justification, or give less if improvement is marked. Some apparently desperate cases clear up under these immense doses, but there is, of course, danger of complications.

Doubtful Cases.

The mistake may be made of diagnosing follicular tonsillitis as diphtheria; but if so, an average dose of antitoxin will do no harm and will at least immunize the patient against development of diphtheria. In these doubtful cases be sure to take a swab for laboratory investigation, but give a moderate dose of antitoxin before the report comes back.

We used to be somewhat afraid of these large doses, fearing that there might be some justification for the outcry against diphtheria antitoxin; but it happens that we are peculiarly susceptible to diphtheria and always take an immunizing dose if called to a case and not having been immunized within three or four months, and we never felt any disagreeable effects from these immunizing doses. Once, having received a bad exposure, one little pin-head spot that looked suspicious appeared in the throat, and we took a double dose, or what was then considered a double dose for a curative effect, and felt no especial effect from that. These experiences removed timidity. And now we never trifle with small doses of antitoxin.

Magnesium Sulphate in the Treatment of Nasal Catarrh.

Tulloch, in *British Journal of Surgery*, claims that magnesium sulphate, by reason of its being absorbed with difficulty, has certain advantages over other salts used for cleansing wounds by osmosis; that it interferes with the digestive activities of pus, and that it inhibits bacterial growth.

These seem to us to be ideal recommendations for an osmotic treatment of catarrh in the nasal sinuses. We need such a treatment, to "poultice out" catarrh, as it were.

Therapeutic Notes.

Give morphin before nitrous oxid anesthesia.

Don't forget that the adenoid case is apt to be a diphtheria carrier.

The hot water injection treatment of goiter is valuable only in small, non-toxic forms.

Give bicarbonate of soda to infants with severe diarrhea, and thus avoid acidosis, which is so fatal in infancy.

It is useless to give soda for acidosis to a person of any age unless enough is given to make the urine alkaline and to keep it so.

Hypochlorous acid is said to be the most powerful disinfectant and antiseptic. It is used as a gas and solutions of the gas.

Theilhaber advocates venesection for the relief of the hot flashes of the menopause. It is not invariably effective but never does any harm.

Hirst recommends corpus luteum extract in the nausea of pregnancy, giving it hypodermically in doses of 1 cc. daily. He believes larger doses will do better.

Nephritic patients should never have bismuth, either internally or locally, according to Higgins, as twenty-four fatalities have been reported. It is due to the formation of nitrites.

Sabouraud recommends, in the treatment of pediculosis, the application of equal parts of xylene, alcohol and ether. Soak a cotton sponge in the mixture and go over the scalp and hair. One part xylene in eight of petrolatum may also be used.

Cole and Querens report a case of purpura hemorrhagica treated successfully with emetine. The hydrochloride was given in half-grain doses once daily by the intravenous route until ten doses were given, by which time the case had fully cleared up.

In India, where antivenene is used in cobra and viper bites, a strong solution of gold chloride is also injected hypodermically, impregnating the whole area of the bite. Of course a ligature is first applied. The paper does not state the strength of the gold solution.

Cotton claims that salvarsanized serum causes definite arrest in paresis; but the case must be treated in the early stages, as advanced stages show no favorable reaction. Also the treatment must be persistent and uninterrupted. On the other hand, tabetic cases must be treated cautiously, with small and infrequent doses.

Practical Articles in June Issue.

The policy of this journal to give the practical and usable data of modern medicine for the busy practitioner's reading will be well exemplified in June. Here are some of the interesting, helpful papers that will make the June issue a true MEDICAL COUNCIL issue.

"The Clinical Rôle of Acidosis" will be the leading editorial. "Obstetric Analgesia and Anesthesia" will detail what is taking the place of the erstwhile "Twilight Sleep." An uplift talk will be titled "A Place in the Sun."

ORIGINAL ARTICLES.

"Blue Sclerotics: Their Relation to Multiple Fractures in Childhood," by Dr. Charles E. Remy, is a finely illustrated paper upon a condition little understood and of great practical importance.

"The Vegetable Dietary in Diabetes Mellitus," by Dr. John Aulde, harmonizes his theory of magnesium infiltration with recent tendencies in the dietetic treatment of diabetes.

"A Plea for the More Frequent and Careful Examination of the Feet," by Dr. Charles Cross, is a most practical exposition of an everyday subject.

Held-over articles crowded out of this issue are: "Protective Vaccination Against Typhoid," by Dr. S. R. Klein; "Faradic and High-Frequency Currents in the Treatment of Constipation," by Dr. Samuel Floersheim; "The Problem of Antisepsis in War," by Dr. Leonard Hirshberg. They will appear in June.

CONSTRUCTIVE REFORM.

Dr. George L. Servoss has contributed a splendid paper upon "Hyoscyamus," which he discusses in its modern relationships. "The Detail-Man and the Truth About Medicines" will continue a discussion begun in this issue, bringing it to a practical head. And others.

THE BUSINESS SIDE.

Dr. G. M. Russell presents a paper dealing with several questions recently raised in our columns and taking the profession to task for wretched diagnosis, which he claims is a leading reason for our economic troubles. "Some Practical Points in Business Ethics" will continue some bright discussion by "The Medical Philosopher."

THE NEWER DRUGS.

June will carry our Quarterly Supplement upon the newer drugs, and will give the advances noted of recent months. We receive many inquiries about these drugs. If the physician will file this Supplement, he will find it most valuable for reference.

Read MEDICAL COUNCIL, which is NOT "independent" of scientific advance, modern views and the clean-up in the advertising field. We are *constructively independent*, and are neither pessimistic nor soured. Get the Medical Council Atmosphere.

The following papers are contributed exclusively to this journal. Republication is permitted if credited as follows: **MEDICAL COUNCIL, Philadelphia.**

ORIGINAL ARTICLES

Sentences, like sunbeams, burn deepest when most condensed.

We are not responsible for the views expressed by contributors: but every effort is made to eliminate errors by careful editing, thus helping the reader.

Chronic Constipation in the Aged.

By I. L. NASCHER, M.D.,
NEW YORK CITY.

In speaking of the aged I refer to the physical condition, not to the years of life. Of four hundred consecutive cases of aged persons who gave me a history of constipation, thirty were under fifty years of age. There were 150 men and 250 women, but about 100 women were seen in the female internal medicine department of a dispensary, the proportion in private practice being about equal. My object primarily was to find out to what factors they themselves ascribed their constipation; but as most of them said they were constipated as long as they could remember, this line of questioning was given up. Many were so accustomed to this condition that they did not consider it pathological and many paid so little attention to the evacuations that they could not recall when they had a movement of the bowels or even when they urinated last. It was, however, possible to bring out some facts bearing upon the etiology of chronic constipation in this class.

Anatomical Changes.

Let us consider for a moment the anatomical changes in the process of senile involution which influence the formation, propulsion and evacuation of feces. These are: diminished gastric juice, bile, pancreatic juice, mucus and the secretions from the intestinal glands, due to atrophy of these glands; atrophy of the muscular fibres in the intestines; formation of colonic and rectal pouches due to dilatation of the gut; enteroposis; dilatation of the hemorrhoidal veins; flaccid abdominal walls, and probably some change in the nerve terminals. There are in consequence of these changes, lessened digestion and assimilation, with consequent lessened appetite; less food is taken and there is less waste; peristalsis is slower and less powerful, consequently propulsion is slower; the feces become dryer and travel along with more difficulty; they become lodged in the rectal or colonic pouch; there is diminished desire for stool; there is dyschezia or difficult ex-

pulsion due partly to weakness, partly to the flaccid abdominal walls which the aged individual is unable to bring to his assistance in the act of expulsion, and partly to the hard feces. If there are hemorrhoids the difficulty is increased.

I am not considering in this paper such exceptional causes for chronic constipation as bands, growths and other pathological conditions which compress or obstruct the bowel. In aged persons the fecal mass travels so slowly through the bowels that it may take from 48 to 72 hours from the time of making a meal before the food fragments or waste is voided. Where there is but little waste to cause peristalsis, it may remain in the rectal pouch for two or even three days before there is a sufficient amount to create the necessary irritation to call for evacuation.

Bad Bowel Habits.

If a person, accustomed to a daily stool, finds that with advancing age he must make a forcible effort to have a daily stool and the stool is then small, he will be inclined to wait until he has a strong desire for stool and thus he may acquire the habit of having a normal stool every second or third day. If he has a normal movement every second day without assistance from cathartics or enemas, it is not constipation and nothing should be done to secure a daily stool.

Many aged persons do not have a natural movement at regular intervals, but must either resort to cathartics or else must make forcible efforts to have a stool when they feel uncomfortable or have a headache or other symptom that they ascribe to constipation.

Many aged persons, and younger ones, too, pay no attention to this provision of nature to rid the system of waste matter but go only when they feel distressed. Some dread the act of defecation owing to the pain produced by the passage of hard feces or because they have piles; others dread the cold toilet in winter and thus they begin to neglect the call for stool until they can no longer hold back. In many cases the call for stool is slight and if not immediately attended to the desire passes away until a much larger amount

of fecal matter in the rectum creates a greater irritation and the consequent pressure symptom which constitutes the call for evacuation. Some persons have so accustomed themselves to cathartics that evacuation will not occur without this extra stimulation. Lack of exercise is a frequent cause for the chronic constipation of the aged. There is then little waste, little appetite, little food is taken, and the small amount of fecal matter remains for days in the rectal pouch. In some cases there is impaired mentality; the patient ignores the desire for stool and the subconscious control over the sphincter is diminished, there being, at times, constipation, diarrhea or dribbling of stool. In these cases the underwear is usually soiled. (This conscious soiling of the underwear where the sphincter muscle is not impaired is a clear evidence of weakened mentality.)

In the dispensary referred to, the condition of the bowels is a routine question in taking the history. Over 80 per cent. give a history of constipation, although very few mention it as a symptom of their complaint; over fifty per cent. of their ailments are due to constipation, yet very few come to be treated for this condition.

Symptoms.

The symptoms of chronic constipation can be classed in two groups; gastro-intestinal symptoms due to the presence of feces in the intestines, and toxemia symptoms due to the absorption of fecal matter and the products of intestinal decomposition.

Lane (*British Medical Journal*, November 1, 1913), mentions seventeen symptoms and pathological conditions due to intestinal autointoxication following intestinal stasis. In a paper on "Lane's Autointoxication Complex and the Manifestations of Senility" (*New York Medical Journal*, August 8, 1914), I pointed out that most of the symptoms mentioned by Lane were normal physiological manifestations of senility and others were pathological conditions to which the aged were peculiarly liable. Some of the latter may be due to autointoxication, but it requires more faith than I possess to accept this as the cause of such conditions as cancer, prolapsed uterus and grey hair.

The only symptom frequently met with in the aged which can be ascribed to autointoxication is a dull headache which makes the individual apathetic or irritable. There are many other symptoms which the aged individual suffering from chronic constipation may present and which may be due to autointoxication, but I am not satisfied to ascribe to this every symptom for which I can find no direct cause. It may sometimes be necessary to use this makeshift of an explanation

to satisfy a skeptical patient just as we make a diagnosis of "old age" when we do not know what ails the aged patient.

The gastro-intestinal symptoms which the aged patients suffering from chronic constipation usually present are: discomfort in the abdomen and a feeling of fulness, weight or pressure in the pelvis; occasionally cramps, more often a dull ache or rather a sense of discomfort. There are sometimes waterbrash, eructations of gas and flatulence. The appetite is generally poor, tongue coated and breath foul. In rare cases the intestinal distention is so great as to press upward upon the diaphragm and interfere with the heart action. Upon examination the abdomen is found distended and tympanitic, the tympanites being marked or confined to the colon, the ascending colon being usually more distended and tympanitic than the other parts. Where there are thin abdominal walls the distended gut may stand out like a sausage and it is sometimes possible to see the bend at the hepatic flexure. In some cases light palpation with the finger tips may reveal a depression at the inner angle of the hepatic flexure showing a kink in the gut. Occasionally fecal matter can be felt in the gut, generally in the lower part of the descending colon. In many senile cases the rectal pouch is constantly filled with a mass of feces and sometimes this mass is so hard that it must be scooped out.

The stomach is usually distended and ptosis of the organ is found in most cases. This can sometimes be determined by inspection, sometimes by light palpation.

Statements of the Aged Unreliable.

The statements of the aged concerning pain and tenderness are unreliable, for they are always looking for sympathy and will exaggerate or lie, declare that any spot to which their attention is directed is painful, although a moment later, if their attention is directed to another spot or subject, considerable pressure can be applied to the former spot and they will evince no sign of pain. Their facial expression is a fairly reliable guide to their sensations. Pressure upon the distended colon may cause momentary spasm or colicky pain but if the pressure is applied in the direction of the fecal stream, upward along the ascending colon, from right to left along the transverse colon and downward along the descending colon, and the patient is cautioned not to restrain the inclination to pass flatus, pressure will give relief.

Accidents may happen when the old man lets up on the instinctive control over the sphincter and if more than flatus passes the sympathetic physician will console the patient instead of chiding him. In some cases there will be a constant

sense of discomfort in the pelvis, a persistent desire to have stool but straining brings only small, hard, dry balls, lumps or flakes of feces and no relief from the discomfort. In these cases there is in the rectal pouch a mass of hardened feces from which flakes or lumps are broken off or else the mass is grooved or tunneled and feces lodged behind the mass are forced through in lumps which become rounded while passing through the groove or canal. Dyschezia or difficulty in passing stool may be due to lack of power to exert the necessary force to expel the feces. This occurs in very old persons who have flaccid abdominal walls.

Chronic Cases.

As the chronic constipation of the aged is generally due to senile atrophy of muscular fibers and it is impossible to repair this waste, a cure of cases in which such atrophy exists is impossible. Much can, however, be done to cause regular stools and avoid the pernicious side effects and after-effects of chronic constipation. Many physicians treat senile constipation without giving the slightest thought to the underlying causes; many do not consider the effect of the various forms of cathartics. They seem to know no more about this than the layman who uses salines, enemata, peristaltic stimulants, massage, cholagogues, etc., indiscriminately, basing choice upon taste or convenience of administration.

Treatment.

Before deciding upon the method or measures for treatment let the physician consider the basic cause or causes of the constipation. Is it diminished tonicity and lessened peristalsis due to muscular waste, or is there a deficiency in gastric or intestinal juices, bile, pancreatic juice or mucus, or is there an enteroptosis kinks, dilated rectal pouch, flaccid abdominal walls and general weakness, or are there several of these conditions present, or is it a condition brought on by habit and neglect without anatomical changes? Each requires individual treatment. At the present moment mineral oil is the fad and physicians use it for all forms of constipation.

Mineral Oil.

Mineral oil is in no sense a cathartic, its action being simply a lubricant, taking the place of mucus in the bowels. I recommended it for this purpose several years ago. (*American Practitioner*, August, 1913.)*

*The employment of oil in constipation is very old. In Floyer's "Medicina Gerocomico," published in London, in 1724, the first scientific work dealing with the diseases of the aged, there appears this passage: "Oyl moistens the Excrements and skins of the Guts in old Men, who are subject to Costiveness; the peristaltic Motion is decayed, and wants a Stimulus also."

It is of special value in the aged, as the atrophy of the mucous glands with the consequent diminution of the secretion is one of the most frequent causes of slowed propulsion and prolonged retention of feces. It should be remembered that the fecal mass is fluid in the small intestines and it does not begin to harden and become formed until it reaches the cæcum. The action of the lubricant is therefore desirable in the large intestines. But when it is used in excess or for a long time it probably coats the small intestines and prevents the discharge of the intestinal secretions, thereby interfering with intestinal digestion. In several cases in which I gave mineral oil in tablespoonful doses three times a day for two weeks there was a like effect in all. There was a copious daily stool which was soft, oily and passed without difficulty. But the patients lost in weight and upon examining the stools they were found to contain a large amount of undigested food particles including meat fibers, grains of corn, oats, rice, bits of milk curd, etc., all covered with oil. Mineral oil will do good in most senile cases if it is used for a short time. But its mode of action should be understood and it should not be used constantly or where the constipation is due to intestinal atonicity alone. It is useless in cases where there is dyschezia due to weakness, where there is a dilated weakened rectal pouch in which the fecal mass may remain for days, or where there is a constipation due to habit.

Diminished Peristalsis Due to Atrophy.

As the most frequent cause of senile constipation is diminished peristalsis due to atrophy of the muscular fibers of the intestines it would seem that the appropriate treatment is to give peristaltic stimulants. But anything which increases the activity of a degenerating muscle hastens its degeneration. The normal degeneration of the muscular fibers is a slow process and the normal stimulation produced by the cellulose of food will not unduly hasten the degeneration. The regulation of the food should therefore be the first measure taken to increase the peristaltic activity. In most cases, however, this condition has existed so long and the system has become so accustomed to drug stimulation that forced peristaltic stimulation is necessary.

Other Drugs.

The best drug for this purpose is aloes or aloin. This increases peristalsis from the stomach to the rectum, its action being most powerful in the lower bowel. The main objection to its use is its griping effect, this being probably due to the compression of the nerve terminals by the contraction of the muscular fibers which cause peri-

stalsis. The usual method of overcoming the griping is by the addition of belladonna. Belladonna relieves the griping by inhibiting contraction of unstriated muscular fibers, thus counteracting the action of the aloin; in other words, the belladonna prevents the full effect of the aloin. Aloin and belladonna is an irrational combination. Physicians will get as good results with a much smaller dose of aloin, and if they will add rhubarb to the aloin instead of belladonna they will overcome the griping and add a stimulant to the intestinal glands.

Peristaltic Stimulant.

In senile cases where I want to use a peristaltic stimulant I generally prescribe a pill containing 1/10th grain aloin and 5 grains rhubarb. This will produce a soft, copious stool with little or no griping. Cascara is a reliable peristaltic stimulant, producing but little griping pain, but it is much slower in action. Senna is useless unless given in large amount. None of these drugs should be given daily except perhaps for a few days after beginning treatment.

If the stools are light colored and foul smelling there is a deficiency of bile. In senile cases where there is a deficiency of a secretion which can be supplied artificially this should be done in preference to the stimulation of the secreting organ. If the deficiency is a temporary condition which can be relieved by slight stimulation of the organ and the organ is not in process of degeneration there will be no harm in stimulating the organ, but deficiency of bile in the aged is usually due to hepatic fibrosis. It is far better in these cases to give the bile salts than to give calomel or other cholagogues.

Saline Cathartics.

Saline cathartics should not be used by the aged, as they withdraw water from the organism which the body cannot spare. They may be of service in obese individuals, but the benefit which such persons derive at the mineral springs must be ascribed more to the strict regimen enforced at the springs than to the waters, for they do not get the same effects when taking the waters at home.

The enema is only of service in retention of feces in the lower bowel. In cases where there is prolonged retention of feces in the rectum and the feces come out in hard, dry lumps, flakes or balls, an enema containing a dram of bicarbonate of soda to the pint of hot water should be used every second day, and on alternate days a suppository containing a half grain of ergotin should be used to increase the tonicity of the bowel.

Astringents.

Astringents may diminish the dilatation but they will not increase the peristaltic force of the gut. The suppository should be pushed up as far as possible. If the alkaline solution used in the enema will not soften the mass in the bowel it will be necessary to use a scoop to extract the hardened feces. We find occasionally decrepit individuals with thin flaccid abdominal walls, who are so weak that they must exert all their strength to expel the feces. In these cases a soft stool should be secured either through the use of mineral oil or rhubarb, the seat of the toilet should be lowered or a foot stool provided to secure a more favorable position for defecation, the patient should wear an abdominal binder and efforts should be made to strengthen the individual.

The Diet.

The most important general measure in the treatment of chronic constipation in the aged is the regulation of the diet. Digestion and assimilation being weakened in the aged, and as there is less physical activity, the aged eat less than in earlier life; there is less waste, and a smaller amount of cellulose is consumed to furnish peristaltic stimulation, though greater stimulation is necessary on account of the lessened tonicity of the intestines. Much more food than the aged person could consume would be necessary to furnish the inert material in sufficient quantity to bring about the necessary peristaltic activity, if he were permitted to follow the ordinary dietary of the home. An ideal diet, based upon calories and taking into consideration the need for increased amount of cellulose, could be devised but in the ordinary treatment of these cases it is impracticable.

A few general directions will suffice for the usual run of cases as we meet them in practice. The "little and often" rule for feeding is wrong. Food should not be given oftener than in 5- or 6-hour intervals. Meat should be thoroughly boiled, and when the teeth have fallen out very little meat should be taken and this should be chopped fine. No cold storage, canned or preserved meat or fish should be used. Spinach, cabbage, beets, carrots, turnips, cauliflower and sweet potatoes contain much cellulose. Thorough boiling of all vegetable foods; no fried food. Rice and sago constipate; other cereals do not. Whole wheat bread, graham bread and rye bread are better than the bread made from the very white, bolted flour. All fresh bread tends to constipate. The much-advertised breakfast cereals and foods are all good, but one breakfast food which contains 25 per cent. of bran is especially good for these cases.

Figs, prunes and stewed apples have a slight laxative effect, but hardly enough to be of service unless taken in large quantities. Of the ordinary beverages, cocoa and tea constipate, boiled milk is often constipating and raw milk constipates some persons, while it acts as a laxative to others.

For a short time after beginning the treatment of these cases the diet should consist partly of concentrated, preferably predigested, food and partly of food containing much cellulose. If under this treatment the regulation of diet and the use of drugs, there is an improvement, the physician should restrict or diminish the amount of drugs and adhere to the strict diet. There should be no departure from this diet until there are regular stools without the use of cathartics and enemas.

Water Drinking.

Many old persons have a daily stool if they take a glass of hot water with or without a little salt before breakfast. These persons do not suffer from chronic constipation but from chronic gastric catarrh. The hot saline solution liquifies the mucus which has accumulated during the night and which adheres to the walls of the stomach. This mucus after being loosened from the gastric walls, passes into the intestines and aids in the propulsion of fecal matter through the bowels.

Physical Measures.

I have not touched upon massage and other physico-therapeutic measures, as I have had no experience with them. I have also omitted those cases of chronic constipation that are due to mechanical obstruction or compression of the gut and which require surgical intervention. These conditions are, however, rare in the aged, the only operative condition at all frequent being hernia. The feces are generally sufficiently soft in the ascending colon to pass any kink at the hepatic flexure that does not completely compress the gut, and kinks at other locations and bands do not appear to play an important part in the senile constipation. I have not seen a case in the aged where surgical interference for such a condition was indicated, although surgeons will sometimes suggest operation for what they diagnose as adventitious bands. The measures recommended in this paper usually suffice to relieve if they cannot cure the chronic constipation.

103 West 88th Street.

New Readers

are requested to look carefully through these pages and in a critical mood. We want to please you.

Acute Abdominal Pain.

Its Clinical Significance.

By HARVEY F. SMITH, PH.D., M.D.,
Surgical Staff Harrisburg Hospital,
HARRISBURG, PA.

Acute abdominal pain is one of the commonest conditions the physician is called upon to treat. Its various causes have been so generally and thoroughly discussed that a correct appreciation of the symptoms and a prompt decision as to the best method of procedure are possible in all cases. It is not always possible to accurately determine the nature of the lesion or what organ is involved. An early exact diagnosis in every acute abdominal case is important, but a prompt recognition of the gravity of existing conditions is far more important. The physician who fails to appreciate this distinction and who defers action until he is perfectly sure of the diagnosis will surely record unnecessary deaths.

Abdominal pain varies in the acuteness and diversity of its manifestations and the breadth of its distribution. The physician must depend upon the patient's description of the pain and must recognize the part the personal equation plays in this description. Pain from the same origin may be described variously by different patients as burning, cutting or shooting, constant or colicky, slight or severe.

Personal Equation.

This personal equation may even modify the evidences of shock and collapse associated with the most serious abdominal lesions. Thus the character of the pain may not be of definite assistance in diagnosis. It is of great importance to learn where the pain was first and most acutely felt, its radiation, recurrence, persistence, severity and method of relief. Its association with inflammatory symptom, local or general tenderness, hemorrhage, gastric or urinary symptoms, palpable masses, and previous personal history must be considered in making the diagnosis.

Pain should not constitute the sole symptom upon which the diagnosis is made. Indeed, no one group of symptoms is sufficient.

Classification.

Because a decision as to the gravity of the case is of first importance, the following classification is suggested as useful:

- 1st. Cases of acute abdominal pain which always demand prompt surgery.
- 2nd. Cases which are surgical but not necessarily of the emergency type.

3rd. Cases which should receive only medical treatment.

It is not my purpose to outline a complete list of possibilities in each of these divisions. There is no doubt in my mind that every acute abdominal condition that is characterized by violent agonizing pain, associated with hemorrhage, or shock or collapse, belongs to the class demanding immediate operation. In applying this rule an occasional abdomen may be unnecessarily opened. But for one unnecessary operation twenty unnecessary deaths will be avoided.

In cases falling under the second class as outlined above, a delay of 24 hours or more will not impair the chances of the patient and may even be beneficial. Among these are certain pelvic conditions, such as ruptured tubal pregnancy, tumors of the uterus with or without twisted pedicles and tubal inflammation; chronic painful indigestion due to a diseased appendix, an ulcer or infected gall bladder; kidney diseases such as stone, tuberculosis or pyonephrosis; certain gastro-intestinal diseases such as carcinoma, sub-acute and chronic obstruction.

To the third or medical class belong the referred pain of some acute chest diseases, such as pneumonia and pleurisy, the root pains of spinal cord lesions like locomotor ataxia, some types of angina pectoris and arteriosclerosis, and some inflammatory gastro-intestinal lesions.

The Class for the Surgeon.

It is only the first class that we will discuss in detail. A ruptured appendix, duodenal or gastric ulcer, certain types of tubal pregnancy, acute intestinal obstruction, acute gangrenous disease of the gall bladder, and acute infections of the pancreas are the most common causes for the type of pain that should have immediate surgical treatment. None of these lesions has a distinct and clearly differentiated set of clinical symptoms, but they all have the one outstanding symptom of severe, acute prostrating pain. This type of pain occurring suddenly in a person of apparently good health, followed by vomiting, pallor, cold leaking skin, small rapid pulse, all indicative of shock, a localized tenderness followed within an hour or two by a general abdominal tenderness and muscular rigidity; this clinical picture means some abdominal catastrophe which demands prompt action. An acute general peritonitis rapidly follows, especially in the perforations of any of the hollow abdominal viscera which greatly increases the difficulty of diagnosis. Classic descriptions appear clear cut and final, but bedside visits frequently fail to confirm. Some assistance may be gained if consideration

is given to certain suggestive signs, symptoms and historical data.

The Ruptured Appendix.

The ruptured appendix is probably the most common of the acute conditions named. The sequence of epigastric pain or distress, nausea or vomiting, and tenderness over McBurney's point, always means appendicitis. If this is followed by an acute general abdominal pain and muscular rigidity, a rupture probably has occurred. This pain is severe but not of the intolerable, prostrating type. The muscular rigidity and tenderness are greatest in the right iliac fossa. A history of appendicial indigestion or of previous attacks can usually be obtained.

Ruptured Tubal Pregnancy.

A ruptured tubal pregnancy associated with shock and severe hemorrhage belongs to the class of emergency surgery. The pain here may be very acute or it may be only moderately severe. Fortunately, about 90 per cent. of tubal pregnancies are so situated that when rupture occurs the hemorrhage is limited or controlled by local conditions, and the life of the patient is saved. An acute pain having its origin on either side in the lower abdomen, local tenderness with little or no muscular rigidity, a decrease in red blood cells, associated with the familiar history of menstrual disturbances and the vaginal physical findings make the diagnosis fairly certain.

Gall Bladder Disease.

Occasionally an acute gangerous gall-bladder happens primarily or, as is more frequently the case, is grafted onto the ordinary gall-bladder infection. The pain is epigastric and upper right abdomen. It is usually severe and there is tenderness and muscular rigidity at and below the ninth costal margin associated with nausea and vomiting. The clinical picture may be severe enough to resemble that of a ruptured ulcer. A history of gall-bladder infection and associated digestive disturbances, or probably recurrent attacks of typical gall-stone colic, will assist in diagnosis.

Acute Intestinal Obstruction.

The clinical picture of acute intestinal obstruction varies in different cases with the cause and location of the obstruction. This obstruction may be of two types, inflammatory and mechanical, between which it is often difficult to decide. Indeed, both may exist. In the first, however, peritonitis is present from the beginning and obstruction is the terminal stage. In the second instance the obstructive symptoms come first and peritonitis develops 24 to 72 hours later.

The general symptoms cannot be too vividly fixed in our minds. There is usually a severe umbilical or general abdominal pain and tenderness. Vomiting quickly follows and occurs at intervals, resisting treatment, bilious at first and later fecal. Distention develops in second 24 hours. There is comparatively soft belly wall and possibly visible peristalsis and palpable distended coils of intestines if the obstruction is mechanical, and a general muscular rigidity if the case is inflammatory. There is absolute constipation after the efferent bowel has been emptied. The pinched, anxious facial expression, restlessness, hurried chest breathing, rapid feeble pulse, cyanosis and mental apathy are late symptoms and indicate the collapse and toxemia of a general peritonitis. Without a history it is not possible to interpret this picture.

Perforation.

Acute perforation is one of the most serious complications that can happen to a gastric or duodenal ulcer. I know of no condition in which the picture of apparent health is so quickly changed to one of gravity; none so surely fatal if treated tentatively, or hopeful if treated surgically within the first six hours. The pain is sudden and agonizing and may be either epigastric or generally abdominal. If the patient is seen at once the picture is one of prostration, pallor, anxious expression, sweating forehead, vomiting, and rapid, short breathing. The patient is usually suffering too much to give a history. One hour after perforation the pain continues, the symptoms of shock are improving and there is tenderness and muscular rigidity in the upper right abdomen. This protective muscular rigidity extends down the whole right side and is more firm and marked than from any other cause. The abdomen becomes tense and is retracted. The escape of bowel contents into the abdomen rapidly produces the symptoms of an acute general peritonitis, which accounts for the frequent diagnosis of appendicitis.

A history of chronic painful indigestion beginning a number of years before, the attacks coming on periodically and lasting a month or two, the pain of a definite character and location, bearing a definite relation to the taking of food and with a definite method of relief; these facts combined with the acute condition at hand may assist in making the diagnosis.

Pancreatic Diseases.

Probably one-third of the pancreatic diseases are of the acute and sub-acute variety. The clinical picture varies in intensity according to the grade of infection and certain predisposing

individual causes. The very acute type ends fatally with great rapidity. The pain is sudden, violent, agonizing, more or less persistent and located in the epigastrium. Vomiting immediately follows, is recurrent, and cannot be controlled. The vomited material may contain blood; at no time is it fecal. Shock and collapse with associated depressed circulation and cyanosis of an exceeding grave character is present from the beginning and continues to the end. There is positive persistent epigastric tenderness and there is some rigidity limited to the upper abdomen. Some epigastric distention occurs within the first 12 to 24 hours, which develops rapidly and becomes general in the second 24 hours. This tympanitic distention with partial inhibition of peristalsis sometimes leads to the diagnosis of acute intestinal obstruction. The pulse and temperature is that of grave shock. The patient looks extremely ill and shows evidences of profound toxemia. There is at this time no palpable tumor mass and gangrene and necrosis are terminal stages. Death occurs within 2 to 5 days. Early drainage of the pancreas has saved a few of this type, but it is always a grave question to decide whether or not the patient is any kind of a surgical risk. See my paper on "Acute Pancreatitis" in *MEDICAL COUNCIL* for February, 1916.

Ulcers.

In making a diagnosis the possibilities of acute perforation of a gastric or duodenal ulcer must be remembered. A careful history of previous digestive disturbances will be helpful here. In ruptured ulcer the evidences of shock and collapse will begin to clear in several hours after the first acute pain and is followed by evidences of a general abdominal rigidity of a positive and board-like character which in 12 hours is associated with the picture of a general peritonitis.

All these patients demand relief. Morphine should be given, then diagnosis reached.

In the final analysis of the clinical picture of acute abdominal crises, prompt abdominal surgery is the treatment in every case. A familiarity with the various signs and symptoms of both acute and chronic abdominal lesions, a persistent effort to train one's self in the correct interpretation of pain in its various phases and relations and a prompt recognition of the gravity of the case—these are the goals for which we should strive.

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The Treatment of Pneumonia.

By JOHN E. WEAVER, M.D.,
803-5 Granite Building,
ROCHESTER, N. Y.

I was greatly interested in the note of Dr. Unzicker, on "Phlebotomy in Pneumonia," in the January COUNCIL. Fortunately, however, phlebotomy is not necessary, as pulmonary depletion is easily accomplished without it.

Regardless of what the exciting cause of the pneumonia, and no matter how regular the bowels have been, in every case there is refuse in the colon and toxic products are being manufactured there and absorbed into the system.

Alkaline Treatment.

In pneumonia, or any other acute febrile movement, not traumatic, it matters not so much which bacteria are present, as that they are scavengers and thrive on what the blood furnishes them and cause local inflammation and fever. Is it not also true that alkalinity in blood and body fluids makes for fluidity? Hence alkalinize urgently in pneumonia, with its tendency to consolidation, as also in membranous diphtheria, etc. Also clear the digestive tract early and have the patient fast, but drink plenty of cold water in the early and threatening stage.

First-Aid Treatment.

The grouping of symptoms after a very superficial examination and a few leading questions and taking the temperature decide the type of case; and it matters little whether you have a case of severe cold, grippe, or pneumonia, so far as the nature of the first-aid is concerned. If the chill has not completely passed, if there is remaining any chilliness, give a hot bath or hot pack as quickly as possible. While that is preparing I give at once ten to twenty grains of bismuth subcarbonate, and five to ten grains of phenacetin, with a copious drink of water, and order four ounces of castor oil to be procured and administered as soon as convenient, to be followed daily, if effective—within a few hours if not—with oil or Epsom salts; for ultimate continued improvement of the case will be contingent on whether the toilet of the colon has been efficiently accomplished.

Now I cannot tell why four ounces of castor oil acts so like a specific, when the same amount in divided doses causing more stools does not, but it is so. Possibly the large dose so completely fills the caliber of the large intestine as to smother all bacteria present.

One reason is that quick large movements draw more fluid from the circulation, deplete the lungs and so relieve the local congestion, as would local blisters or blood-letting.

About four doses of the bismuth are given, four hours apart. This seems to act in the stomach as a sedative, and antacid.

About two and a half to five grains of phenacetin are given every hour or two until pulse is appreciably softened. If you get a little blueness of face, lips or finger tips, stop it. Usually not many doses are required to obtain an appreciable softening of the pulse and lowering of temperature, when it is to be stopped.

Understand, I would never think of using it except in that combination—bismuth, water *ad lib.*, castor oil, fasting.

The Earlier Stages.

Now I substitute for it four tablet triturates (very small doses) "ferrum phos." (phosphate of iron) every hour until free perspiration and approximately normal temperature are attained.

One would think that this is an inadequate dose to produce results, but there is only 3 or 4 grams of iron in one's whole blood supply, and possibly the decimal dilution triturate is suitably dilute to be used immediately by the red blood cells. Iron is an oxygen-carrier. Give no water to wash these tablets down; dissolve on the tongue.

I give not a particle of food until the tongue is clean, breath sweet, pulse soft and patient hungry. Liquid food until convalescence.

I use ammonium chloride and ipecac when expectorants are necessary—after the fever subsides and the rusty sputum disappears. Hypo-sulphite of soda (2 ounces in a pint of water, giving a tablespoonful every hour or two) will have an excellent effect when the stomach is foul.

Of course the above treatment is for sthenic cases seen early. Such cases treated as I outline seldom have pleuritic involvement. Of course I also use other indicated remedies in suitable cases, as well as counter-irritation.

[We regret that lack of space and other subjects crowding in at this season of the year have compelled us to omit case records and some general discussion from Dr. Weaver's interesting paper.—EDITOR.]

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The Basic Principles of Autotherapy.

By CHARLES H. DUNCAN, M.D.,
233 Lexington Avenue,
NEW YORK CITY.

The author believes that spontaneous cure of an infectious disease is due to entrance into the blood-stream of the unmodified toxins developed in the focus of infection. When this occurs, the power of the blood-serum is raised, the activity of the leucocytes stimulated, with the resultant development of specific antibodies.

Autotherapy is based upon Nature's method of cure; for by autotherapy the patient is inoculated with unmodified toxic substances elaborated within his own body by the action of the infectious agents upon his body tissues. In autotherapy the physician simply inoculates the patient with his own unmodified toxin complex, which may be obtained by filtering the pathogenic exudate of the disease through a Duncan Autotherapeutic Apparatus. The bacteria-free filtrate contains all the toxins from all the microorganisms, both causative and complicating, that are in the focus of infection, and when this is injected hypodermatically the same thing occurs as when Nature cures, namely, the power of the blood-serum is raised, the activity of the leucocytes is stimulated by the action of specific antibodies, to overcome or combat all the microorganisms from which the patient suffers.

Antibodies Are Developed.

As more antibodies are developed when toxins are placed in the subcutaneous tissues than when they are introduced into the blood-stream, and as by autoinoculating the patient early the physician may often "steal a march" on the slow natural method of curing the patient, autotherapy has distinct advantages over the natural method of cure. The unmodified toxin complex, therefore, is the ideal therapeutic agent for treating a patient suffering with any localized and possibly non-localized infectious disease. Furthermore, my unmodified toxin complex therapy has distinct advantages over any form of vaccine therapy, for the reason that the unmodified toxins are the parent toxins or set of toxins that are in the patient's body, the therapeutic value of which is unchanged or unaltered by the mechanical process of filtration. On the other hand, every step

From the warm reception of my article in the February issue by the earnest readers of THE MEDICAL COUNCIL, the writer has accepted the kind invitation of the Editor to write a series of articles for THE MEDICAL COUNCIL on the subject of autotherapy in its application to the various infections, to appear periodically in its columns during the coming months.

in the process through which a vaccine passes in the laboratory during its preparation alters or changes its therapeutic effect in the tissues. If a vaccine cures, such is not because of laboratory manipulation, but in spite of it. There is no certainty of cure with any heterogenous toxin or set of toxins. Experience for upwards of a century clearly proves this. Administration of stock conglomerate vaccine is shot-gun therapy, pure and simple, and is wholly unscientific.

Acute Infections.

In all acute infections where it is possible to obtain the toxins, a speedy cure may be expected. With few exceptions, all chronic infections are benefited more by the autotherapeutic remedy than by any other curative agent.

Autotherapy is being used successfully by thousands of physicians throughout the world. Autotherapy is a new drugless system of therapy based upon Nature's method of curing the patient. It cures all acute local bacterial disease quickly, for, in the words of physicians who have used it on themselves as patients, it acts "like magic." The general rule of autotherapy is given for the practical guidance of the physician.

Rule.—If a dilution of the pathogenic discharge of any localized infection be filtered through a Duncan Autotherapeutic Apparatus and the immunizing bacteria-free toxin complex contained in the filtrate be injected subcutaneously, antibodies specifically corresponding to all the infecting microorganisms will tend to be developed.

The rule is universal in its application, and far-reaching in its effects; it has caused an evolution or upheaval of our ideas of medicine. Autotherapy covers practically the whole field of medicine, as pertaining to bacterial infections, and much that lies entirely without its borders.

The writer desires the reader to keep in mind particularly the fact, that the filtered exudate is universal in its application to all bacterial infections; there is a corollary or subjoined rule, as it were, that is applicable also to infections in certain localities. It is not necessary to cure the patient by means of the principle embodied in this corollary, but it is often more convenient, less trouble and desirable. This corollary is applicable to those infections which are connected in no way with the alimentary tract or respiratory system.

Corollary.—If the crude pathogenic exudate of a patient suffering with an extra-ali-

mentary or extra-pulmonary infection be placed in the patient's mouth, antibodies specifically corresponding to all of the pathogenic microorganisms in the locus of infection will tend to be developed.

Alimentary and Respiratory Infections.

The writer was the first to successfully employ the live pathogenic microorganisms as a curative agent. Healthy tissues develop the maximum amount of antibodies, and in alimentary and respiratory infections the mouth and stomach are already involved, and therefore do not respond as readily to the oral administration of the exudate coming from the mouth as the tissues of the alimentary tract respond to the toxic substances coming from without the tract.

There are other reasons why this is so that are not in the province of this paper to discuss. There is no danger in this treatment, if the technic given by the writer be scrupulously followed; seldom will the temperature rise higher than 100° F. In the oral administration of the exudate or the filtrate, there is often no appreciable systemic disturbance.

The formulas given are for a robust man; these will necessarily have to be altered according to the individual requirements of the patient. It is obvious that a very old patient, or one with little vitality or children will require proportionately smaller doses. Treat the *patient and not the disease*. A diagnosis is often unnecessary as far as cure is concerned. Infections of vascular organs, as lungs, pelvic organs of women, the brain, etc., may usually be cured quickly because of the rich supply of blood. In infections of tendons, and fistulas, etc., where the blood supply is scanty, the treatment will often have to be continued over a longer period of time.

Cure the Patient; Then Theorize.

The first duty of the physician is to cure his patient, no matter what remedy it is necessary for him to employ. In treating a patient autotherapeutically it is necessary for the physician to hunt for the infecting microorganisms that are always accompanied by a corresponding set of toxic tissue substances, as enzymes, ferments, etc. The activity and therapeutic value of a bacteria toxin is intensified when in the presence of its corresponding set of toxic tissue substances. The pathogenic exudate may often be obtained from the orifices of the body, as the nose, the ear, the mouth, cervix, from the surface of the body in infectious skin diseases. In many chronic conditions, the antigen or curative remedy may be obtained from the centrifugalized blood-serum. In cerebro-spinal meningitis it is obtained from

the spinal canal. The writer will pause here for a moment and state that acute cerebro-spinal meningitis will be aborted almost every time, if from five to ten drops of the cerebro-spinal fluid is drawn into a sterile syringe, and then, withdrawing the point of the needle to a point just beneath the skin, injecting the contents there. If the patient is not seen or the case not diagnosed until after an onset of several days, there is liable to be pus in the fluid; under these conditions it is usually necessary to filter a dilution of the exudate and inject the filtrate subcutaneously.

The practicing physicians who do not use autotherapy in the treatment of their patients are not using the best agent we have at our command in fighting disease and death.

Some Opinions.

Dr. J. T. Elder says: "Incantations, amulets, drugs, the serum of immunized animals, dead and living cultures from heterogeneous organisms and their toxins, have all been tried with varying degrees of success; as witness our mental scientific friends at one end of the fighting line, and von Erlich at the other.

Physicians of all schools, since schools began, have depended upon autotherapy." The hot applications wet or dry, the poultice of mustard, flax or mud, hydrotherapeutics in any form, what are these but autotherapeutic measures * * * and mighty good measures, too, as we all know; in fact, were it not for a few specifics, it could be said that all measures, medicinal and osteopathic, for the cure of infectious and contagious conditions depend on autotherapy.

"As to the therapeutic change which takes place within the human body during an infection we know very little." But we do know the reaction to the toxins developed in the patient's body is the specific curative reaction to the disease with which the patient suffers.

It has remained for autotherapy to sound the everlasting truths, "The remedy comes from within;" "Nature is the healer;" "Medicine is lacking;" "One by one science is cutting the links in the chain that binds the human mind to the rocks of ancient beliefs," until now, one of the most ancient and cherished relics of the past—our ideas of medicine—has been smashed by a new conception of the truth underlying "The First Law of Nature," i. e., Autotherapy.

Autotherapy is the keynote in the great symphony of truth that is now reverberating in the medical world, is awakening the minds of men to new vibrations and new conceptions of truth in its application to the art of healing. Autotherapy is the physical religion of the body and has

come to the physicians hands to stay; for the principle upon which cures made by its use rests and is founded upon simple natural laws.

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Senile Constipation.

From a Physiological Viewpoint.

By ALBERT C. GEYSER, M.D.,
Professor of Physiological Therapeutics, Ford-
ham University Medical College,
NEW YORK CITY.

Nowhere in the domain of medicine is it of more importance to keep in mind the laws of physiology than in the diseases of the aged.

Here the highest point of physiological development has been attained. It is or has been at its maximum; it will never be any higher, perhaps never again as high.

In order to appreciate fecal retention in the aged we must constantly keep before us: first, the normal process of digestion; second, the deviations from this normal process that appear to have taken place in each individual case.

It is perfectly normal for food products to enter the digestive tract, to remain there for a time, to undergo certain digestive changes and for the residue to be eliminated within a reasonable time.

The entire process of normal digestion allows itself to be studied under four distinct heads, the secretory, the resorptive, the motor and the excretory activities.

Secretory and Motor Disturbances.

Our special attention is called to the interference with the secretory and the motor activities.

Digestion begins with mastication and ends with defecation. Man is an omnivorous animal.

The digestion of carbohydrates begins by mastication and insalivation, that of the proteins by the combined action of the gastric juices in the stomach, while the fats after emulsification are taken care of in the small intestines.

Each of these three anatomical divisions receive assistance from numerous sources, such as the salivary glands, the gall-bladder, the pancreas and other glandular structures.

While the mouth, the stomach and the intestinal tract each appear to have a separate duty to perform, nevertheless they are all interdependent upon each other.

Failure on the part of one of these puts a burden upon all the rest. Such a burden may therefore not become manifest until at some distance from the source.

If carbohydrates, especially in admixture with a liberal quantity of cellulose material, have not been properly masticated and insalivated in the mouth, the burden of this defect may not be noticeable until such a pabulum arrives into the transverse colon.

Having escaped the proper reduction by the digestive secretions owing to their inability of penetration, the 44 or more varieties of germs in the large intestine cause decomposition with the formation of gases. Distention and colic lead to atony and retention.

The remedy lies not in digestants, sedatives nor cathartics. They may be of temporary benefit but can not take the place of mastication. Perhaps a set of artificial teeth instead of the old decayed stumps would do more good.

For the purpose of digesting cellulose the stomach need not be taken into consideration at all. This is solely the duty of the intestines and the most difficult one that they are called upon to perform.

Atonic Retention.

There are patients who are suffering from atonic retention, but they can eat practically anything and everything in the way of fruit and vegetables, yet never have a loose stool. There are others where the intestines are more responsive, more easily irritated; in these even the ordinary vegetables and fruit properly masticated and insalivated will pass through quickly and practically unchanged.

In either of these cases a diet rich in coarse, fibrous substance is obviously contraindicated.

If the fats fail to be emulsified because of a lack of bile, neither the pancreatic nor the juices from the small intestine can perform their function.

This failure may not be apparent until such

fats arrive into the rectum and are discharged as a fatty diarrhea. Because such a patient is suffering from diarrhea should he receive a constipating remedy like opium or bismuth? It would be far better, assuming that fat must be administered, to supply artificially the lacking bile salts.

Meats, especially muscle tissue and other albuminous substances, although well masticated, if they fail to be acted upon by the gastric juices cause general constitutional symptoms far removed from the source of origin. On the other hand, there is no food stuff that is so easily and so thoroughly made use of in the intestinal tract as meat, providing gastric digestion has been normal.

A patient with a coated tongue, foul breath, headache, pains in various nerve trunks, in fact suffering from a general copremia, does not require aspirin, phenacetine nor analgine, etc. A brisk cathartic is of temporary value; if protein must be taken, the administration of dilute hydrochloric acid and pepsin until the tongue clears will be physiological.

A few of the digestive secretions can be artificially supplied with at least temporary benefit. Much more lasting results will be attained by a suitable diet, one that is in harmony with the physiology of the patient. Above all do not use the so-called "intestinal antiseptics;" they are unphysiological, therefore of questionable value.

Motor Function.

With the act of mastication begins the motor function upon food. The chewing of the food serves a double purpose, that of division, especially for the meats, and that of insalivation for the carbohydrates. Food must be chewed; therefore it should not be bolted, neither is it necessary to make a fad of it by Fletcherizing. When the bolus of food is prepared for swallowing it passes into the esophagus.

Once within the grasp of this organ a reflex phenomenon makes its appearance. Throughout the intestinal tract, wherever there is a source of irritation a muscular spasm is set up behind the point of irritation, while a relaxation occurs in front of it.

By this procedure the bolus of food arrives at the cardiac end of the stomach in from four to six seconds. In patients with a neurotic temperament, or when an irritation exists in the cardiac end of the stomach, or atony of the muscular wall of the esophagus, it may happen that this organ dilates but fails to contract from above downward and we have an accumulation of food with regurgitation, vomiting and further inability to swallow. In other words, we have cardio-

spasm. By recalling the laws of physiology and by a process of elimination, we arrive at the cause of this symptom. The remedy is obvious.

When the food has arrived within the normal stomach, a more or less rhythmic motion of this viscus assures a proper mixture with the digestive secretions. When the acidity of the contents has reached a sufficiently high degree of acidification on the gastric side of the pylorus, it causes a relaxation, and a prepared portion of the food passes through this opening. The acidity on the duodenal side of the pylorus causes an irritation with consequent closure. By the time that the next portion of the stomach contents is properly prepared, the admixture of bile and pancreatic juice has caused an alkalinity of the duodenal contents. This process is repeated until the entire meal has passed out of the stomach. The time consumed depends upon the particular meal ingested, the average being 2½ hours.

Intestinal Motor Function.

The intestines, like the stomach, are endowed with a double motor function, one for mixing and the other for onward propulsion.

A diet consisting principally of hydrocarbons and cellulose material, other conditions being equal, passes through more rapidly than a diet consisting mainly of meat; the average time required being about 4 hours.

The general contents of the small intestines, which is of a more or less fluid consistency, passes through the ileocecal valve into the ascending colon.

In the ascending portion of the colon we have the double motor function, the one for mixing, the other for the onward propulsion or a true peristalsis.

As soon as the residue arrives into the transverse colon the fluidity is less and less and with it the mixing motion is lost.

From now on we have only true peristaltic motion. Under ordinary circumstances the food residue remains in the large intestine from 12 to 14 hours.

Should any part of this contents through the tonic contractions be forced in the upper end of the rectal pouch, immediately a reflex stimulus causes a desire for voiding the stool. The act of defecation is a very complicated one, being partly voluntary, nervous involuntary, motor and reflex.

When we are dealing with retention due to some failure in the motor element, it will be traceable either to an inflammatory process somewhere, which as a natural defence would inhibit all motion, or else it will be an atonic condition usually below the ileocecal valve.

Adhesions and Bands.

If you wish to be real up-to-date, you must consider adhesions, bands, peritoneal folds, cobwebs, etc. As a rule all you have to do is to *consider* them and then leave them alone.

If the atonic condition is of recent origin and tonic contractions can be produced with mild galvanic or faradic currents, using the water electrode within the lumen, they may be productive of much good. Where the atony has gone beyond this point such treatment is contraindicated. Much comfort can be secured by a diet having a small amount of residue matter. Such a patient should not be told to drink large quantities of water for the purpose of softening the stool. Water does not pass out by the way of the rectum. The contents of the entire intestinal tract up to the transverse colon are always in a fluid state. If that fluid is absorbed, no matter how much a patient drinks it will be absorbed. On the other hand, rectal douches are clearly indicated. If we keep before us the physiology involved, many therapeutic measures, perhaps indicated in the younger individual, will appear as a fallacy in the aged.

Mineral Oil.

For a routine treatment of retention from almost any cause there is one that stands out pre-eminently as safe and sane. The daily administration of a chemically pure mineral oil is free from every objection. It is not absorbed; it is not changed chemically; it acts simply as a mechanical lubricant.

My own preference is a mineral oil to which has been added some of the volatile oils. Oil of orange and oil of peppermint exhibit in a marked degree the power to keep the entire gastrointestinal tract reflexly contracted.

After all, we can not change the senile physiology; it has been with the patient a long time and served him well, but we can remove the friction and make life's passage easy.

It seems to me that in senile constipation it is not so much to know what to do as it is to know what not to do.

231 W. 96th Street.

A Neglected Field in Medicine.

Some of the most profound minds have been devoted to the study of business and economics; but this is a neglected field in medicine. This journal hopes that this department may merit attention from our most thoughtful men, and that they may send us high-grade and constructive articles based upon actual practice, as controlled by correct medical ethics and not by mere commercialism.—EDITOR.

“Abnormalitis.”

By ESTILL D. HOLLAND, M.D.,
Dugan-Stuart Bldg.,
HOT SPRINGS, ARK.

The title of this paper is unusual, the object of the paper is unusual, but its deductions are none the less true.

“Abnormalitis” is a disease very prevalent in America, very acute in some localities and sub-acute in others. It is caused principally by the psychological effect of specialists (or more often pseudo-specialists) finding that a patient isn't normal in every way.

The “Normal.”

To hear some physicians talk of the “normal” would lead one to think that there was some set standard that everyone should maintain; that an individual was a machine of a standard form that with the proper care should hold an exact equilibrium in an exact way, any deviation from this set standard being considered an abnormality, or disease, which requires immediate treatment.

They seem to forget the fact that the *normal* is always the mean and that the patients examined, who were used in arriving at the *normal*, very likely differed a good deal.

If we found that the normal blood-pressure for a man of fifty was 145, systolic, it would not indicate that every normal man we had examined who was fifty years old had a blood-pressure of exactly 145, but it would show that after having examined a number of men under the same conditions we had found that while some might be 160 and others 130, the average was 145.

The same holds true in speaking of a normal gastric juice when we refer to a gastric juice that contains the digestive elements in a certain proportion.

Some Illustrations.

I have just been treating a man who was suffering from neurasthenia, and who had been told that his temperature was two-tenths of a degree below normal, and told in such a way that the *sinister significance* would not be overlooked.

I had another patient who thought he had a high blood-pressure and after having been treated for six weeks the physician told him he was out of all danger as his diastolic pressure had dropped six points.

This physician was a friend of the patient and had no ulterior motives, still he shook his head and looked grave when he first discovered that this man's diastolic pressure was six points higher than it was when he said everything was fine.

It might be well to add that this patient was sixty-three years old, that his systolic blood-pressure was never over 148 at the highest and that the diastolic pressure was from twenty-eight to thirty-five points lower.

Both of the above patients had "abnormalitis" in an acute form; they were sick from mental anxiety, and No 2 was really in a lamentable condition.

View the Whole Patient.

There is no way for a specialist to arrive at the individual normal unless he takes the whole patient into consideration, and it seems that the better informed some physicians are on their specialty, the less able they are to do this.

Medical instruments of precision were never intended to make a diagnosis and for the very reason that they deal with an animate subject, which is influenced by countless conditions; they are absolutely incapable of making a diagnosis except in extreme cases, and they are not usually required in such.

I have no fault to find with the different instruments of precision and I use most of them constantly in my practice, but I do not know of any of them that could make a diagnosis for me unless it showed one of its extremes.

A blood-pressure of 160 would not excite me in the least unless I had an opportunity to examine the patient and found that he was not the sort of a subject that should have such a pressure; on the other hand a blood-pressure of 140 in some individuals would convince me that there was danger.

A subnormal temperature may mean something in a certain patient and it may also be found in an athlete.

Pulse-rate does not necessarily mean anything unless the normal for the individual is known. I went to college with a foot-ball player who was remarkably well developed and whose pulse averaged fifty-four beats a minute.

Comparing People.

If physicians would stop and think they would realize that what is normal for a brick-layer would be pathological for a book-keeper, but still we see people all the time who have been told they were abnormal because they vary a fraction of a point or several points from what is considered normal.

The most trying patients one sees are those who have been infected with "abnormalitis" by having had their attention called to some peculiarity of some organic function such as blood-pressure, temperature, pulse-rate, etc., and physicians are becoming entirely too prone to lay the responsi-

bility on a machine and call everything that doesn't exactly tally with the text-books abnormal.

Instruments of Precision.

Instruments of diagnostic precision are intended to be used in the same way that laboratory methods are used, that is, as confirmatory evidence and as a means of exact comparison. By taking an exact reading of any sort on a patient and then taking it again in a week or two you can obtain valuable information and can often confirm a diagnosis, but you can seldom make a diagnosis with any instrument during one examination.

There is a saying about having to pull a little pig's ears off to get him up to a trough to eat and then having to pull his tail off to get him away, and it seems to me that this expresses the condition that a great many of us are in in regard to instruments of precision. We had a hard time seeing the necessity of them and we are going to have a harder time to keep from putting too much reliance in them.

Telling the Patient His Condition.

There are only a few nervous conditions in which a physician is justified in telling a patient how sick he really is, and it is hard to think of a justifiable cause for telling the average man that his blood-pressure is high or his pulse abnormal.

The knowledge of his condition is bound to make him worse in either case and one can not go into a hospital without seeing patients feeling their pulse when they think no one is looking.

Why are they feeling their pulse for its rate and tension? Because someone has told them that they are abnormal and explained to them that their pulse-rate is too fast or slow, and that the tension is too high or low. They have also been told that they must not feel their pulse which means that they will lie awake nights to do it.

A nervous man can run his blood-pressure up twenty points and his pulse-rate up thirty without half trying, and every time he examines himself he does that very thing and the faster and tenser it gets the more excited he becomes.

I have a woman patient now who has an abdominal aortic aneurysm which is of tremendous size and is sure to rupture in a short time. Should I tell this woman her condition so that she can lie in bed and watch the abdominal pulsations realizing what they mean? I haven't told her, in any event, and am not going to. I have told her husband that she may die any minute and can live but a short time at least, but she came to me for stomach trouble and thinks that she is being treated for that.

I can do everything for her under the head of stomach trouble that I could do if I told her the truth and I haven't the added disadvantage of the psychological effect of her knowing the real condition. In other words I do not have to treat the "abnormalitis."

I feel sure that this woman will live longer and be happier while she does live than she would if I told her the truth, yet this is a parallel case to telling a man with a slightly high blood-pressure that his pressure is high.

Life Insurance Examinations.

I think the life insurance companies are largely responsible for fixed rules of diagnosis, and as long as they expect a physician to make a *real* examination for an applicant for from \$3.00 to \$5.00 their results will be just as inaccurate as their methods, and as long as physicians are willing to make such examinations for from one-fifth to one-eighth of what they would charge an individual for the same examination, we can expect to have routine diagnoses and routine physicians.

The practice of medicine in Hot Springs is largely made up of the treatment of chronic cases, or cases that think they are chronic, and to see some of the reports they bring with them, purporting to show their abnormality, would make one either want to laugh or cry.

"Abnormalitis and even fractional "abnormalitis," is a real menace to the health and happiness of people who think they are sick, and is a banner drawing card for Christian Science fakers, and every physician should vaccinate himself against inoculating his patients with such a disease.

Messerli is inclined to the view that parasites in the drinking water cause goiter, especially where the disease is common, as in Switzerland. He has, from time to time, published four series of cases treated by continuous mild purging and disinfection of the intestinal tract. Any suitable purgative may be given, while salol is the anti-septic of choice.

Acidosis.

Acidosis is the newest pathologic devil. This can be admitted readily enough as regards diabetes; but Boston has rung it in as the fiend of the "grippe epidemic." Glycosuria and ketonuria go with increase in flesh. Therefore, keep of spare build and acidosis will not get you. Next thing we will hear about is acidosis in tuberculosis and the necessity to avoid forced feeding.

Therapeutics from the *Racial Standpoint.*

The Indian.

By BACIL A. WARREN, M.D.,
First Lieutenant, M. R. C., U. S. A., in Charge
U. S. Government Hospital,

LEUPP, ARIZ.

(Continued from April issue)

The Yea'beachy Dance.

In my first paper on the Indian I told you that I would describe a yea'beachy dance that I attended. Now that I come to the description I find words utterly inadequate for the purpose. Moving pictures of the performance, together with phonographic records (The Government has made such records) of the songs and incantations would be next best to actually seeing with your own eyes and hearing with your own ears, as I did. However, such a word-picture as I may be able to give you, together with some description of the significance of the masks, sacred cords, sacred meal, medicine rug, the sand picture, disk or altar, eagle's feathers, etc. (used in the dance), may be of interest.

Crossing the Little Colorado River and going about two miles north from the Indian school and agency headquarters at Leupp, Ariz., about 8 P. M., we came to a group of Navajo hogans, eight big, blazing bonfires arranged in the form of an ellipse open at one end, and perhaps 150 Indian men, women and children, sitting, standing, and lying on the ground around the bonfires.

We took a position between two of the bonfires at the closed end of the ellipse and near a hogan within which there were said to be special ceremonies carried on which no outsiders were allowed to see, and we sat down on the ground among the Indians to wait for the dancers and singers. It was a cool night, but the ground was warm from the heat of the great bonfires which are kept burning all night. We could hear a monotonous chanting coming from the special hogan above referred to. The Indians had arranged their wagons, buggies, and in some cases, tents and beds around and backed up to the great ellipse of bonfires and were themselves sitting, lounging, and lying on the ground between and around the fires chatting and laughing, and in some cases feasting on mutton and

other things. Some enterprising Indians had purchased a supply of candy, apples, oranges, etc., at the nearest trading store and did quite a flourishing business, at big prices, at this "sing" or dance, whichever it might be called.

Incantations.

Soon several Indians went around inside the circle of the fires and called out for every one to get back out of the way, as the dancers were now coming. All those who were inside the circle got back, and before long we saw eight Indians coming in a line, single file, from the open end of the ellipse. An Indian placed a chair in front of the door of the special hogan spoken of before, threw over it a medicine rug, and out from the hogan came an Indian woman—the patient to be treated—and seated herself in the chair facing the direction from which the dancers were coming. As the file of dancers came nearer we saw that in the lead was a medicine man known as "The Fat Medicine Man." He was dressed in ordinary Indian clothing and came slowly forward, saying something apparently to himself in a low, monotonous voice. An interpreter informed me that he was speaking in the language of the "ancient holy people"; that none of the other Indians understood that language except the medicine men, but that he was saying a sort of prayer. The medicine man and his file of dancers headed straight for the woman seated in the chair and she arose as they approached and held up a sacred bowl which she had brought with her from the hogan. I learned afterwards that this bowl contained the sacred meal so commonly used by the Indians in various ceremonies. As the line of Indians came up and stepped in front of the Indian woman patient they were within fifteen feet of where I sat and I could easily study their make-up.

Their Peculiar Make-Up.

As before stated, the medicine man was dressed in ordinary Indian clothing. All the others in the line were naked except for moccasins, G-strings, sacred cords across their chests, masks, and head dresses of eagle's feathers. Each one had a tanned fox skin suspended from the belt and G-string behind apparently in representation of some animal with a long tail. Their bodies had evidently been covered with some whitish substance which gave them the appearance of having been white-washed. I would not be surprised if they had utilized for this purpose the oxide of zinc ointment with which the medicine men and other Indians commonly supply themselves at the Government hospital.

The head dresses were made up of the masks

and a number of eagle's feathers fastened to the masks and in the hair. I did not have a chance to make close examination of the masks, but they were grotesque in appearance and looked from a little distance to be a combination of some kind of skin and hair or fur and made in rough representation of the head of some animal.

Legends and Superstitions.

I believe the Indians have a particular legendary belief or superstition regarding each of the articles, masks, sacred cords, sacred meal, medicine rug, the sand picture, eagle's feathers, etc., which gives to them a particular significance. In a general way they are considered "good medicine" by the Indians when used under the direction of a medicine man who knows how to use them to bring out the virtues they possess. Indians gladly pay a dollar each for eagle's feathers, and medicine rugs are comparatively scarce and high in price. Into the medicine rug is woven the figures of one or more rattlesnakes. The sacred cords have numerous knots in them and it is claimed by some students of our American Indians that these cords correspond very closely to the rosaries of the Roman Catholics. The sacred meal is used not only in various ceremonial dances but in various other ways.

Sacred Meal.

A common custom among Indian women is for the wife to throw a little of this sacred meal toward the sun each morning before commencing the day's work. It is her morning prayer.

The medicine man left the file of dancers and stood beside the patient and made a long talk in a low, monotonous voice. This the interpreter told me was a continuation of prayer. Then the medicine man and the patient advanced to a place near the head dancer and the medicine man asked the patient numerous questions in a low voice and she answered. After this the medicine man sat down on the ground within arm's reach of me and the dance commenced.

I speak of the medicine man sitting down near me because after a while he saw me, recognized me as the *peh-cone a-zeh* hostine (white medicine man) and leaned toward me, proudly informed me in his own language that he was conducting this medical work.

The patient now took sacred meal from the bowl which she carried and, passing along the file of dancers, threw a little on each one; then she returned to her chair and sat down.

The head dancer then commenced the dance by letting a sudden, high-pitched howl escape him. It sounded as instinctive and animal-like, and much the same as though it came from a

coyote. Then he stamped suddenly with both feet at once on a certain spot just in front of him; then he stepped back to his place at the head of the line and stood still. The Indian at the tail end of the line now ran rapidly to the same spot which the first dancer had just left, let a coyote yip out of himself and stamped with both feet in the same manner as the first dancer had done, then ran rapidly back to his place at the end of the line. Now the first and the last dancer run rapidly from their places toward each other and just as they are about to meet each gives out a loud blowing noise from the mouth, accompanied by a throwing gesture of both arms. The two dancers return to their places but the head dancer continues the dance by turning round and round and shaking the gourd rattles of which he holds one in each hand. This is done with elaborate gestures as though in imitation of scattering sacred meal (perhaps) on the ground. Then all the dancers shake their gourd rattles, turn, and gesticulate in the same manner altogether, and the dance seems well started. They continue turning, gyrating, moving backward and forward, shaking their gourd rattles, and letting occasional yips and yells or low, long-drawn howls come out. One of the dancers, the one at the end of the line, is said to be a sort of a clown.

Bare Bodies Weird in Dancing.

After a time the dancers all stop as suddenly as they commenced, form in line, and march slowly away the same as they came. This first dance was, compared to what I had seen before in other Navajo dances, so slow and quiet that I had begun to wonder about it, but just then my Indian friend, George, informed me that that dance was a sort of a prayer, that the dancers would soon be back again, and then the real fun would commence. And sure enough it did. The succeeding dances were like the first one *only about ten times more so* and they were *not* slow or quiet, relatively or otherwise. The noises they made utterly outdid any standard pack of coyotes that I ever heard. The dancing of the bare bodies is entirely beyond any description that I could give you. It was said that one of the dancers was a woman, but I do not know about that. All wore their long hair flowing and all wore masks so that one could not positively tell a man from a woman, especially as the Navajo men resemble women in being generally very small around the waist and having relatively large hip bones.

There are many points of interest in connection with these ceremonial dances of the Indians, and pertaining to their customs, legends, and

superstitions, on which I would like to dwell at greater length, but feel that I have already taken up too much of your time with this part of it. However, I wish here to refer any of you who are interested in this subject to "The Medicine Men of the Apache," by Capt. John G. Bourke.

These papers will be concluded next month with an account of Indian remedies and methods of treatment, and an analysis of Indian reaction to remedies, etc., from the white man's point of view.—EDITOR.

Eye Affections *Resulting from* *Motor Nerve Disturbance.*

With Report of Two Cases.

By F. P. HOOVER, M.D.,
JACKSONVILLE, FLORIDA.

I have often wondered, when seeing a passer-by, or someone on a public conveyance, afflicted with a drooping eye-lid whether or not just a little proper care and attention could not have obviated the deformity if given early, even in cases resulting from paralysis, providing the patient were not too old.

I know we seldom see a well-to-do person with such a condition because they have medical attention at once, but the poorer class are not so fortunate. In larger cities the free institutions are a great boon to the latter class, but now and then, even among those who can afford to pay a specialist, we meet the same unhappy condition due, in my opinion, either not to heeding the directions given them by their doctor, or else failure on the attending physician's part to fully appreciate what gentle stimulation of the affected motor nerve may do for his patient.

Two Case-Records.

Two eye cases I have had under my care were of especial interest. Their trouble was diagnosed as diffuse clonic facial spasm. Both patients were men past middle age, one, a retired merchant, the other, a promoter; their history was as follows:

One patient had a severe cold the previous winter and was confined to his room three weeks, part of the time in bed; the cold had settled entirely in his head, which he said was swollen to nearly twice its normal size. During the attack his left eyelid drooped and he could not see quite as well as formerly with that eye. He was extremely nervous and irritable and occasionally had muscular twitchings of his face, especially noticeable on the left side. His doctor ordered him on a trip South by water to recuperate. He

came to Jacksonville and shortly after was referred to me for an examination of his eyes.

Case 2. In the fall of 1913 patient was thrown from his horse. He sustained painful but not serious injuries, was confined to his house ten days, his body was bruised, face and back scratched and lacerated, wound on left side of head necessitating several stitches. When able to return to his office he found he could not keep his left eye open when using same in perusing his mail. He also experienced difficulty in moving his head; there was no pain except in trying to rotate head. There was considerable improvement of the muscles of the head by the use of electricity and massage, but the left eyelid did not improve; he observed the pupil of that eye was smaller than that of the other eye.

Operation Refused.

He eventually consulted an eye specialist, who recommended an operation; he said complaint was ptosis, the result of injury. The patient refused operation, decided to postpone same until after his return from a business trip to Florida. While here he had an attack of tonsillitis and I was sent for. While under my care I learned history of his eye and had an opportunity to closely observe same, eventually diagnosing the trouble as clonic facial spasm; the twitchings of the face were occasional; the interval between the spasms would be of longer or shorter duration.

On examination of the eyes of Case 1, I found he was myopic; he accepted a minus 1.25 d. s. for both eyes for near vision. It was necessary to keep the lids of the left eye open with a speculum while making examination. The correction for distance was minus 2.25 d. s. for both eyes; the orbits were both about the same in size; the pupil of the left eye was smaller than its fellow.

Galvanic Current.

On both patients I used the galvanic current, at first for two minutes at a time twice a day for three days, the positive pole behind and below the left ear, with the negative sponge electrode applied over the closed lid of the affected eye. Internally I gave one-sixtieth gr. strychnia sulph. three times daily. On the fourth day applied one pole over the supraorbital nerve, the other behind the ear on left side, moving over face and neck. I did this for three minutes twice daily for ten days on one patient, and for twelve days on the other. I was pleased to notice after the three-days' treatment with the galvanic current there was a steady improvement, the interval between the spasms becoming longer.

The urine of both patients was highly acid; in one albumin was found, which was not permanent. The blood pressure of both men was high and remained so.

Both patients attained to an ability to close eye to about two-thirds of full closure.

I would add the eyes of the patients felt relief with use of a tinted lens; amber seemed to be

the preferable color; it was claimed the eyes felt weak when exposed to a bright light.

Recently I received a letter from Case 1. Says he is ten pounds heavier than when here; he seldom has a spasm; the last one was over three weeks prior and then it was slight; his left eyelid opens about normal, same as the good eye; he still uses the tinted glasses when out of doors during the day; he takes electric baths and massage once every week.

Etiology.

This condition occurs more often in males than females, and is more common in older than young people. Sometimes it is the direct result of injury to the facial nerve, and sometimes a reflex condition, the result of a disturbance in other nerve tracts. Heredity plays an etiologic part many times, but this class of nerve disorder usually reaches the nerve specialist, as should all neurotics and neurasthenics, as they require more thorough investigation and care than the general practitioner can devote to them. The mental and physical condition is most important in the improvement of these cases, but the will power, while largely contributing to the control of these spasms, will not of itself do so, as sometimes there may be from one to a great many attacks within twenty-four hours. Worry and excitement of any kind aggravate these spasms and sometimes other groups of muscles are involved in these obstinate cases. Frequently during a spasm there are noises and even pain in the ears. There are points which correspond to individual sensory nerves; they are very sensitive to pressure, the latter may suddenly abolish, more rarely intensify, the spasmodic attack; they may be found along the supra- or infra-orbital nerve, on the mucous membrane of the nose or mouth and various other places on the body.

The convulsions are usually unattended with pain, but the patient complains of a tired, exhausted feeling in the muscles affected. In some instances this disease has gone on for months, years, or for an entire life time.

Prognosis is uncertain; it is never dangerous to life.

Treatment.

The treatment in general largely depends upon the patient and how long a time he has been afflicted, and the severity of the attacks, etc. The cases herein reported were presumably the results of a reflex condition, while on the other hand we may have these cases resulting from some nerve affection direct, and where the physical condition or mentality is not fully up to the normal, or below par, so to speak.

The Shortcomings of the Architect.

I assume that Dr. Robert T. Morris is writing for the benefit of the general practitioner and, from the second paragraph of his contribution, to the beginner in the practice of medicine. While in perfect accord with the basic idea that accurate diagnosis is essential to successful therapy, his recommendations furnish opportunity for a mild protest.

The present status of medicine precludes the possibility of any one man being adequately equipped in training, necessary apparatus, time and skill to make, as instanced by the justly celebrated doctor, the required fluoroscopic, radiographic, microscopic, bacteriological and chemical examinations preliminary to prescription.

Therefore, provided the breadwinner of a family has the wherewithal to pay the freight, e'en though the pet colt and the litter of pigs must be sold to get it, he is sent to the metropolis to the specialists, who so kindly fluoro-radio-bacterio-chemico analyze him to the extent of his roll and send him back with an affectionate letter something as follows:—Dear Doctor: I have examined your patient Mr.— and find that he is suffering with a chronic dyspepsia. I would recommend a carefully regulated diet and the administration of magnesia and liquid paraffin. In case this does not bring satisfactory relief, kindly send him to me again for further examination, etc., etc.

Half-baked Specialists.

After a somewhat thoughtful observation extending over twenty years, I am forced to the conclusion that it is *not* the general practitioner who determines the majority of dissatisfied people to "go to some other doctor and then to another one after that and finally to some faker" but that the laboratory experts, the eminent consultants and the specialists, are also at fault. "I have been to the most noted specialists in my disease, spent a lot of money and found no relief, so I thought I would try —pathy," is a not uncommon expression given as sort of an apology by many who have gone to the "fakers."

The essence of this miniature diatribe is that the acknowledged specialists, laboratory men and consultants are about as much given to routine as the general practitioner; that the man with one idea is about as dangerous as the man without any idea; that we are afflicted with as large a proportion of half-baked specialists and research men as with indifferently prepared general practitioners; that the present-day specialist has no monopoly of knowledge of his subject and that he is grossly imposing upon his colleagues in general medicine and upon the public by charging extortionate fees for purely mechanical service.

Danbury, Conn.

H. D. MOORE, M.D.

OUR OPEN FORUM

A department of Current Comment, Instructive Case-Records, Short Original Articles, Clinical Discussion and Matters of General Interest.

Contributions to this Department should be short, pithy, kindly in expression, of true scientific value, and carefully prepared.

This department of the MEDICAL COUNCIL is open to free exchange of proper opinion, criticism and matters of professional interest. Space precludes printing all letters in full, but so much of those received as will interest or instruct our readers will find place here.

A Reply to Dr. Keister by an Osteopath.

In Dr. B. C. Keister's "Some Facts and Vagaries" in the February COUNCIL, there is such a preponderance of "vagaries" in regard to Osteopathy that I cannot allow some of his misleading statements to go unchallenged.

Regardless of the report of the Governor of Kentucky regarding the osteopathic schools, that State now has, and for several years has had, an osteopathic physician as a member of its State Board of Health and Medical Examiners. So far as I have been able to learn, this member has performed his duties satisfactorily.

It seems the desire of the Doctor that his readers infer that *manipulative treatment* caused *uremic* convulsions in the case he mentions. So far as the treatment is concerned, manipulation would never be more than a part of the treatment in a case of Bright's disease. The osteopathic physician would advise and use all of the nursing and dietetic care that the "regular" physician would. He would not advise nor use drugs. These are admitted to be of little or no use in such cases by many who are considered authorities in the medical profession.

That two of the "most distinguished graduates" from any of the recognized osteopathic schools evidenced the ignorance that the Doctor charges them with, I cannot believe. I would make any reasonable wager that the Doctor's informant did not fairly or truthfully state the case. I know personally some of the most distinguished Osteopaths in the State of Wisconsin and know that they will compare favorably in *medical knowledge* with the same number of medical men from any State.

Report of State Board.

I have before me the report of the Washington State Board of Medical Examiners. Out of 64 candidates, 48 passed, 16 failed. Out of the 10 Osteopaths examined, 8 passed. Out of the 40 medical graduates examined, 28 passed. This shows a proportion in favor of the Osteopaths. All had the same questions. In my own State, with a very rigid examination on all medical subjects, the number of Osteopaths failing has

been no greater in proportion than the number of medical men.

The American Osteopathic Association demands that its colleges require, as a minimum, three terms of nine months each. The minimum number of hours required is 3,731. Some of the osteopathic colleges require four terms of nine months and nearly 5,000 hours of work.

The osteopathic profession is trying conscientiously to educate a class of physicians who shall be able to treat diseases effectively by their own methods. We merely ask that our cause be fairly and truthfully stated. There may be osteopathic incompetents, but the medical profession has no more right to judge all of the osteopathic profession by its incompetents than we have to say that all medical doctors are no better than the most ignorant in that profession.

PERCY H. WOODALL, M.D., D.O.

Birmingham, Ala.

The Old Doctor and Surgery.

I noticed in THE COUNCIL a very interesting editorial on Cæsarean section *vs.* time in labor cases. Time in such cases is the finest surgeon I have ever known. He has helped me in so many tedious cases without an accident. Noting several hundred cases I have only met *one* that really should have had a Cæsarean section. A thirty-year-old primipara with small pelvis and a very large child. I did a craniotomy in this case, but have always been sorry I did it, as a fine boy was lost; yet everything indicated that it was dead, but it was not. Even after the head had been reduced, there was such a rush that the shoulders produced a complete laceration of the perineum, which was promptly repaired. I have done craniotomy where the child was known to be dead, yet *time* would have treated the case much better. The obstetrician who has too much to do to wait for a normal labor had better leave off obstetrics altogether. We take *plenty* of time with our own wives *always*. Why is this if we think it wrong? As you stated, some country doctors can teach the surgeon some things on this line, but some of us have no more sense than he has.

Appendicitis.

As to appendicitis: I remember calling to see a fourteen-year-old girl, a sister of one of our progressive merchants. She showed every sign, I thought, of appendicitis. That was 3 o'clock P. M. I told the young merchant my diagnosis and advised an early operation. He said that she had had several attacks and thought as I did; so he carried her on the 3.30 train to a surgeon who was noted for successful operations in such cases. He made a careful examination, confirmed my diagnosis and freely congratulated me on my prompt diagnosis. At 10 o'clock same night it was all over and she was resting well. But when we examined the appendix it was as healthy as

our own. I said: "Suppose we drop a bird-shot into it before anyone else sees it." He said: "Don't you see some fecal matter in it?" I said: "Why, of course."

Another, a young man who had drunk a lot of mean whiskey and had eaten a can of sardines, staggered into my office. I sent him to the hospital all drawn up with pain. I called a surgeon. In a few hours he had no appendix, but there was nothing wrong with it, except that it was cut off. Another, a lady patient of mine, who had been having ovarian pains for some time, went to the hospital and the appendix was removed. I said to the surgeon: "You never found anything wrong with the appendix." He said: "No, but it was too long, and I removed it anyway."

These were three cases that I was especially interested in; all had their appendices removed without real cause. So I decided to try the old doctor's plan and not be in too big a hurry to operate, and have gotten along nicely. Any one who can spay a gelt successfully, can cut and sew, but it requires a fine brain to know when and when not to cut.

The Value of Experience.

Of course, there are cases of real appendicitis, but they are so scarce that we need not get excited over them. I don't think I have ever seen a dead one; and right here I want to say that this talk about the old doctor running out at sixty and the young ones knowing more is *all rot*, if he has kept himself informed. He knows what the young ones do and many things that they do not.

A professor in a medical college writes to all the physicians whom and of whom he may know as to any new disease to ask if he has met and treated the disease, and if so what remedies he used and with what success. Then he teaches the young men these same facts, and when the young man comes out to practice, the older ones who practice what he tried to learn must step aside and give way to him, because he is younger and knows all there is to be learned.

Whom did the great armies in the east choose to lead them to victory in the present great war? Some old, crippled, one-armed veterans who understood war from actual experience as well as training. Our president, Wilson, is in his sixtieth year. Suppose we had a young man at the helm? Mr. Brandeis, whom he has just nominated for the Supreme Court, is in his sixtieth year. Nearly all our presidents were sixty and over. What about Gladstone and Bismarck? If you were going to cross an angry ocean on the very best ship possible, would you not like to meet a captain in charge whose head was a little frosty with experience? The sea of life, the roughest of all seas, is the only one men are willing to cross guided by the inexperienced.

H. X. RICHARDSON, M.D.

Deerbrook, Miss.

CONSTRUCTIVE REFORM

For the Practical Benefit of the General Practitioner

The Detail Man.

Necessary Reform that has been Neglected.

THE LABORATORY introduced into therapeutics adrenalin, antipyrin, arsacetin, chloral, cocaine, veronal, eserine, the nitrites, novocaine, stovaine, strophanthus and many other modern drugs. Enterprising manufacturers made them available to the physician. During the last score of years very few drugs of importance were introduced into trade until after the laboratory, either academic or private, first worked them out. But many of these original products, aspirin being an instance, have been imitated under other names, which seriously complicates the situation.

Some Censoring Necessary.

If the maker is indebted to the laboratory for the original suggestion, and if he wants to sell the product to physicians, his claims for his product should be exclusively those worked out by the laboratory and by capable clinical authorities. These claims should be set out over against a full statement of the composition of the product, its scientific justification, and the exact clinical findings reported concerning it. This being done, physicians are quite capable of determining for themselves the clinical range of utility of any such product, always aided in such determination by careful reports from special sources, such as large hospitals and experts in pharmacology and therapeutics. The final claims in circulars, selling talk and journal advertising, as well as on labels, should closely conform to the verdict of the medical profession. And these products should, unless simple antiseptics, harmless laxatives or properly domestic remedies, be exploited wholly to the profession.

All thoughtful physicians stand for these things, and it makes little difference who capably and fairly rules upon these problems, some censoring in the interest of the profession is necessary and proper, even if ultimately the Government is forced to do the censoring.

The Detail Man.

Dr. William Brady, in our issue for December, 1915, presented a paper entitled "The Detail-Man and the Diffident Doctor." A detail-man has sent in this reply:

In the article in your recent issue on "The Detail-man and the Diffident Doctor," the writer in all good faith sets forth his own personal views and opinions as definitely and universally accepted facts.

Proprietary Remedies.

Surely any man would be "diffident" toward the presentation of any other theories but his own, and the statement that "the detail-man is the greatest common factor of the proprietary medicine evil," is but the emotional outburst of a much-biased mind, for the practice of medicine would have made but little progress during the past 50 years, had not the proprietary medicine manufacturer given to a profession almost wholly engrossed in empiricism, "*ELEGANT PHARMACY*," in the form of recognized, standardized products of uniform dependable quality and value, whether prescribed in December or May, in equatorial Africa or the frozen North.

The writer of the article has overlooked another important point, which is, that there are hosts of intelligent men and women engaged in the practice of medicine who have widely different and divergent views from his, and there are thousands upon thousands of them who do welcome the intelligent detail-man, because he can present to them the results of arduous and careful scientific research and investigation.

Besides, it is reasonable to imagine that the large manufacturers of proprietary remedies of proven efficiency and worth would invest thousands in advertising them and employ representatives to present them to the profession, if they did not have the utmost confidence in the intrinsic merits of these preparations? Or would they expect physicians to prescribe them if satisfactory results were not obtained?

Truthful Presentation.

I have been a detail-man for over fifteen years, and am "still at it," having at this time a clientèle of more than 2,000 successful, independent, thinking physicians, upon whom I regularly call, and who in all sincerity welcome my visits, for I have yet to attempt to "teach" or even "bluff" any one of them.

I am inclined to believe that, in the personal experience outlined so faithfully by the writer of the article in question, the detail-man with

whom he came in contact (I was going to say conflict) was from long experience a sufficient judge of human nature to perceive that there was no interest manifested, and he immediately decided that the best way out was to humor the doctor's very evident and pronouncedly sublime "egoism," and to gracefully retire.

The writer sums up his article with a seeming analysis and a suggested "cure." He states: "The nostrum evil began at home. The housecleaning should originate there, too." I shall close my reply by asking the question, "Where is home?"

Chicago, Ill.

FRANK C. REIGHTER.

Is the Detail Man Necessary?

From the standpoint of the manufacturer, detail-men are necessary to move goods. They are sent out to get results. From the business standpoint there can be no objection to a gentlemanly detail-man—and the guild in general certainly are gentlemen—calling upon the physician to interest him in the use of certain goods. So far so good; but the ethical question arises: Are the goods honest and are they honestly represented?

Not Necessary to the Doctor.

Most of us physicians are kind to the detail-man and rather welcome a bit of change from the hearing of the woes of our patients. Then, too, we sometimes get some real information from these gentlemen. Many of them are widely traveled, are real good fellows, tell us about conditions in other towns and professional friends we have there, and they are a cheerful lot of optimists most of us like to be friendly toward.

Yes, from the *human point of view*, the detail-man is strong; but from the scientific one he is not so necessary. He knows it; we know it, and so does the manufacturer who sends him out. But science is one thing and business is another, and it is hard for us very human people to reconcile the two. Dr. Brady and Mr. Reighter are each sincere in what they wrote, and we will leave them to fight it out themselves. With good will to both, they will pardon a few remarks, as based upon long practice.

The Scientific Side.

"If it be true that 'good wine needs no bush,' 'tis true that a good play needs no epilogue." And if it be true that a good drug tells its own story, there is no need for a detail-man to make a little speech after the play itself is told—told in the laboratory and at the bedside.

But even quinine will not sell itself. The physician does not object in the least to a salesman urging him to buy his firm's make of quinine pills; but he would object to a line of fancy

talk about what quinine will do. He *knows* what it will do, and he can easily find out, if he does not already know, about the newer drugs.

Not long ago a detail-man came in to see us. His product gave a formula; but it was represented—honestly enough by the detail-man, we suppose—as dangerous to compound and impossible to get except through his house. It happened we had a dim recollection of seeing about the same formula in an old formulary book. So we got the book, found the place, showed it to the gentleman, and went to the medicine case and made it up in his presence. He had to admit that the two products, ours and his, were identical in appearance, taste and odor. This sort of thing is not justifiable upon the part of the manufacturer; and there are a whole lot of proprietary manufacturers doing this very thing in the name of "elegant pharmacy," which same pharmacy was known forty years ago. And some of the drugs in their products died therapeutically thirty years ago and are forgotten by the present generation of physicians until dug up anew by the manufacturer and detail-man. We could name a whole lot of these drugs, but don't care to do so in this present discussion.

Abusing Detail Work.

The detail-man is a factor present propagandas fail to reach. These men, often innocently enough so far as they are personally concerned, for they tell the "story" as it is told them at headquarters, pass out in doctors' offices a lot of hot-air selling talk that is extravagant, unjustified, unscientific and not in the interest of the doctor or his patients. Doctors can't take the time to verify these claims and because the detail-man is a good fellow, many accept a lot of fudge and pseudo-science that, were they to take the time to investigate, they would resent most vigorously. Doctor, be very suspicious of the detail-man who makes extravagant claims. Usually he does not know how extravagant they are. We need to censor detail work just as we censor advertising. And the detail-men should have an organization that would protect them with the truth and in telling the truth. This would check the dishonest or ignorant manufacturer and put detail-men on a better basis.

The High-Class Firms.

The really good firms don't send detail-men around with "stories" they know a good medical journal would not print for them in advertisement form; they don't mail lying circulars full of pseudo-science; they don't print house organs filled with stuff none but the ignorant class of doctors will read; they don't dig up discredited

and forgotten drugs that are cheap because not in use to any extent and exploit them as "elegant-pharmacy" products of valuable agents and simply for the money that is in it; they don't label up their stuff in patent medicine form for the accommodating doctor to introduce in a cheap way to the public—ultimately; and they don't give catchy and therapeutically suggestive names to their products or blow these names in the bottles.

But a whole lot of *the other kind* of firms do these very things, and they employ non-professional but good-fellow detail-man representatives to put it across on the long-suffering medical profession. Oh, yes, they do. We have not patiently listened to detail-men for twenty-seven years without *knowing* that this is done. It is done every day. Doctor, it is done in *your office*. Ask some of these men if their stuff is advertised in THE MEDICAL COUNCIL, and if it is not, why not?

We refuse several pages of such advertising we could have in every issue, and that a whole lot of journals carry without question so far as we know. Why do we refuse it? Because it is not in YOUR interest and is discreditable to modern medicine. As an independent journal, we think it is time for a clean-up that fair-and-for-all medicine seriously needs. But how are we to have a clean-up by medical journal effort so long as circulars full of deceit and misrepresentation that a self-respecting medical journal will not print flood the offices of physicians, and so long as the ubiquitous detail-man goes his energetic and uncensored way?

Poor Advertising

An excellent way to solve the problem would be for the makers of truly scientific products to tell to the doctors in the medical journals what they may now pay detail-men to tell. A mere card or display notice is not effective advertising; there is no human interest or selling strategy in such formal advertising, and the doctor finds nothing therein to hold his interest. Let the maker of high-grade products tell his story like the informed detail-man can tell it, but tell it in full-page advertisements in good medical journals, and it will not be long until the American medical profession will be so familiar with the good products that they will cease prescribing the bad ones or listening to the insidious pseudo-science of the uncensored circular and the good-fellow detail-man who knows nothing about the goods except his "little story."

Nevertheless, there will still remain a place for competent and honest detail work, which we will outline next month.

Sulphur and the Sulphides.

ENGLAND esteems sulphur more highly than we do and the medical men there have many more preparations of it than we do in America. The English are known to be careful therapeutists. This article will present sulphur and the sulphides from the English point of view.

Animal experimentation tells us little regarding sulphur for, as sulphur, it is wholly inert, passing unaltered through the stomach; but what the body does to sulphur brings it into quite new relationships. The alkaline content of the intestinal tract turns a small portion of ingested sulphur into sulphide, and this is active, some being absorbed and excreted by the kidneys, as sulphates, and the rest by the lungs and skin as sulphuretted hydrogen. The bowel action is to stimulate peristalsis and produce a soft and large motion without griping, while the skin is stimulated and that reaching the lung is expectorant.

The Digestive Tract.

Sulphur has been used for a host of troubles, but only the logical uses will be given here. Sulphur prevents fermentation in cancer of the stomach where the stomach juices are abnormal. In the normal stomach it does not prevent fermentation of food. In the intestinal tract sulphur has a soothing effect upon the vascular tissues, and this, added to its laxative influences, makes the drug of particular value in hemorrhoids. Anal fissures are irritated by most laxatives, but not by sulphur. Compound licorice powder is an eligible form of administration, or the B. P. confection of sulphur (Precipitated sulphur, 45; acid potassium tartrate, 11; tragacanth, 0.5; syrup, 21; tr. orange, 5.5; glycerin, 17. Dose 60 to 120 grains.) by itself or combined with senna. Sulphur lozenges containing acid potassium tartrate are on the market and serve well. Ichthyol and allied products have a field of usefulness in certain gastroenteric conditions. They are sulphur products and have been separately discussed. Sulphur waters constitute an available form of administration, especially in syphilis, not because of any specific effect upon the disease, but because they facilitate the absorption of large doses of mercury and render the patient more tolerant to it.

Respiratory System.

If the faucial secretions are abnormal, sulphur applied by a blower to the throat is decomposed; sulphuretted hydrogen is liberated and acts as an antiseptic. Jephson's powder (Precipitated sul-

phur, 2 parts; guaiacum resin, 1 part), is used for tonsillitis of rheumatic origin. In chronic bronchitis sulphur or calcium sulphide stimulates the respiratory tract and may be used, in many cases, to advantage.

Cutaneous System.

The skin eliminates sulphur as sulphuretted hydrogen. The best form for internal administration is calcium sulphide in the form of pills. Calx sulphurata is the U. S. P. name for this salt.

But it is externally that sulphur is most useful in skin diseases. Calx sulphurata is an efficient transient depilatory used in the form of a paste to remove hair from the site of operation. Sulphur is an efficient antiseptic and parasiticide in seborrhea, acne, chronic eczema and scabies. Sulphur baths are effective. Prepare in a porcelain dish the following: Quicklime, 2; sublimed sulphur, 5; water, q. s. to 100. This is called Vlemencx's solution. Use a dessertspoonful to each gallon of water in the bath. This solution $\frac{1}{4}$ to $\frac{1}{2}$ strength may be used as a paint for scabies.

Goloidal sulphur is especially efficient in the external treatment of acne. Commercial "hair restorers," which make the hair dark brown in color, are many. A good formula is as follows: Lead acetate, 1.75; precipitated sulphur, 3.5; spirit of rosemary, 2.5; glycerin, 12.5; distilled water, q. s. to 100.

The U. S. P. sulphur ointment is well adapted to general uses. Wilkinson's ointment, well suited in scabies and psoriasis, is made as follows: Sublimed sulphur, 15; precipitated chalk, 10; tar, 15; lard, 30; soft soap, 30. Camphor, resorcin, phenol, and other agents, are combined with sulphur in a host of ointment formulae. Sulphur iodide is not stable and is apt to be irritating when applied.

On page 2 of the Supplement of MEDICAL COUNCIL for June, 1915, ichthyol and allied products were discussed. These are essentially sulphur products and are of great value in a host of conditions so familiar that they may be omitted here, especially at this time, when the war is interfering with the distribution of many of them.

Other Internal Uses.

Sulphur favors the elimination of lead from the system poisoned by it. In chronic rheumatism and sciatica sulphur is commonly given with guaiacum, which is known to be effective therein; hence the use of sulphur in this disease is empirical and not upon a scientific basis. As a remedy to limit suppuration, as in boils, sulphur seems to possess advantages, and it also promotes the absorption of exudations. Ichthyol especially does this latter in a way ordinary sulphur fails

to do. It is useful in certain chronic forms of rheumatism for this reason and is so superior therein to ordinary sulphur that ichthyol is always to be preferred. The best form of sulphur for use as an intestinal antiseptic is ichthoform. for insufflation in tuberculosis laryngitis and antrum and sinus diseases thigenol is valuable.

The use of the fumes of burning sulphur as a disinfectant is too well known to require discussion here.

As before stated, sulphur itself is inert; animal experimentation guides us but little in its use. But physiological chemistry does guide us. What the body does, in health and disease, to an ingested agent is not so very hard to trace with agents so definite chemically as is sulphur. And there may be other drugs which appear to be inert and yet, by certain vital interactions, may be most valuable as drugs. Sulphur has a defined toxicology in large doses, and yet this toxic action does not guide us in its therapeutic range of activity. Most all we know of sulphur was worked out empirically; but the laboratory has confirmed many of these empiric uses as being manifestly justified.

Japanese Chemical Industries.

Japanese chemical houses are actively engaged in the manufacture of dyes, synthetic chemicals, phenol, salicylic acid, bromine, chloral hydrate, alkaloids, etc., aided therein by a Government subsidy guaranteeing the stockholders an 8 per cent. investment. Recently one of the new companies was capitalized at \$4,000,000 and the investors over-subscribed this stock many times over. We can learn much from Japan. We are indulging in a lot of talk about taking advantage of the European war to establish the chemical industries here, and doing nothing because Congress won't see the point; but Japan is pushing ahead and doing things. For rank inefficiency our Congress beats the world; and that same inefficiency is one of the principal reasons why the world is "beating us to it." Recently we wanted some drugs. When they came to hand they were mostly made in Japan, made well, and eminently satisfactory in use. Where does America come in in this? Our hat is off to Japan, but not to our own Congress.

Saves a dollar. So much more convenient.

Send \$3.00 for FOUR years
when remitting for subscription.

<p><i>While we, as physicians, desire to be scientific students and practitioners of medicine, and that is the primary purpose for which this journal is published;</i></p>	<h2><u>THE BUSINESS SIDE</u></h2> <p><i>of Medical Practice</i></p>	<p><i>yet, for the welfare of our dependent ones and our standing in the community, we must secure a fair compensation for the services we render our fellowmen.</i></p>
<p>"The laborer is worthy of his hire."</p>		

The Proposed Physicians' Exchange.

In Denver there is a "Physicians' and Surgeons' Telephone Exchange." Dr. Charles N. Meader, of Denver, writes he has no doubt it will be a success. It is, thus far, a private enterprise, originated and developed by Mrs. Lillian M. McLelland, of 100 Twenty-third street. The County Society has no connection with the project but endorses it. The membership is large and growing, and Osteopaths and others are not excluded. Dr. Meader does not believe the County Society could use it as an advertising medium under this arrangement; but he considers the proposition of MEDICAL COUNCIL an end to be worked toward and that an exchange regulated along the lines we propose could be made a very effective force for promoting the public health.

Mrs. McLelland Writes.

Mrs. McLelland writes: "I was more than interested in your paper on the Exchange, and to tell you it has been my idea from the start, only not on quite such an extensive plan. The possibilities are great and the benefits to both the medical profession and the public unlimited. The doctors have been very much interested and have been very loyal in helping me to get started. I am building up slowly, as I want only, as you put it, 'a reliable brand of medical men.' I sincerely hope you will not be so very much disappointed to know it is not under the City and County Medical Society. I have been encouraged by the members and expect to have their co-operation in this matter."

This Exchange circulates a neat card to the public, which is here reproduced.

When You Cannot Find Your
Physician
CALL MAIN 1624.
The Physicians' and Surgeons'
Telephone Exchange
Night or Day.
Nurses' Exchange Ambulance

In Los Angeles.

The County Medical Society in Los Angeles operates a Telephone Exchange in the Bradbury Building and with the same name as the one in Denver. It has been a glowing success but is strict in its rulings. But it has a free-for-all rival Exchange in Room 1131 Black Building, and it is not so strict.

Dr. William R. Lee, 318 E. Tenth St., Los Angeles, writes us very distinctly favoring the County Medical Society fathering and controlling the Exchange idea we propose; but he says he has known some very bright men who were debarred from the County Society for some fault that did not reflect on either their skill or honor, and he asks: "Would such a man be eligible for the Exchange membership?" If he were excluded he could make the Exchange appear very narrow and ridiculous. He fears favoritism upon the part of the operator, but this could be prevented by censorship and testing out the matter at intervals. He favors the public education features of an Exchange, and he believes that clean, fair treatment to the disgruntled brother in the profession by such an Exchange would break down the wall of distrust and promote fraternity.

From San Francisco.

Dr. Charles Cross, 275 Post Street, San Francisco, whose well-appointed office we once had the pleasure of visiting, believes there is need for publicity without the usual subterfuge practiced in securing it. Under the activities of a live board of medical examiners in California the quack is having a hard time. Dr. Post suggests to the County Societies the appointment of a Committee on Cordiality in each Society and the membership of the Committee to be composed of "live ones." He would have the Committee call upon members and non-members, dispensing a little of the milk of human kindness and cementing cordial relations among the doctors. Much of the newspaper propaganda of an Exchange would be news, and the papers should be

glad to get it. North American doctors need to learn from those of South America, where leading men advertise in agreed-upon ways. Or the men in North America might learn the game from the faculties of some of our medical colleges, who seem to get publicity that is regarded as ethical. The plan we propose, Dr. Post believes, would "put a crimp in the fakes." He says: "Instead of fighting the isms, pathies, religions and fakes, if the profession would take the public into their confidence it would be better for all concerned, but it would be well to make the plan benefit the entire profession instead of organized bodies here and there. At the rate the profession is now pauperizing the public, it will almost be necessary to pay patients for their time in another twenty-five years. The plan suggested by the Council is good."

From Sultan, Washington.

Dr. Thos. W. Musgrove, Sultan, thinks about 10 per cent. of doctors are unethical and inclined to take advantage of their fellows. These might make trouble, as they are flies in the ointment and must be provided for as surely as drainage in a septic wound. Otherwise, the plan may work well, once it is perfected.

Colorado Again.

Dr. D. W. Reed, Greeley, Colo., says: "In a city of considerable size, where the Exchange could have fifty or more members, the idea seems to me practical and would elevate the dignity of the medical profession." In smaller communities Dr. Reed fears the expense would be too heavy, but he considers it perfectly ethical.

Now Let Us Come East.

Dr. Henry Edwin Bell, 859 Sterling Place, Brooklyn, N. Y., says: "I am opposed to the whole proposition." He says his letter will be brief as "I think it an awful waste of time." Once the State has granted a license to practice, who should presume to decide between men? It would establish a dangerous and exclusive clique, Dr. Bell says: "Don't waste a dollar to try it."

From Ohio.

Dr. C. C. Carter, Lancaster, Ohio, says: "I have no inclination to write much on your Utopian and visionary plan. . . . This thing of continually telling the people of the danger and contagiousness of disease has been carried to a ridiculous extreme. . . . If the fool doctors would quit publishing such fool nonsense about the terrors of disease, it would be better for everybody concerned."

New York City.

Dr. J. Boyd Campbell, 700 W. 179th Street, says: "I fear it is not workable, in that it will

in time degenerate to the same degree as many other undertakings praiseworthy in their origin." Dr. Campbell instances the hospital situation in New York City as an illustration of such degeneration.

Connecticut.

Dr. A. D. Ayer, Madison, Conn., thinks the plan might be made to work to a certain degree, but fears that the experienced and truly successful physician, who for some reason was unable to pay the dues, would be militated against by the younger man with a head full of theories and no practical knowledge.

The Osteopaths Beat Us To It.

The osteopaths of our town have such an association and every Sunday it publishes some article boosting Osteopathy, such as "Osteopathy in Diseases of Children," "Osteopathy for Prolonging Life," etc. Now if these means can be invoked for *misinforming* the public, why not turn them to the worthy purpose of *educating* the public in medical matters, at the same time informing them who *are* the honest, capable ones?

I have for some time believed that the physicians of each community should conduct their own collection agency, which should at the same time furnish credit ratings to its members, thereby enabling them to lessen the professional deadbeat nuisance. This could very easily be worked into the plan you propose, making losses fewer, collections easier as well as cheaper, and at the same time furnishing a form of publicity that would educate the people away from the quacks and pathies, patent medicines, etc.

We all recognize the immense power of the printed word in convincing people's minds, but we ethical men have deliberately turned our backs upon it. Now is the time to get up to date.

E. N. WALKER, M.D.

Springfield, Mo.

You evidently believe in carrying the colors just a little ahead of the file leader. I have heard your very idea discussed by three different groups of physicians and it was the consensus of opinion that the idea was all right, *ethical and eminently to be desired.*

Ethics should expand so that the reputable village physicians can tell of their ability to relieve, in the same way that the college professor does. A full realization of our duty to equip ourselves and then inform the public will hasten the adoption of your idea.

J. F. ROEMER, M.D.

Waukegan, Ill.

Dr. O. M. Johnson, Kokomo, Ind.—I believe every physician who has any interest in himself and in the protection of public health will agree with the article.

The Medical Business Outlook is Improving.

Medicine is just as good a business as any other to the man who makes it such, and it is getting better to the man who realizes that the public expects every doctor to do his duty in an efficient and up-to-date manner. But there's the rub; some doctors don't believe this. To them, "A Doctor's a Doctor," and their mighty prerogative is the same as is that of the up-to-date man. A doctor's a doctor if he makes and keeps himself one and forgets all about mighty prerogatives. Being an M.D., is very far from being a doctor. A doctor is made new every year; yes, nearly every month. He is made new just as fast as medicine is made new; and in these days that is pretty often.

Thirty Centuries of Medicine

Any profession that has held a scientific place for thirty centuries, as medicine has, has something to it, something that the hundreds of evanescent cults, pathies and isms have not shaken and never will shake. Think of it! Christianity is only twenty centuries old. How foolish it is to get discouraged over the future of medicine!

Modern Medicine

The practice of modern medicine is making a fine living for a good many thousands of practitioners in this fair country. Despite a lot of empty talk, the public *does* appreciate modern medicine and the modern practitioner. Brothers, we want to stand by our guns and stick to the text. Don't be a medical hyphenate.

It is natural for a physician to be much concerned over his patients wandering off to the newer cults so that he falls all over himself to work the hyphenate game himself. During the centuries there have been hundreds of kinds of medical hyphenates, and there will be a fresh crop of new kinds every generation. What's the use bothering about that? Modern medicine is a great big and energetic modern phenomenon that requires great big and energetic men to measure up to it.

And it pays. What need we care if the U. S. P. deletes a lot of old drugs, if some of our pet theories play out next month, if some of our old prescriptions are shown to be inert next year, and a lot of senile old technic goes punk? Let these things go and don't worry about them. Everything changes; if they don't, they die. Cease medical growth, and you die as a doctor. Medicine was planted in a sweet soil; keep it sweet and there need be no fear of its growth in the future. But let mold or moss grow about

it, or you, and the medical sap will sour and there will be no bloom or fruit to reward the cultivation of previous pears.

Get in Line.

Last month one of our contributors, a man well along in years, told us to smile and be man-size. Splendid advice! Take it! "Laugh, and the world laughs with you; weep, and you weep alone." If the reader saw the reams of sad and pessimistic copy that comes into this office about the awful condition of medicine at large and the other fellow in particular, he would not blame the Editor if he took a nightly antidote in the form of the tired-business-man show or something else giddy and enlivening. Please have pity! Medicine is *not* going to the dogs, even in a business way. On the contrary, it is bracing up and getting better every year. Are you?

Enlarging Opportunities

As a business, medicine is getting along better than are many lines requiring more capital. This is the day of skilled service; and people are willing to pay for it, and do pay. Everything nowadays exacts skill in the worker. Modern medicine saw that tendency long before several other lines of businesses and professional activity saw it, and modern medical schools, hospitals and literature are conspiring to open up to the active and ambitious medical man the possibility of an exact and technical attainment that makes him tower head and shoulders above the old empiric routineist.

And don't forget that modern medicine has brought to light a host of new diseases, a great wealth of resource, a multitude of new methods of treatment, and an entirely new set of diagnostic measures. We do a lot of things now the "old family doctor" never heard of; and we get paid for doing them. If *you* don't do them and get the pay, it may be because you don't know how to do them, won't learn, or let the other fellow beat you in the practical use of them.

So don't blame modern medicine, or the surgeons who get the "cream of the work," or the "medical aristocracy," or the hospitals that are so great a public necessity, or Rockefeller, or Russel Sage, or Carnegie, or the Harrison law, or the detestable little geezers of counter-prescribers, or the board of health, or any other Jonah; but just face the music like a man and sweeten up.

There's an awful lot of medical business to be done. Why not get after it in an up-to-date way and keep a stiff upper lip?

Best Current Medical Thought

A Practical Service.

Instead of the ordinary disconnected abstract matter, this is a department of current medical thought that is painstakingly planned out and worked over each month, to have the greatest practical value in your everyday problems. Not nearly so easy to do, but it

gives the reader a service of real value; in a nutshell, the kernel of current medicine, concise and usable. Practical points gathered from many and varied sources, grouped under the three important heads: Surgical Scissors, Practical Therapeutics and Clinical Diagnosis.

Surgical Scissors

As wielded by Douglas H. Stewart, M.D.,
F.A.C.S.

The scissors of an editorial office are bright, keen, polished and practical. May this space imitate them and its quality be helpful.

Bacterial Flora of Trees and Men.

Presidential Address Conn. State Society, delivered by Stephen J. Maher, M.D., New Haven. *Med., Record.*

The harmless spore-bearing bacilli, often drunk with milk and always eaten with salad, have received scant attention because of a belief that no disease originates from them; but all germs known as disease carriers do spring from them. Our present faith is that one germ must be the ancestor or descendant of another germ, of the same sort. Staphylo from Staphylo, Strepto from Strepto, diphtheria from diphtheria, tubercle from tubercle and so on. What becomes of that faith if an innocent *Bacillus subtilis*, upon a greasy human skin, may become the Smegma bacillus, and this, learning to live in human cells, may destroy the latter and cause tuberculosis.

The remark upon germ-bearing salad is curious when contrasted with the claim of a certain cult that eating celery causes coughs and colds. Bacteriologists admit evolution in the microscopic world: why should its influence be denied as a force in micro-parasitic progress and change? The point to be debated is: "Do germs have a common ancestor and become differentiated through habitat and environment"? Thus far, answers are characterized by dense silence. The field is open, the champion is waiting, but where are the challengers? An attempt to convert Dr. Maher would interest a wide circle of readers.

Appendicitis Complicating Pregnancy.

Lancet-Clinic, February 5, 1916. Magnus A. Tate, M.D., F.A.C.S., Cincinnati, Ohio.

Patient, age 40. Seven months pregnant. Tip of buried appendix found. Drain passed to this. Abdomen closed. All bad symptoms ceased with drainage. Normal, full-time labor; 8½ lb. child. Rufus B. Hall, M.D., in discussion, said: The surgeon must operate. He cannot get away from that fact. Yet his better judgment emphasizes the necessity of using the least surgery possible.

This method has received the sanction of the greatest surgeons of the world. Of my own teachers, Willard Parker, did it in 1867; and when I entered the Medical college in 1879, much admiration was devoted to H. B. Sands, who had performed it a number of times. One death, eight successes. For additional information, see *Med. Record*, January 19, 1878. Bull told me he had performed it successfully a number of times. He was aspirating at first (*N. Y. Med. Journal*, September, 1873). In pregnancy the drainage method minimizes the danger to both mother and child. A subsequent operation is not at all a certainty; but even if it were, all interests are safe-guarded by the plan here recommended. How Sir. Frederic Treeves enabled a monarch to be crowned is well and widely known.

Compound Tincture of Benzoin in Surgery.

An expedient for which it would appear that the *Am. Journal of Surgery* is responsible is the collodionoid film which tinct. benzoin co. forms upon moist or mucous surfaces, mouth, rectum, weeping eczema, etc. This has been used by rectal specialists for many years. In trying it out it was found that the addition of one per cent. acid salicylic checks moisture and perspiration. Or camphor, one per cent., stimulates sluggish healing. The acid is best to diminish se-

cretion, as in unbroken vesicles. Camphor is the better to promote healing when said vesicles are broken. Each has its indications.

Practical application: A doctor just returned from a holiday a victim of a coasting accident. Teeth driven through lower lip; stitches, etc., well placed, but food, saliva, etc., would get into wound and smart. Collodion tried. Failure. Suggested hourly painting with tinct. benzoin co. This met the patient's entire approval. The only drawback seems to be that there is no satisfying or definite reason why it should form a film. That it does so, would appear to be no reason at all. The psychology of the subject is foreign to this column, even though it is curious.

Gun-shot Wounds of the Abdomen: Their Emergency Treatment.

Berliner Klinische Wochenschrift, December 27, 1915. Page, 1321. Weber Bauchschüsse im Felde Kausch.

If intestines are perforated, air is in consequence pumped into the peritoneal cavity. Make an incision to peritoneum, puncture the latter and the air will escape. Or, if it does not, do not make an incision, but avoid the hazard of an unnecessary abdominal search; place your repair stitches as close to the peritoneum as possible, and rapid and easy recovery should follow. On the contrary; if air does escape intestinal damage should be sought for, found, and repaired. Anesthesia, local or general.

This is a simple expedient the findings from which may decide questions of mortality. It is based on good physiology, too. It is an abdominal simile of the experiment known as positive ventilation. Should a perforation of the intestine assume a valve function and the hole in the abdominal wall be closed, by swelling or otherwise, air may be pumped into the peritoneal cavity to such an extent that abdominal respiration will cease. In such a condition letting out of the confined air is a step in the direction of good preliminary treatment. Possibly the air would escape if the hole in the abdominal wall and in the peritoneum exactly coincided, but contraction of the bowel, from shock, and other things, tend to displacement and to form a valve or block.

Significance of Foreign Bodies in the Tissues.

Walton Martin, M.D., New York, *Annals of Surgery*, January.

There are no foreign materials absolutely indifferant to the tissues. The very presence of the foreign body implies alteration in nutrition and damage to tissue caused by dislodgement of cells to make place for that body. The majority

of gun-shot wounds are not aseptic, only the lighter grade of bullet injuries are truly so. The foreign body has a different significance when introduced through comparatively clean skin and clothing, with low initial velocity, and receiving immediate attention; and when introduced with enormous trauma and much infection. It is a focus of infection and at the same time depresses the resistance of the tissues. Its removal removes the focus and aids the body cells to resist growth and spread of pathogenic bacteria.

Calculi in Submaxillary Gland and Wharton's Duct.

Frank S. Matthews, M.D., New York, *Annals of Surgery*, February, 1916.

Symptoms: swelling of gland at meal-times or a persistent swelling under the jaw and in floor of mouth. The larger stones can be palpated even in presence of edema. Pinhead-sized stones can be felt or seen when they slip forward into anterior part of Wharton's duct. Removal through the mouth.

Practical Questions.

PITUITRIN. Joseph Wiener, M.D., New York, says (*Med. Record*, p 301): One advantage of pituitrin, in post-operative conditions, is that it permits the use of large doses of morphine.

REST AND SEPSIS. No quotation carries the lesson any better than Keetley's Index of Surgery, page 73, Dissection Wounds: "If signs of local poisoning appear, give the limb complete rest (splinting, etc.,) and the patient a country holiday, with instructions to avoid any kind of exertion, for excitement of the circulation appears to drive the poison from the wound, inward." The articles from the war are merely variations of this. Perhaps they might be termed confirmations.

Wound Water, Wound Wash, Camphor Wine and Wound Honey, as used by German Surgeons.

The German surgeon would as soon report upon paregoric as upon these because it is more than possible that the idea would never occur to him that everybody did not know all about such things. Wound water or wash, or Theden's vulnerary, is the mist. vulneraria acida of the German Pharmacopeia. I understand it was very successful in the war of 1870. It appears in the G. P. of 1872; consequently it is only new to those American surgeons who have recently met it by chance. It is: vinegar, 6 parts; dilute alcohol, 3; acid sulphuric dil., 1; clarified honey, 2. Mix, filter, and the result is clear and yellow, turning brown with time. About twelve years

ago the present writer used it, found it good and gave it a punch as a germicide by adding chlorinated lime to it. In case anyone should wish to try it out, my recollection is that I took a mortar and glass stirring rod. Then, in the following order, stirred together the ingredients: 6 tablespoonfuls vinegar, one level teaspoonful of chlorinated lime, 2 tablespoonfuls of honey, 1 tablespoonful of sulphuric acid dil. Let stand fifteen minutes. Put 3 tablespoonfuls of alcohol in a bottle and pour the contents of the mortar upon it. The acid of the "Wound Water" destroys iodine and in aseptic wounds chlorine is not required. One thing is very clear in my mind, and that is, one old German soldier's enthusiasm when I gave it to him for chilblains and frosted feet. But he himself told me that green soap at night and Theden's water by day was the real home-made stuff for bad feet in a winter campaign.

Camphor wine (Kampferwein) is the vinum camphoratum (G. P.). It is: Camphor and gum arabic, a.a. parts, 1; white wine, parts 48. A white cloudy fluid.

"Wound Honey," "Wound Oil."

etc., are synonyms. Even the shoemakers make something of the sort and give it a name. After many trials, the writer has adopted the following formula as combining the good effects of camphor, turpentine and balsam peru. It is of value upon frozen septic, contused and lacerated tissues and does no harm to aseptic or healthy ones.

Take, in order, one tablespoonful of liniment. Camphor (U. S. P.), of oil of turpentine, of aristol (thymol iodide), of balsam peru; and enough castor oil to make a pint. Put in a wide mouth dark-brown bottle. For the first dressing, of a badly infected wound, take a dropper and fill every cavity with 1:5000 argent. nit.; let that be covered (wet) with a single thickness or turn of gauze-roller-bandage; put a teaspoonful of wound honey on the part of the bandage in contact with the wound; smear it around, and complete your bandage. Open in four days.

Emory Lanphear says: "An ointment, one part arg. nit., two parts balsam peru, and ninety-seven petrolatum, is not strictly compatible, but it is splendid for varicose ulcers.

The Surgeon and Dental Shortcomings.

Here and there, through both native and foreign journals, are scattered references to the mouth, teeth, malocclusion, etc. All that have come to hand contain matters that have been better treated by Bogue, Nodine and other orthodontists. However, inasmuch as the opinion of the average dentist seems but a broken reed in

orthodontic matters; perhaps it may be well to put the surgeon on his guard in regard to three points:

First. If the child has a high dome, or palatal arch, the teeth meet point to crown instead of flat, crown to crown; consequently one tooth will bite holes in its opponent.

Second. If the teeth are in beautiful close position at the sixth year of the child's age, there will not be sufficient space for the eruption and placement of the larger oncoming second teeth.

Third. Adenoid hypertrophy and consequent interference with ventilation will pull the teeth out of position and malocclusion, high dome, and consequent deflected septum will make adenoid hypertrophies grow larger.

Let any of the three obtain and the patient will be in the dentist's chair for life, more or less continually, unless things are left to nature, which gives better protection to germs than to man because they require it more. Nature will remove offending teeth and not uncommonly include their owner in her elimination. Mitral regurgitation and aortic stenosis is one of the methods employed. Is it not curious that the teeth are driven out by the heart-beat and, when germs burrow into the teeth, that heart-beat-machinery is so often overthrown.

Syphilis in General Surgery.

Med. Record, page 347, February 19, 1916. Edward Martin, M.D., Philadelphia.

"If within a week, or at most two weeks, anti-syphilitic treatments did not cause improvement, regardless of a positive or negative Wassermann, the lesion should be considered non-syphilitic. The betterments of a specific lesion under well-directed treatment occurred quickly. There were in hospitals at this moment thousands of patients perishing from the corrupting influence of a positive Wassermann, drained by the steady progression of a condition which called for prompt surgical relief and even more actively sapped by the long-continued and futile administration of mercury, arsenic and iodide of potassium."

The doctor's ideas seem to conflict with the old rule of faith, viz.:

If you haven't the least idea what your patient's symptoms betide, take your pencil and learnedly write. Massive doses of iodide.

As to the Wassermann, it only reacts positively to syphilis, malaria, scarlet fever, lupus, etc., and a drink of whiskey will cause its disappearance for several days; and yet Dr. Martin seems dissatisfied. Possibly he is not competent to do justice to the situation. If not, then enlighten-

ment may be obtained through a man who has first, been told that his fears are true, *i. e.*, he has a positive Wassermann; second, confessed his error to a wronged wife; third, been informed that she has a positive Wassermann and will probably lose the child which she is carrying; fourth, submitted both parties to vigorous anti-luetic treatment for two years; fifth never found any discernible manifestation of lues in wife, self, or child, nor in a second child born three years after the mythical infection; sixth, sanatoria, salvarsan, absence from business, excessive worry and other things to recall in his leisure moments.

He refers to the Schmier-Kur (inunction) as a means for turning "A man into a mammoth bed-bug with an odor calculated for a distance of one geographical degree of sixty-nine and a half statute miles." The man ought to be grateful on discovering that he had no syphilis, but he is not. People are funny that way.

In what Dr. Martin says about the Wassermann he impresses one as being sincere, but the man aforesaid appears the more earnest in his comments.

Mechanical Derangements of the Knee-joint.

Dr. M. S. Henderson, Rochester, Minn., in *Interstate Medical Journal*, September, 1915, has a splendid article upon this subject, reaching these conclusions:

1. Surgery of the knee-joint in America, at least, is still in the developmental period. More clinical reports are necessary to aid in establishing definite procedures.

2. Internal semilunar or external semilunar cartilages should be removed only when definite pathology is present (*e. g.*, fractures, definitely loosened or thickened, and showing evidences of nipping or with such a clear history that there would be no doubt as to its culpability).

3. Loose or free pieces of cartilage should be removed with the least possible trauma. This can be done in some instances under local anesthesia, with, of course, the most rigid asepsis.

4. Small incisions and early use of the leg.

5. The curved incision along the internal condylar line is usually best. In certain selected cases, the splitting of the patella, as advised by Jones and more recently by Corner, is an aid in the approach for certain loose bodies, but probably not the best for removal of the internal semilunar or routine knee surgery.

6. Patients, especially older people, having associated arthritis cannot expect to be relieved of their arthritis by operation, but are entitled to removal of the mechanical derangements when possible.

7. Under rigid asepsis and careful technique (more rigid than in abdominal surgery), there is practically no danger to life or limb.

Practical Therapeutics

Giving in concise usable form the therapeutic points from current medicine that are really of value to the busy practitioner.

Methylene Blue in Erysipelas.

In *Bull. et mém. Soc. Méd. des Hôp. de Paris*, Nobécourt urges the use of 5 per cent. aqueous solution of methylene blue as a paint to cover erysipelatos areas of the face. No dressing is applied. The pain ceases soon. Applications are made night and morning for two or three days. This drug is stated to be peculiarly efficacious in removing edema.

Mercury Salicylate in Syphilis.

This formerly much esteemed treatment has been thoroughly tried out in the military prison at Fort Leavenworth by E. A. Anderson, as reported in *J. A. M. A.*, the injections being made into the buttocks. No advantage over other mercurials was noted.

A Useful Poultice.

Dr. Douglas Montgomery, in *J. A. M. A.*, suggests this:

Take ordinary common lump starch, laundry starch, and pulverize it. This pulverization is to be done before measuring. Dissolve one slightly heaping tablespoonful of the pulverized starch in two tablespoons of cold water. Add to this one coffee-cupful of boiling water, stirring rapidly until the mixture is a thick paste. To this paste add a tablespoonful of boric acid, free from lumps, and stir well until thoroughly mixed. Fold the warm jelly between layers of thin muslin or cheesecloth and apply as hot as can be borne. A good poultice should not be too thin or it will dry; nor too bulky, or it will run. It should be slightly less than a finger thick. In order to prevent the borders drying and sticking to the surface they may be greased with vaseline, oil or zinc ointment. This poultice is not gummy like a linseed poultice, is cleaner looking, and retains heat just as well.

Sunlight as a Therapeutic Agent.

J. W. Kime, Fort Dodge, Iowa, in *Med. Record*, February 12, 1916, dwells upon the necessity of sunlight in preserving health; and he believes it does more than does the X-ray in surgical tuberculosis. In skin affections—lupus, eczema, psoriasis, etc.—the results are most gratifying. Sunlight kills the bacteria; but the exposure must be the bared skin. In cervical adenitis the results have been most marked, the light being

concentrated upon the parts, followed by a general sunbath taken nude. However, the head is protected, and the exposures are made gradually at first.

Pyorrhea Alveolaris.

Sometime ago the U. S. Public Health Service instituted an investigation of the curative effects of ipecac and emetin. The work has now been under way for about nine months and is still being pursued. In a recent number of *Public Health Reports* there is published a preliminary report on the results thus far obtained. According to this, of 190 cases examined, 187 showed the endameba and of the 187, 78 were treated for pyorrhea. None of the 78 treated lost their endameba permanently. The conditions of the gums and teeth were greatly improved in 22 cases, while 41 cases remained the same; the results were doubtful in 2 cases and 1 case became worse. Practically all that were found negative for entameba at the conclusion of the injections were found positive for endameba from two weeks to four months later, in spite of using a solution of ipecac as a mouth wash.

The report concludes as follows: "Emetin is an amebicide, but alone will not cure pyorrhea alveolaris. Less confidence will hereafter be placed in the properties of emetin or the preparations of ipecac, although it is not denied that the drug possesses amebicidal properties. It appears necessary to revert to a degree at least to those painstaking and tedious operative procedures, the efficacy of which has long been known to dental surgeons. Just how much assistance is to be expected from the ipecac preparations used in conjunction with operative measures is a question upon which further studies may be expected to throw some light."

This statement coincides exactly with the conclusions arrived at by the workers of the Research Laboratory as a result of the work with school children undertaken in conjunction with the Bureau of Child Hygiene.—*Weekly Bulletin, N. Y. City Dep't. of Health.*

Hay Fever an Acidosis.

K. E. Kellogg, in *N. Y. Med. Jour.*, holds that a general acidosis accounts for many of the symptoms of hay fever, and he treats it with drachm doses sodium bicarbonate, three times a day. The treatment was effective in 70 per cent. of his cases, and gave relief up to 90 per cent.

Neuralgia of the Head.

A. C. Howe, Brooklyn, N. Y., in *Long Island Med. Jour.*, reports a number of cases of neuralgia in which entameba appeared to be the

etiological factor, the organisms appearing in the gums, mouth and tonsils. Thorough emetin treatment, with other indicated local measures, cleared up many of these cases of neuralgia.

Diabetes.

Meltzer and Kleiner, of the Rockefeller Institute, believe dextrose to be the cause of diabetes. Dextrose is natural to human metabolism but an excess induces diabetes. The indictment is not against the dextrose of fruits and honey; but against the artificial product known as glucose or corn syrup.

Two or three years ago we wrote an editorial condemning glucose as a constant article of diet. It is not probable its occasional use is dangerous; but we have long banished it from our own table and have urged patients to be most careful of its use.

Gastroenteric Disease of Infants.

H. A. Killian, Portageville, Mo., in *Jour. Mo. S. Med. Ass'n.*, in his suggestions for medicinal treatment, urges complete evacuation of the bowels, with sodium bicarbonate as an antacid; almost complete starvation for twenty-four hours; then the use of bismuth, the subgallate being the preferable salt in these cases. Doses of 2 to 4 grains every 2 hours are given to a child of one year. Opiates are rarely needed.

The Treatment of Typhoid Fever.

Beverly Robinson, New York, in *Medical Record*, while disapproving the Brand baths, urges the free use of water, both internally and externally, in typhoid; it diminishes the toxemia. If there is any evidence of nephritis, rectal irrigations with the short recurrent Kemp tube, do much good. There is, under these irrigations, less somnolence, fever and deficient urine. A milk diet seems to increase tympitanites. If there is intestinal hemorrhage, hypodermoclysis, following a careful technic, is preferable to rectal irrigation.

While calomel is proper in the early treatment of the case, Epsom salts or castor oil is preferable later on. Moderate purgation cleanses the bowel and reduces liability to ulceration and hemorrhage. And, too, intestinal gases are toxic, causing faint heart action.

Saline infusion by the vein, when the patient is delirious and suffering from profound intoxication, may have most prompt influence for good.

Treatment of Alopecia Areata.

Richard L. Sutton, Kansas City, Mo., in *Jour. Mo. S. Med. Ass'n.*, believes alopecia areata to be due to ganglionic injury following trauma or

infection; therefore he prescribes hexamethylenamin in full dosage, with tonics of iron, arsenic and cod-liver oil. Externally phenol in glycerin serves a useful purpose, but it should be used in strong solution cautiously.

A good stimulating tonic is as follows: Mercuric chlorid, gr. 1/6; chloral hydrate, ʒ2; spirits of formic acid, ʒ4; castor oil, minims 5; oil of bergamot to perfume; alcohol (80 per cent.), q.s. ʒ6. Mix and direct: Shake well and apply to scalp at night.

Clinical Diagnosis

*Gleanings on diagnosis from current medicine.
Points you can use in your practice tomorrow.*

The Heart in Pregnancy.

Erwin H. Taylor, Pittsfield, Mass., in *Boston M. and S. Jour.*, shows that the heart does not hypertrophy in pregnancy; but the heart should be repeatedly examined during pregnancy, as uncompensated lesions are dangerous and may cause abortion from placental apoplexy. Especially look out for mitral disease. The greatest danger to the mother is just after labor, when an extra quantity of blood is suddenly thrown back upon the heart. A fairly free hemorrhage may be an advantage to such a woman. Nitroglycerin hypodermatically is the best heart stimulant in such cases.

Always make a discriminating examination of the heart of the pregnant woman.

Diagnosis of Gastric Cancer.

Chas. E. Sears, Portland, Oregon, in *North-west Medicine*, February, 1916, concludes an able paper with these valuable diagnostic points:

(1) It is possible to diagnose cancer of the stomach earlier than is now being done and at a time when it will be possible to do something for the patient.

(2) It is not possible to diagnose ulcer from cancer, by gross appearances at the operating table, better than by clinical examination; hence all ulcers should be submitted to microscopic examination when possible during or after operation.

(3) There are four factors which play the chief roles in the hopelessly late diagnosis:

(a) Patients disregard too long symptoms that are not severe before accepting or demanding a thorough examination.

(b) Incomplete examination and observation of patients presenting themselves with those symptoms.

(c) Lack of familiarity with and importance of the means of diagnosis which we now possess. Hence what we need at present is not newer

methods of gastric diagnosis but an earlier application of those we now have to the apparently mild but protracted and recurring gastric disorders.

(4) The latency of cancer is often more apparent than real.

(5) The most constant sign of cancer of the stomach are: (a) occult blood; (b) X-ray manifestations; (c) indican in excess in the urine.

A Rapid Method for the Quantitative Determination of Albumin and Sugar in the Urine.

The methods recommended by E. Lenk (*Deut. med. Woch.*, No. 43, 1915) are as follows: (a) *Albumin.* Dilute the urine four times and fill an Esbach tube with it until the mark U; add Esbach's solution to the mark R and knife-point full of powdered pumice stone. Stop up the albuminometer with a cork and turn it upside down about ten times (do not shake). After ten minutes the sediment, which otherwise requires 24 hours standing, is complete.

(b) *Sugar.* To 10 cc. of Fehling's solution add the urine to be examined and which has been warmed, drop by drop. In order to bring out the reaction, if sugar is present, more distinctly add a drop from time to time of the following solution:

Potassium ferrocyanide	15
Acetic acid, 1 per cent. sol	125..
Water	500

Allow to act for three minutes, after which the reaction is complete. As 10 cc. of Fehling's solution require 0.05 gm. sugar for reduction the quantity of sugar present can be estimated from the amount of urine added to the solution.—*Urologic and Cutaneous Review.*

A New Test for Beginning Peritonitis in Children.

Dr. Drachter says that palpation of the abdomen often gives confusing results in children, as they may complain of pain in the absence of peritonitis and the reverse. The writer has found the following test useful: The patient lies on his back with the legs extended. The right leg is raised by grasping the foot with the left hand. With the right fist, the sole of the foot is struck a light but somewhat pushing blow. A minimal impulse is transmitted to the parietal peritoneum, causing it to rub against the visceral peritoneum. In the presence of appendicitis, the little patient usually complains of pain in the abdomen, a region to which his attention has not been directed. In an otherwise suspicious case, a positive outcome of the test confirms the diagnosis of peritonitis; a negative outcome, however, does not necessarily speak against its presence.—*Pediatrics.*

COUNTY MEDICAL MAP

A Forum for the Problems of the County Medical Societies

The County Map aims to co-operate with the National and State Societies in promoting a wider interest in the County Societies, in increasing their effectiveness and in the interchange of plans successfully employed to effect these ends.

Members of County Medical Societies are invited to contribute to this department such matters as are of general and widespread interest.

County Societies publishing Bulletins will confer a favor by placing - The Medical Council - on their mailing lists.

A Splendid Library in Denver.

In anticipation of the expansion of the Library quarters, new steel stacks for books have been contracted for, which will cost \$524.00.

At the present time the Library is in a better financial condition than ever before. During the past year between twelve and fifteen hundred books have been catalogued, and the general organization has been greatly improved.

The increased facilities afforded by the large acquisitions of 1914, thanks to the liberal subscriptions of our members, has resulted in an increased patronage by our own members as well as by physicians throughout the State.

This additional work devolving upon us has made it necessary to employ an assistant, whose salary has been generously paid by the Metropolitan Realty Company.

The Library has become a valuable asset to the members of this Society, and gives dignity and character to the medical profession of this city and State, which we are sure every member realizes, and should appreciate its worth.

The Library has outgrown its present quarters, and your trustees asked for the whole floor of one wing of the building, adjoining the present rooms, and this was under consideration by the Metropolitan Realty Company until within the past month.

The company now has made a very generous offer to the trustees to erect a new building on the lots adjoining the Metropolitan building, giving the Society the whole ground floor of the Library and Meeting Hall. Plans have been drawn and are now ready for inspection.

This offer of the Metropolitan Realty Company affords us an opportunity to have a modern and up-to-date Library and Meeting Hall. The Society should not let this opportunity pass. Before accepting this offer the board must look to the Society for its hearty support and cooperation. With more commodious quarters greater expense will be incurred for current expenses and fixed charges. A large outlay will be necessary immediately for moving and furnishing the new rooms, which must be raised by special effort.—*The Denver Medical Bulletin.*

There are about 20,000 volumes in this library, one thousand of which were added in 1915, and 210 medical journals are regularly received. There are 353 members of the Denver County Society, even after it dropped 98 dead-wood members in one year. Denver is a model: we know it, for we have been to this fine Society home to see.—EDITOR.

American Salvarsan.

The supply of salvarsan and neosalvarsan in the United States is exhausted, and no one knows just when the German product will again be available to American physicians. Germany has placed an embargo on the exportation of these products but would be willing to conditionally raise it provided England and France would give assurance that they would not seize the drug in transit. In the meantime thousands of patients are suffering from the deprivation of this valuable remedy.

The Dermatological Research Laboratories of the Philadelphia Polyclinic have for over a year been engaged in original chemotherapeutic investigations in the course of which salvarsan has been incidentally reproduced. In view of the existing salvarsan famine and the suffering resulting therefrom, the director of the research, Dr. Jay F. Schamberg, and his associates, Dr. John A. Kolmer and G. W. Raiziss, Ph.D., have decided to distribute salvarsan at a moderate figure to physicians having urgent need for the remedy. The pledge is volunteered that any profits accruing from the sale of the drug are to be exclusively devoted to the establishment of a fund for further scientific research and that no part thereof is to inure to the benefit of any individual. The Polyclinic product has been thoroughly tested out on animals for toxicity and for its effects on experimental trypanosomiasis with results that are equal to those obtained from the German product. Nearly one hundred and seventy-five intravenous injections into human subjects have been given with admirable therapeutic results and with no untoward effects. In a short time a scientific report of the animal experiments will be published.

It will be a matter of patriotic and civic pride to the profession that this scientific benefaction finds its American origin in the City of Brotherly Love.—*The Dauphin County Medical.*
(Helpful Points one leaf over.)



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While in no sense a "specific" or "cure-all" its value has been demonstrated beyond question.

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The use of creosote has been neglected largely because of difficulties of administration. Calcreose, a chemical combination of creosote and calcium (contains 50 per cent. creosote) overcomes many of the objections.

Careful and accurate clinical work demonstrates that as high as 60 minims of creosote, when combined with calcium as in Calcreose, may be safely administered daily in a large per cent. of cases without digestive disturbance (reports of much higher dosage have been made).

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We want every physician who is unfamiliar with Calcreose to give it a *thorough* clinical test. To that end we will send sufficient to demonstrate its value beyond question. If results are satisfactory you will, of course, be glad to pay for it; if results are not satisfactory, we will not let you pay for it.

Don't Hesitate to order on above terms. If Calcreose is of value in throat and lung diseases you want to know it and want to use it. If you are not fully convinced of its value you have only to write us to that effect and the bill will be credited at once without question. In other words, you run absolutely no risk.

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The Formula leaves nothing to be desired; it is an ideal one. You increase the flow of bile—nature's laxative—and improve both gastric and duodenal functions. The pill acts pleasantly on both the large and small intestines, promoting prompt and free evacuation without griping.

The constantly increasing demand for "the little pink pill" is the best indication of its growing popularity among physicians, for whom it is exclusively made. It is considered by physicians who have used it for years the best anti-constipation pill made.

Price: The pills are supplied in boxes of 1,000, price \$1.00.

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I will remit in 60 days for all that are satisfactory.

Nothing to be returned, nothing to be paid, if results are not satisfactory.

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Helpful Points

Buying counsel is here practically offered by us and we believe it is useful and helpful for the Physician. What we print below we believe to be true.

Up-to-Date Products.

The Intravenous Products Company is installing extensive additions to its laboratory in Denver to further enlarge the scope of its pharmaceutical work. The new equipment includes a Zeiss ultra-microscope, analytical balances, electrical apparatus for making colloidal gold, silver, copper, etc., by the Bredig method—sterilizers, mixers, pulverizers, etc.

This company has heretofore been specializing on sterile solutions in ampoules, including Venarsen, Venosal, and other products for direct medication by the intravenous method, but is now introducing a new product, Guaiodine, for the treatment of gonorrhoea.

One of the distinctive features about Guaiodine—electro-chemically prepared iodine suspended in oil, together with Guaiacol—is its comparatively low iodine content. Extensive laboratory and clinical tests have demonstrated that the 7 per cent. iodine dosage in Guaiodine has all the therapeutic value of a larger dosage, even 25 per cent.; while the smaller dosage eliminates waste, lowers cost and minimizes irritating and toxic effects. Urethral injections of Guaiodine are said to be practically painless. This product is also recommended in undiluted form in application to open wounds or broken surfaces, as a spray for tonsils, nose and throat, etc.

This company has been growing rapidly and now has branches in New York, Chicago, Washington, Atlanta, Cincinnati, Kansas City, Oklahoma City, El Paso, Los Angeles and Mexico City. Address The Intravenous Products Company, Denver, Colo., and they will send you their 64-page book on direct medication. It will interest you and give you some helpful points.

Mineral Oil in Constipation.

By reason of its high gravity and viscosity Nujol has proved itself remarkably effective in the treatment of constipation and chronic intestinal stasis. This mineral oil, made from the finest American crude oils, is a thoroughly efficient lubricant; its absolute purity is certified to by the Lederle Laboratories. A copy of this analysis will be sent gladly on request. Address Standard Oil Co., Dept. R, Bayonne, N. J.

Principles in Infant Feeding.

Where for any reason nature's supply fails and artificial feeding must be resorted to, the food to select should be clean, wholesome, uniform in composition, easily assimilated and simple to prepare. Borden's Eagle Brand Condensed Milk fills all the requirements, and many physicians have found it an excellent substitute for mother's milk. Samples, feeding charts, and the 52-page book, "Baby's Welfare," will be sent on request. Address Borden's Condensed Milk Company, New York City.

"Baby's Welfare" is beautifully bound and illustrated and contains a vast amount of helpful information for the young mother. Your patients will appreciate a copy of "Baby's Welfare"—copies will be sent to you for patients.

(Helpful Points continued one leaf over.)

LISTERINE

In the treatment of Summer Complaints of Infants and Children

"The clinical basis of treatment is antiseptics and disinfection of the intestinal tract; not with a purpose to completely destroy the offending bacteria and their toxins, which we know to be neither possible nor necessary, but to assist the normal defenses of the body to gain the ascendancy."

"There are four principles of therapy which govern the treatment of these infections:

- "(a) To give the gastro-intestinal tract physiological rest."
- "(b) To remove as much as possible of the infective elements."
- "(c) To stimulate natural defenses."
- "(d) To reinforce these natural defenses with local antiseptics."

"By local antiseptics we can inhibit many of the pathogenic bacteria in the bowel before they enter the mucosa. The antiseptic agent must be selected with a view to certain requirements; for example, it must not be strongly acid. It must not coagulate mucin. It must not be astringent. It must be easily soluble and not upset osmotic conditions, and finally it must be non-irritant and non-toxic."

"Listerine answers to all these requirements and furnishes an ideal agent of local antiseptics in these cases. It has the additional advantage of being compatible with almost any other medicinal agent with which the physicians may desire to administer it."

The above is abstracted from a pamphlet entitled

"Acute Intestinal Infections of Children"

a copy of which we shall be pleased to send to physicians upon request

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Typho-Serobacterins Mixed (mixed sensitized typhoid vaccines) are recommended by Castellani, Broughton-Alcock, Besredka, Gay, and other prominent authorities, since they afford immunity against the typhoid bacillus and the paratyphoid A and B, which latter infections cause about ten per cent of cases usually diagnosed as typhoid.*

Typho-Serobacterins (sensitized bacterial vaccines), being saturated with specific antibodies, are attacked by the complement and taken up by the phagocytes much more rapidly than unsensitized vaccines.



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Immunity begins within 24 to 48 hours
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Freedom from toxicity.

Typho-Serobacterin Mixed Mulford is furnished in packages of three aseptic glass syringes, graduated as follows:

	First dose	Second dose	Third dose
Bacillus typhosus....	1000	2000	2000 million
B. paratyphosus "A"	500	1000	1000 million
B. paratyphosus "B"	500	1000	1000 million

Typho-Serobacterin, Immunizing, Mulford, is furnished in packages of three aseptic glass syringes, graduated to contain: First dose, 1000 million, followed at 2 to 5 days interval by second dose, 2000 million; third dose, 2000 million sensitized typhoid bacilli.

In the Treatment of Typhoid Fever, striking results are reported from the therapeutic use of Typho-Serobacterins. Krumhaar and Richardson† analyzed more than 1800 cases of typhoid; in 95 per cent of these, favorable results were secured.

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Full literature mailed upon request.

* British Medical Journal, 1915, 1445; Jour. Royal Army Med. Cor., 1911, XVI; Press Medicale, Feb. 10, XXIV, No. 8, p. 5764; Lancet, Sept. 19, 1914; Jour. A. M. A., June 26, 1915, editorial; Amer. Jour. Med. Science, 1915, CXLIX 406; Jour. A. M. A., August 7, 1915; Jour. A. M. A., July 24, 1915. † Am. Jour. Med. Sci., 1915, CXLIX 406.



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(Helpful Points continued one leaf over.)

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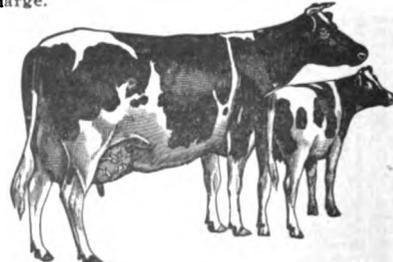
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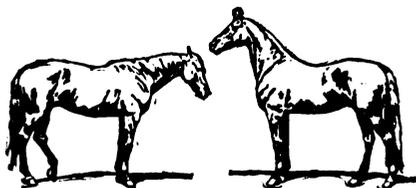
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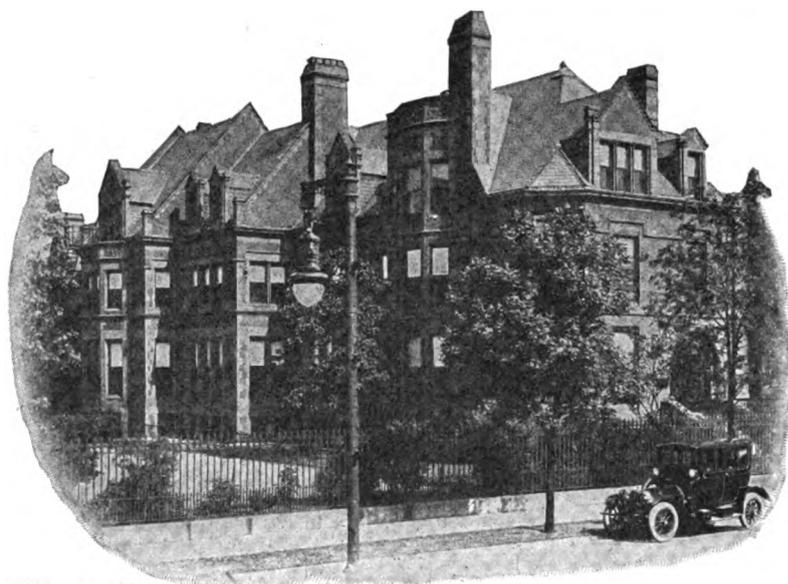
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By the same token, the human body—that little world in which a man lives and moves and has his being—needs a turning upside down very often, a "moving," a radical renovation; and the agent by which such a process is thoroughly and adequately accomplished is one of the most valuable in therapeutics. Keep in mind the "Clean Out, Clean Up and Keep Clean" principle; you know, everybody knows, that Saline Laxative (Abbott) is its concrete embodiment. Like all potent forces, it does its revolutionizing work in the intestinal tract quietly, silently, painlessly, unobtrusively, but **efficiently.**

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Vol. XXI

Philadelphia, Pa.

No. 6

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[This Supplement is markedly clinical. Be sure to read it all; it will pay you.



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Prepared Especially for the
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EDITOR

PHILADELPHIA, PA.

JUNE, 1916
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The Medical Council, Commercial Union Building, 416, 418, 420 Walnut St., Philadelphia, Pa., U. S. A.

The Clinical Rôle of Acidosis.

ACETONURIA is a term long associated with diabetic coma and should, more properly, be called diaceturia. Acidosis is now a recognized factor in many conditions not diabetic, acetone, aceto-acetic acid and beta-hydroxybutyric acid being each accorded a recognized place in the clinical manifestations of acidosis. In a way, the term is a negative one, since the pathology is really a diminished alkalinity of the blood and a faulty metabolism of fat. Physiologically from 10 to 30 mg. of acetone bodies are excreted daily, and the amount is dependent largely upon the protein ingested. Starvation increases the output, and carbohydrate feeding reduces it. The ingestion of fat increases the output. Indeed, when acetone bodies are excreted in great excess, they are derived principally from fat; and when there is a faulty metabolism of fat acidosis becomes marked.

The Diagnosis of Acidosis.

It is not safe to base this wholly upon laboratory findings; but acid indicators are readily used and their findings show, at least, the relative degree of urinary acidity. The most simple and yet adequate test is this: Dip clean filter paper into the urine to be tested, and upon the wetted area drop one drop of a solution of methyl red (supplied by chemical firms). If acid to this indicator, the spot will turn red and if alkaline canary yellow. Normal urine will not react red to this solution except before breakfast, only urine containing approximately ten times too much acid reacts. If the urine is acid to methyl red, drop a drop of para-nitro-phenol on another bit of urine-wetted filter paper. If it does not change color the urine is exceedingly, even dangerously acid; whereas if it is alkaline it changes to a greenish yellow.

Proper Food in Acidosis.

Hogan, writing upon the preparation of the patient for operation, emphasized eliminating acid from the urine. This he does by heavy feeding of bread, toast, oatmeal, grapefruit, oranges and sugar, as well as giving alkalis. Fruit acids are quickly oxidized and their ingestion is equivalent to giving alkali. Such food goes a long ways in preventing acidosis in many conditions.

Diabetes.

A diabetic is carbohydrate-starved, and may also be destroying his proteins. He assimilates properly fat and some protein; but even this fat may be partly converted into acetone bodies. Acid intoxication is a serious factor in many cases of diabetes. The Allen "starvation" treatment of diabetes includes 2 drachms of sodium bicarbonate every 3 hours if there is much evidence of acidosis. The patient is starved for 2 to 4 days, receiving nothing but water, coffee and some whiskey. After he is sugar-free, he is placed upon a special diet of "5% vegetables," that is, containing 5% carbohydrate. Later proteids and fat are added. The diabetic may maintain his urine neutral in reaction by proper food and the use of alkaline mineral waters.

Infectious Diseases.

Acidosis often develops in infectious disease, and is marked by acid urine and sweat. Such acidosis is not only incidental to these diseases but is aggravated by deficient diet, especially deficient carbohydrates. No longer do we starve typhoid cases, since we know such tactics favor acidosis. High caloric feeding, with plenty of water and alkali when needed, are indicated in many infections.

Edema and Nephritis.

According to Fischer, all the water in our bodies is held in the protein or colloids, the addition of acid making the protein take up more water. Hence, if Fischer is correct, edema is, or

may be, a manifestation of acidosis. Salts—magnesium, calcium, potassium and sodium, and their sulphates, phosphates and chlorides, being effective in the order named—reduce colloid swelling. Magnesium sulphate and sodium phosphate are the actual drugs commonly employed; but alkali should also be used, the two classes co-operating, especially in the edema of heart disease and in nephritis, which latter is classed as an edema of the kidney.

Other Acidosis.

Acidosis is often a factor in eclampsia. The

pregnant woman's urine should be kept neutral or nearly so, largely by a proper and adequate diet, outdoor air and sufficient rest. Many cases of asthma, certain skin lesions, some cases of hay fever, and others of arteriosclerosis are due to acidosis. Genitourinary affections and some gastric troubles have a high-acid factor. On the whole, the proper testing of the urine, with careful attention to symptoms will put the practitioner early on his guard as involves the dangerous factor of acidosis.

Obstetric Analgesia and Anesthesia.

TWILIGHT SLEEP having practically gone out, and many differing forms of analgesia and anesthesia in obstetrics having been offered in its place, some summation of the matter is in order.

Nitrous oxide-oxygen-ether is too complex for use in the work of the average obstetrician, though admirably adapted to hospital work. Nitrous oxide-oxygen or gas-oxygen is adapted to continuous analgesia, which is usually not necessary in the work of most men. Like the old ACE (alcohol, chloroform, ether) mixture, the admixture of gas, oxygen and ether vapor is complex and unsatisfactory at the bedside of the private house. We never quite knew what we were doing with ACE, and the same difficulty pertains to the gas mixtures.

But we *do* know what we are doing with nitrous oxide alone or with ether alone, and it is very easy to slip from one to the other in the conduct of a case.

Nitrous oxide alone quickly secures an analgesic state sufficient to obtund the pain of a uterine contraction, and it is quickly enough secured to render the gas effective if its administration is begun when the pain is felt to be impending. With this brief administration there is no cyanosis; but when the final expulsive pains which deliver the head or other presenting part come on it is better to give ether. So, then, the two work together very well. Ether may be given just as it long has been in obstetrics; but the gas may be used from the beginning of the more severe pains until the ether period arrives.

If gas, with oxygen, is used for continuous analgesia, it takes continuous attention, may increase hemorrhage, and is thought by some to be deleterious to the child. And it does not, without ether, produce a really satisfactory anesthesia in a hard labor, the effect of gas being really quite evanescent even when pushed as far as is safe.

The Apparatus.

An outfit—tank, connections, bag, and inhaler such as is used by dentists—weighs about 10 pounds, and the tank contains enough gas which, when expanded by admission into the bag, would fill a 100-gallon container. This is enough for several hours' administration, and the gas costs about two dollars.

Of course the gas-oxygen apparatus may be used as suggested here, and some men prefer it; but the simple and more compact gas apparatus serves well and is simple.

Technic.

Between pains the gas is allowed to flow into the bag until about one gallon of gas is therein, some cases requiring more, up to two gallons, the capacity of the bag. When a pain is impending place the inhaler in position and have the patient take six or seven deep inhalations rather rapidly, rebreathing two or three times more after the gas is exhausted or shut off. Do not push the gas to the point of cyanosis. Too much gas causes a stage of excitement or of anesthesia; analgesia is all that is required. Patients differ more or less, and each one learns after a few pains how to breathe for proper results. The physician should be watchful.

When the stage requiring ether comes, give it in the usual manner.

Doctor, if you have never used gas, you will be surprised how nicely it goes. It is made very pure and its administration is not at all unpleasant, and it is not dangerous if used with any discrimination. Ask one of your dental friends to show you how to handle it.

Physicians who have used gas and gas-oxygen—both have advantages and the gas-oxygen is merely a little more complex and the outfit weighs more—report no ill effects to mother or child, and no interference with the course of labor. But

with gas-oxygen there is a tendency to give too much, since there is little cyanosis.

A gas-oxygen outfit costs about fifty dollars,

and the gas outfit even less. It is a good investment for the man doing much obstetrics. Certainly it is safer than twilight sleep.

A Place in the Sun.

IF MEN LOVE DARKNESS rather than light it is because their deeds are evil. There is no longer place for darkening the counsels of medicine by mysticism, obscurantism or pendent shadows. Nature renews herself every year because she turns her face to the sun; but man, who feels so superior to Nature, goes on from sun to sun the same, and he is not renewed except as one generation gives place to another. He makes himself a strange exotic in his own environment; he sleeps in the day and works in the night. Is it any wonder his mental processes often tend to habitate the cellar of the world?

The Soul of Medicine.

Philosophy develops man's soul for the hereafter; science develops it for now. Science, with her electrical energy, X-ray, radium, wireless telegraphy and instruments that search for microbes and for stars, treads more closely on the heels of the Infinite than ever did the philosopher in the field of ethics. Philosophy makes the soul individualistic: science raises it to the status of a class-conscience, and makes of it a force in this *present* world. The soul of medicine is the collective conscience of the physicians of all ages who have turned their faces to the sun. With the soul of medicine, immortality began in the long ago, is now, and ever shall be; the soul of philosophy is sleeping, awaiting its resurrection. Medicine has ever had its place in the sun; it is a child of light, and its path is as a shining light, shining more and more until the perfect day.

The Blight of Individualism.

We need to preach the salvation of the *individual* medical soul, the one not yet awakened to class-conscience. Man is not wise enough, or good enough, or big enough to lift himself by his own bootstraps; nor is the individual medical man. We get our medical "light" not from within, but from without, by getting in step with the men who have turned their faces to the sun.

The Marchers in Medicine.

The medical sun never sets upon the path of the man who is marching with its light before him, be he commander or private in the ranks.

Some feel that we are, today, marching too fast. Not so! It is only the scouts and the road-makers who have pushed ahead so fast. Most of

us—we who are of the rank and file—are in heavy marching order and loaded down with accoutrements; and we can't push on into new territory until after it is prepared for us. Don't despise the new medical scouts and engineering corps. After while you will be on their ground, if you keep marching with your fellows. Don't despise the research laboratory, the big medical foundations, the leaders of thought, the "ultra" scientific and specialist journals, the advanced special institution, the "heavy" books, the advanced reform movements that seem so iconoclastic; for these are the scouts and the engineering corps of the army, and they are necessary.

To You Is the Victory.

There is a big fight ahead. Already the skirmish line is in action; the cavalry is deploying over a wide territory; the heavy guns are roaring, and you are impatient because inactive. But soon the charge will sound, Brother, and the victory will be yours. Keep in the ranks. Don't drop behind!

Who Is the Enemy?

Four hundred million dollars—more than the Panama Canal cost—is spent each year by the people of the United States on medicines not prescribed by physicians nor recommended by them. This is 80 per cent. of the whole outlay. Think of it! Doctors, you are doing but 20 per cent. of the prescribing in this country. From the business point of view, the patent medicine interests of this country are vastly greater than is the whole medical profession. What a situation! Can you blame us for refusing to foster the so-called "ethical proprietary" that is either now, or preparing to go, on the list of the patent medicines? This is one enemy we must fight.

Then, too, take the new-born cults and isms practiced by men without any adequate training. It is estimated they are doing one-third as much business as is the recognized medical profession. This is enemy number two.

Also there is the medical quack, that conscienceless harpie that is daily swindling the people in the sacred name of science. This numerous and discreditable class are mostly members of our own profession; and it is to our shame that we have not before this found a way to put wholly out of practice this enemy number

three. They, too, are collecting a large proportion of the money that the public is foolishly spending, the proper proportion of which should be paid to reputable doctors, for the reputable doctor comes vastly cheaper than does the quack.

There is one drug store for every four physicians in this country—altogether too many. So many stores can't live and be what they ought to be and what the American Pharmaceutical Association is trying to make of them. It is a hard situation, and many of these stores must be classed as enemy number four; but not all by any manner of means, for there are hosts of high-grade and reputable druggists.

How Shall We Fight?

We should fight *fairly* and in the *interest of the public at large*. People in isolated districts need domestic remedies; and many toilet articles, simple laxatives, mild antiseptics, etc., are entirely proper articles of trade in the drug stores. These proper lay proprietary products excepted, we should wage unrelenting warfare against the others. The cults and isms should be fought on their own ground. Whatever is of *value* therein we should *promptly adopt*. Nor should we fight any individual who is trained in the fundamental sciences of medicine, whatever he calls himself, and who is giving honest and competent service to the sick and injured; but we should encourage the honorable man associated with a one-sided line of practice to broaden out in his own interest and that of his patients, preferably by coming regularly into the medical profession. The quack is beneath contempt and simply needs drastic suppression by taking his license to practice away from him. We should cooperate more with the reputable druggist, helping him to eliminate the discredited members of his own profession, and we should uphold the National and State laws regulating the sale of drugs. We should fight through *publicity*, mainly exercised by boards of health and associations of reputable physicians.

The Enemy at Home.

The poor medical schools that gave utterly inadequate courses of instruction were graded up or eliminated—or most of them were—by publicity. We should eliminate the few remaining ones that show no tendency to elevate standards.

There is also much talk about poor medical journals. And the poor ones are not necessarily the small ones.

Some journals of much pretension are published simply with the idea of putting up enough "*front*" to beguile a profitable advertising patro-

age, and readers are only an afterthought, a sort of necessary evil.

Here is the keynote of the whole question:

"Service to *READERS*, on every page from cover to cover, the one guiding aim"—is the proper formula for any good medical journal, whether it be small or large; whether it be a journal of "ultra" scientific or of specialist character and restricted circulation, or a journal of essentially practical, every-day helpfulness for the General Practitioners and of wide circulation.

There has been marked improvement in some medical journals. There is room for further improvement, and always will be, even in the best medical journal published, if there ever can be *one best*.

You can't solve the problem by dividing medical journals into classes and saying a certain class is good, a certain other class is bad. There is real, vital need for different forms and types of medical journals, supplying different needs of the medical profession.

But an educated physician certainly has sufficient perception to tell whether a journal is published primarily to give "*SERVICE TO READERS*" or whether readers are an afterthought, a sort of necessary evil.

If the individual physician will refuse to continue as a subscriber to *any* medical journal that he feels is not published primarily to give "*Service to Readers*," the problem will be solved.

Such a journal *must be a good journal* in its particular field if it is to be financially successful enough to continue in existence.

The problem of the out-of-date and relatively incompetent practitioner is one we should face kindly but bravely. If he will allow, something should be done *for* him; if not, something should be done *with* him. We should try to help him as a brother. Perhaps his conditions have been so hard that it was impossible for him to keep a place in the sun. This is a problem for the County Medical Society to face in the most kindly but *constructive* spirit.

Putting a Soul in Business.

We trust this article shows the fundamental reasons for any complaint of poor business for the medical profession; but we believe medical business is improving by reason of reforms and an increase in efficiency already instituted. There is a vast deal of medical business to do—honorable and necessary practice along modern lines; but the recognized medical profession is doing only a *relatively small* portion of it. This is to *our* disadvantage and to that of the *public*.

We need many reforms. We are busy now reforming conditions within our own ranks and concerning our own professional efficiency. We need to remember that medicine has a soul, and each one of us try to live up to its best traditions. We need to put this soul into our business relations with our patients and with our brother practitioners. We need to go *frankly before the public with our message* and let the people see we are acting in *their* interest. Above all, each one of us needs to take his place in the sun.

The time has come for each and every doctor to remember that, merely because he has the legal right to write M.D. after his name, does not impose any obligation upon the public to support him. There are certain economic penalties even *medical* incompetence cannot hope to escape.

Get the reforms at home well established, and the public will help us to eliminate the various common enemies we have discussed.

Do these things, and there will be little complaint about the hard economic conditions under which we labor.

The Treatment of Eclampsia.

Recent thought is unfavorable to the use of chloroform in eclampsia, morphin in full dosage doing better, depressing the nervous system and decreasing metabolism. Fresh air or oxygen, preferably the latter, is indicated in every case.

Hypodermoclysis of sterile normal saline dilutes the toxins and produces diuresis. Venesection also reduces toxins and lowers the blood pressure. Remove from 5 to 30 ounces, according to conditions.

The anesthetic of recent choice, when emptying the uterus in eclampsia, is nitrous oxide with oxygen, ether being a good second choice.

Repeated enemas are necessary, the "one, two, three mixture" being in favor. It is made as follows: One part glycerine, two parts magnesium sulphate, and three parts water. Some authorities wash out the stomach and give two ounces magnesium sulphate by mouth.

Two drugs rapidly losing favor in eclampsia are croton oil and veratrum, as both are depressing in the doses requisite.

Hot packs tend to exhaust the patient and are not used as largely as formerly. Hot stupes to the loins, cupping over the kidneys, or a digitalis poultice, may be used in anuria. If complete, decapsulation may be necessary. Ice caps to the head, quiet and rest are of importance.

As will be noted, this is quite a departure from the old treatment; but it is rational and effective.

France Is Doing More than Fighting.

France was industrious before the war, and she is working over-time now. She is busy making the things she used to get from Germany and is getting ready to sell these products to us. Here is her program: Training an army of chemists, looking over her patent laws with the aim of reforming them, getting ready to make coal-tar intermediates, educating the public to use French goods and to give France a chance to make them, organizing Government-controlled trusts to make highly specialized products, preparing to balance up her tariff, and arranging for coöperation between Government and industry. If the only way to learn German efficiency is to go to war with Germany, perhaps we better join the Allies. If Germany is wise, she will keep us out of it; for, if the United States ever takes up German efficiency in earnest, there will be some doings. How bombastic we are, and how inefficient! An approaching presidential election that blinds Congress to everything else will cost us the loss of a promising chemical industry unless the brush with Mexico does to Congress what is needed, makes it forget politics and remember the Nation and its industries. War will prove to be a great business reviver on the other side, even for the doctors. It is to be hoped we have a better plan here than war; but it will have to give us a tremendous jolt to succeed.

Medical Preparedness.

Doctors are getting scarce in England and Europe, both for military and civil service. There is little likelihood of a numerical deficiency here, even in time of war, should that dread event overtake us; but we had a lesson during the Spanish-American war we should call to mind, and that lesson is that the average physician in the United States is utterly unfitted for service in camp and field. This country needs to train its young doctors in camp and military hygiene; and there is especial need to give attention to economics in medicine, so the rank and file of medical men be kept truly efficient. It is very bad policy to keep our physicians ground down by hard conditions. The country might need them.

Always check a diarrhea in pneumonia; it weakens the heart. After an initial dose of castor oil, if needed, restrain the bowels with 1-10 grain doses of morphin. Fortunately, morphin tends to sustain the heart. But look out for fermentation in the bowel, and give salol.

Therapeutic Notes.

Magnesium salts show inhibition as the dominant action.

Calcium and magnesium salts are biologically antagonistic.

Magnesium sulphate subcutaneously is effective in the treatment of tetanus.

Eight parts of paraffin and 2 of petrolatum, applied hot, renders gauze non-absorbent, to a degree, and non-adherent.

Diphtheria carriers carry the bacilli in the crypts of the tonsils. Various antiseptics applied give slow results. Tonsillectomy is sure.

Kaolin mechanically removes bacteria with which it comes in actual contact, but it possesses none but absorptive influence and is not an anti-septic.

Nixon, of San Antonio, reports that chaparro amargosa comes next to emetine in the treatment of amebic dysentery. He uses the fresh infusion. This is an inexhaustible American drug. We believe it contains amargosin, also found in *castella nicholsoni*.

Goetsch claims that corpus luteum extract has a stimulating influence on the female, and a retarding influence on the male, sexual development. He suggests the administration of pituitary extract to help bring about normal sexual development. Anterior lobe extract causes increased weight and sex development; the posterior lobe extract retards such development. Hence use anterior lobe extract.

Haskins has shown that while hexamethylenamin dissolves uric acid in a test tube, it cannot be given in sufficient dosage to have much effect in the body in this direction. He believes alkaline diuretics of sodium bicarbonate in reasonable quantities will act better. Theoretically hexamethylenamin will even dissolve calculi of uric acid, and large doses will, for a time, reduce gravel; but these large doses cannot be kept up.

There is need for a scientific study of intravenous medication. There are certain advantages inhering in the method, such as the unchanged drug reaching the tissues and promptitude in effect; but commercial interests are overstating the matter and inducing the practitioner to use the method rather indiscriminately. There is, of course, always a degree of danger in intravenous administration, which is to be discounted in case of vital need. But shot-gun intravenous products are no more scientific than are similar pharmaceutical mixtures.

July issue one of Practical Helpfulness

Discriminating editorialship is necessary to make any technical journal a safe guide to the reader. Physicians want accurate information along lines they can use in practice. MEDICAL COUNCIL aims to supply this need, believing that the well-informed physician is alone able to compete in this present strenuous age. We can't afford to cater to the half-cooked, erratic or one-sided in medicine. Neither can you, Doctor, if you aim to make your living from the practice of medicine. Read our July issue and you will find it full of level-headed and helpful articles you can actually apply in practice.

The **Intravenous Treatment of Cancer** is on the medical horizon, and our heavy editorial will tell about it. **Autotherapy** is interesting our readers, and an unbiased discussion of it will appear in July. **Oral Hygiene in its Wider Range** will carry a definite message.

ORIGINAL ARTICLES

The **Use of Superheated Steam in the Treatment of Superficial Cancer**, by Dr. Wm. J. Gillette. Dr. Gillette has gotten some surprising results. It is an intensely interesting article—well illustrated.

False Doctrines Concerning the Stomach, by Dr. D. W. Collins, is a protest by an experienced clinician against the current ultra-surgical trend in gastroenterology. This is a striking and incisive paper that gives comfort to the therapist.

Leg Ulcers, by Dr. A. B. Cloak, answers many questions physicians are asking. Many readers have asked for an article upon this subject. This paper is practical and to the point; a valuable article.

Convulsions in Children, with Special Reference to Spasmophilia, by Dr. J. Rosenthal, is a thoughtful paper of marked clinical value to every general practitioner.

CONSTRUCTIVE REFORM

Temporarily departing from the discussion of drugs and therapeutics, this department for July will present an able paper upon **Constructive Reform in Social Welfare**, by Dr. Geo. H. Tichenor. If there is space, other subjects will be discussed.

THE BUSINESS SIDE OF MEDICAL PRACTICE

July will carry a number of short papers, among which may be noted these: **Getting Results**, by Dr. A. D. Hard; **What Does Medical Freedom Mean?** by Dr. Joseph Lebenstein, and others.

A CHALLENGE

Doctor, if MEDICAL COUNCIL is not giving the most for a dollar of any General Practitioner's journal in the field, we challenge you to show us which one is beating us. But please remember this is a *Whole-Field Journal of Modern Type*, not a so-called "practical journal" that ignores modern trends and the necessary scientific elements. Our motto is *scientific but practical*.

The following papers are contributed exclusively to this journal. Republication is permitted if credited as follows: MEDICAL COUNCIL, Philadelphia.

ORIGINAL ARTICLES

Sentences, like sunbeams, burn deepest when most condensed.

We are not responsible for the views expressed by contributors: but every effort is made to eliminate errors by careful editing, thus helping the reader.

Blue Sclerotics:

*Their Relation to Multiple Fractures in Childhood.**

By CHAS. E. REMY, M.D.,
AINSWORTH, NEB.

In this paper appears a true contribution to medical literature, and an important one. Has any reader of this journal knowledge of similar cases? If so, please report full details.—EDITOR.

When we have brought to our attention cases of multiple fractures in children, our first duty lies, of course, in recognition of the etiology. We have to consider in this relation the various diseases of metabolism in which fragility of the bones occurs, as rickets and scurvy; certain nervous diseases, as general paresis, locomotor ataxia and anterior poliomyelitis; certain intoxications, as phosphorus poisoning. A special form also appears among the insane. Fragility of the bones may result from lues, osteosarcoma, multiple myelomas, or multiple echinococcus cysts (Osler). But we have no intention of entering into an analysis of all these varying conditions in this brief paper. Suffice to say that practically all of the above mentioned diseases will reveal local bone lesions explanatory of the condition. Our particular interest lies in a discussion of those cases of fragile bones occurring concomitant with certain manifestations known as blue sclerotics.

Differentiation.

This rare condition, so far as I am able to determine, was first differentiated from the various forms of osteoporosis and bone caries in 1833 by Lobstein, and long went by the name of Lobstein's disease. In describing the condition at that time he characterized it as "an idiopathic form of brittle bones without demonstrable local lesions." Strange to relate, while this peculiar condition aroused some discussion as from time to time occasional cases were reported, yet it was not until the year 1900 that Eddowes recog-

nized, and published a paper calling attention to the peculiar blue sclerotics appearing synchronously with the bone lesions and suggesting that they hold a place of importance in the symptom complex of osteopsathyrosis.



PLATE 4, FIG. 1—Eyes of the Blue Sclerotic.



PLATE 4, FIG. 2—Normal Eyes.

Recent Literature.

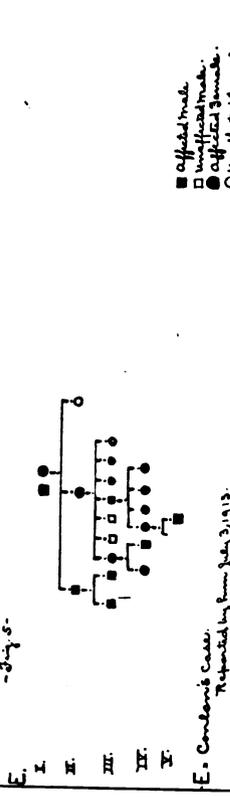
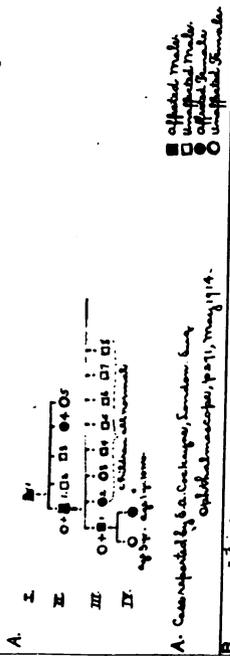
Recent literature is very skimp indeed upon this very interesting condition, and the few reports that we have are so deficient in detailed information as to be almost lacking in value. For instance, it will be noted in the accompanying symbolic diagrams (Plate I, Figs. 1, 2, 3, 4 and 5) that no distinction has been made other than that certain individuals of the family represented, showed signs of osteopsathyrosis. Now we assume in relation to the particular cases here represented, that as the writers were discussing in particular the blue sclerotics as a symptom they intended to show in their diagrams those in whom the blue sclerotics appeared. But this being true we have no data whatsoever as to how many members from their respective families

*Read before the Northwestern Nebraska Medical Society, at Crawford, Neb., March 21, 1916.

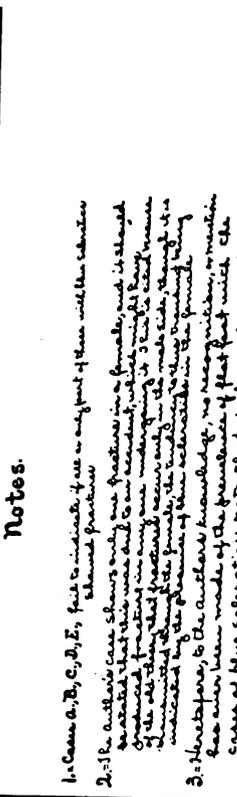
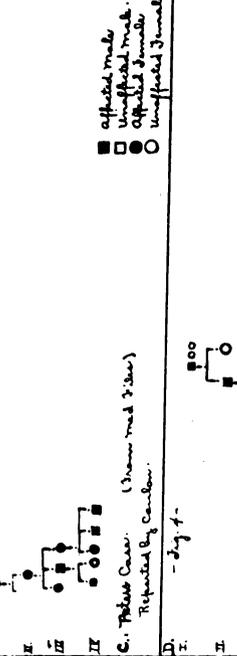
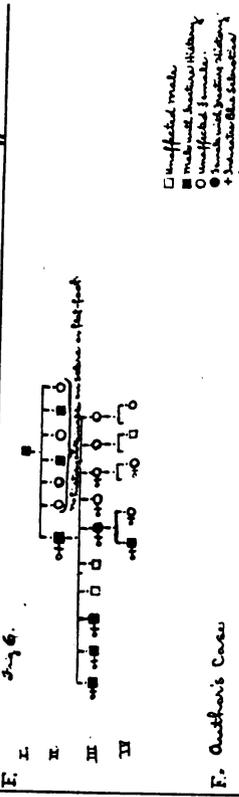
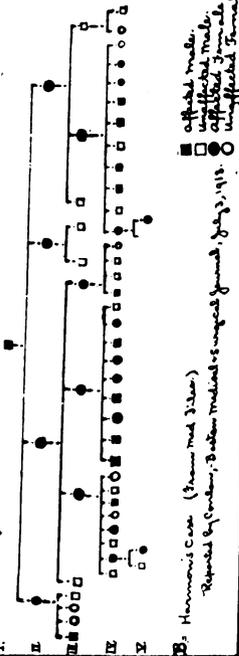
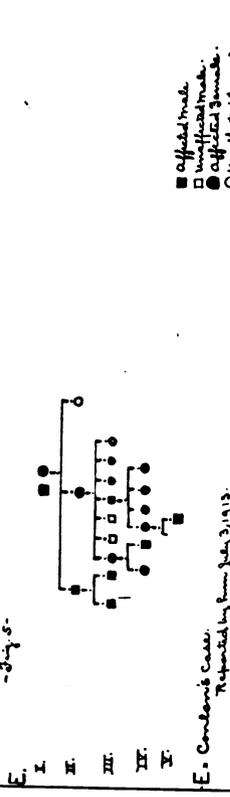
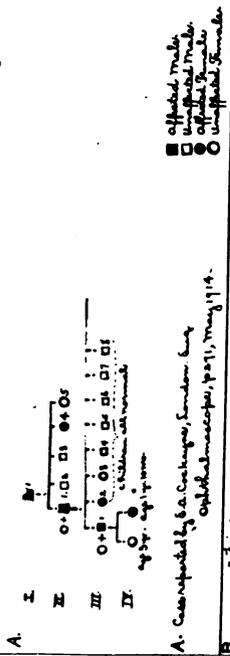
Hereditary Blue Sclerotics & Brittle Bones.

- Photo I -

- July 1.



- July 5.



Notes.

1. Cases A, B, C, D, E, fail to indicate if one or any part of them with the selection showed fracture.

2. The author's case shows only one fracture in a female, and it should be noted that this was due to an accident, and not to a fracture of the bone. In many cases, however, the fracture is of the old type, the fracture occurring in the middle of the bone, and is not accompanied by the usual signs of fracture, such as swelling, redness, and pain. It is interesting to note that the fracture in the present case occurred in the middle of the bone, and is not accompanied by the usual signs of fracture, such as swelling, redness, and pain.

3. Heretofore, to the author's knowledge, no case of blue sclerotics with fracture of the flat foot which the case of blue sclerotics, note that in the author's series as shown above, flat foot is indicated in every case where there are blue sclerotics, or in other words, no fracture appears.

presented fractures. Did all those with blue sclerotics present fracture symptoms also? And did all those presenting fractures possess the typical blue sclerotics? What per cent. of male and what per cent. of the females showed fractures? Was there an appreciable difference in the two sexes? These things could, and should, be shown in the diagrams. And the reason for the omission of detail is this: Lobstein, in discussing osteopsathyrosis, laid particular stress upon the fact that, though the condition of fragile bones was transmitted through the females of one generation to the males of the next generation, yet the peculiar fragility of the bones did not appear in the females. This is cited as one of the distinguishing features between the inherited form of fragile bones designated by him osteopsathyrosis, and other forms of fragile bones. Later writers have seemingly ignored this statement, as witnessed by the foregoing charts.

The Author's Case.

My own case has so evidently borne out and verified Lobstein's statement that I wish to again call the matter to the attention of those interested in blue sclerotics and fragile bones.

The writer's case is shown in Plate I, Fig. 6, and also in the diagram, Plate II.

It is true that we have in this family one case of fracture occurring in a female, and in a female possessing the characteristic blue sclerotics. Yet we must not forget in our interest in the study of these peculiarly afflicted families, that fractures still continue to occur in the most healthy of our patients where sufficient trauma occurs. In this particular instance the fracture was incurred as the result of a fall down an entire flight of stairs. It is the writer's opinion that the amount of trauma involved in the production of the fracture should receive its quota of attention in reporting these cases, rather than to assign all fractures to the family tendency, especially where there be history of only a single fracture. The fracture occurring in this girl unquestionably complicates our chart of the family to some extent, particularly as regards the idea that the fragility of the bones coincident with the blue sclerotics, appears only in the males. The history of the case and the fact that there were no other fractures than the one, leaves my own mind still positive on the original hypothesis that the fractures in osteopsathyrosis occur only in the male members of the afflicted line. The extreme fragility of the bones in those truly afflicted with this rare disease is evidenced by the following incidents:

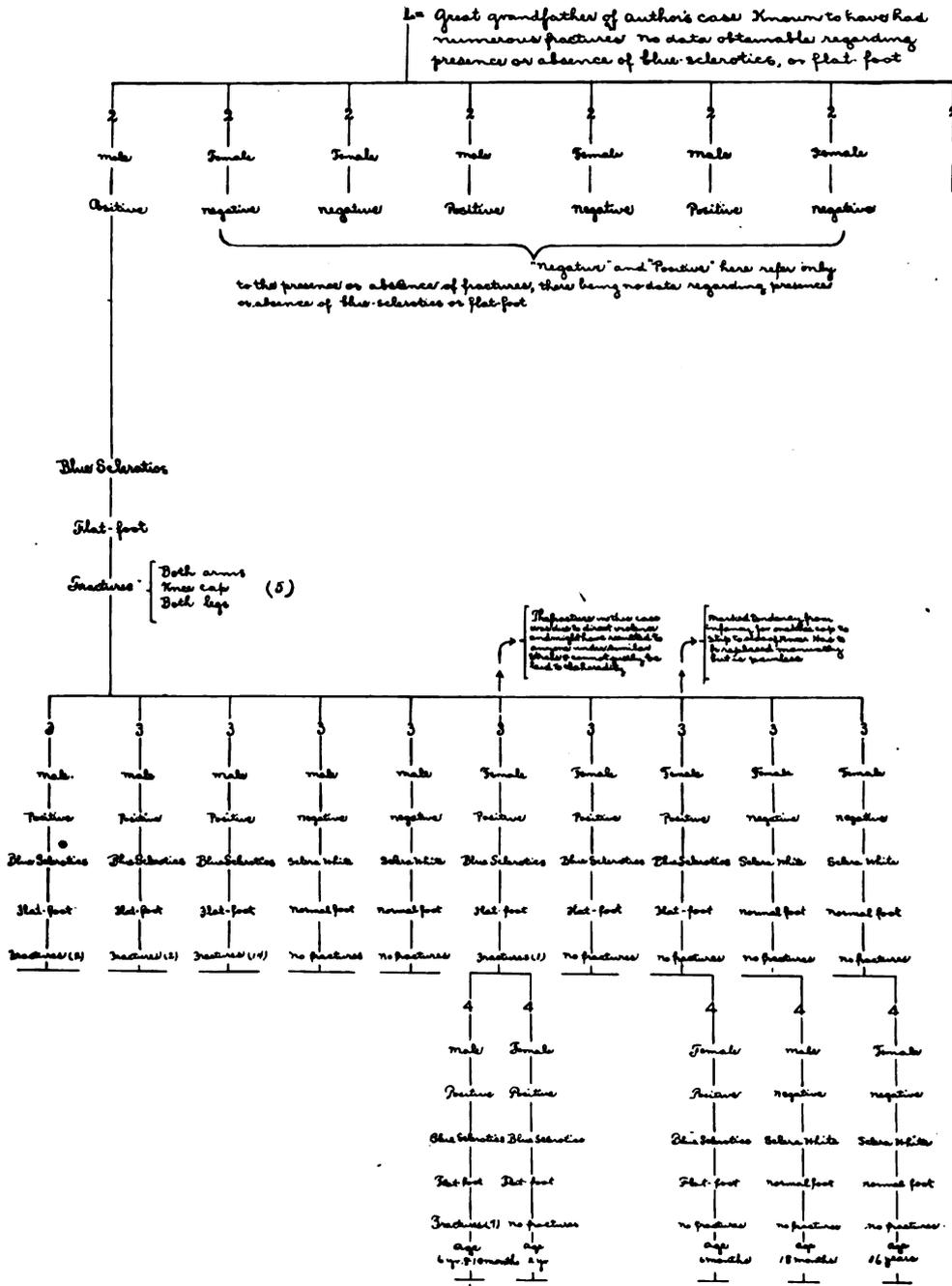


Flat-foot Sign. Author's Case.

An uncle of the child originally reported by me was scuffling with another boy, who playfully slapped him with the open palm of his hand, resulting in a fracture of the lower jaw on both sides. In this same individual the humerus was fractured by the act of throwing. Another peculiarity of these fractures is the comparative lack of pain resulting. For instance, in Plate II a star marks the author's originally reported case. This child is now six years and ten months old. In the early part of this month (March, 1916), a fracture of the right radius about an inch and a half from its distal extremity occurred. The

Author's Case
Diagrammatically Represented

Plate II



Note:— The star indicates the case reported in 1918 by the author.

child made no complaint and the fracture was not discovered until two days later by the parents, when upon inquiry the child explained when and how it had been done, but complained of no pain unless the part were rather roughly handled.

Causes.

An explanation of the cause of the bone fragility in these cases is, as it were, somewhat as yet a matter of conjecture. My suggestion in the original report of this case (presented before the Elkhorn Valley Medical Association in 1913) assumed the fragility was due to a congenital deficiency of the matter furnishing the bones their elasticity. Buchanan further bears this out when he says: "By examination of an excised eye in an isolated example of the disease it was shown that the blue sclerotics depended upon an abnormal thinness of the fibrous tissue; the fibers, although normal in thickness, were deficient in numbers. The cornea in this case was very thin and the anterior elastic lamina entirely absent." The frequency of strains and sprains occurring in these families would thereby also be explained. The defect is probably one of the whole of the mesoblastic tissues of the body (Casey Woods).

Casey Woods also makes the pertinent suggestion that though the blue sclerotics and fragile bones are the most obvious features of this peculiar symptom complex, it is evident they merely form part of a general condition.

Diagnostic Signs.

Concurring in this opinion I have gone rather carefully over my cases in the hopes of discovering other uniform defects. I think I have found two, which though of minor importance, have not yet, so far as I am aware, been called attention to in the reports of these cases. One of these signs is flat-foot. I have found that in every instance where the individual presents blue sclerotics, there is also flat-foot present (Plate III). There is not a single exception throughout the family. Every individual with blue sclerotics has flat-foot; and, what further emphasizes the relationship, is the fact that in every instance where the sclera is normal the feet are also normal. (Plate II, and Fig. 6, Plate I.) The second sign I would call attention to is that in all these cases of mine the lower eye-lid has a tendency to cover the lower margin of the iris, giving the eyes an indefinitely peculiar expression. This is instantly seen in referring to Plate IV, Fig. 1 of which shows the eyes of a blue sclerotic, and Fig. 2 those of a normal individual. There is a peculiarity in the shape

or set of the eye-ball, too, that appears in these cases, which though perceptible at once and at a glance, yet eludes me when I would make an attempt to define the same. It is even noticeable in the figures here shown, though it is very much more noticeable in observing the individual.

Stature and Size.

Cockayne and Bishop Harmon, in discussing their cases, place stress upon the matter of stature and size, the affected members of the families reported by them being uniformly abnormally thin and of light weight. My own case does not bear this out, as, with one exception in the family I have reported, the members are hearty and rugged, and inclined to overweight.

I believe I should also mention here that there has been some tendency on the part of those discussing this peculiar symptom-complex, to confuse the condition of osteopsathyrosis with osteoporosis or rarefying bone caries. This is an error, as the two conditions are entirely dissimilar, and the term osteoporosis should not be used in the discussion of these cases of blue sclerotics at all, in the estimation of the writer.

In MEDICAL COUNCIL, January, 1914, Dr. Remy contributed a case-history, the essential points of which were: Patient 2 years and 2 months of age; fracture of left femur above the condyles $1\frac{3}{4}$ inches; fell in walking; uneventful recovery. One month later, fracture left tibia (Aug., 1911). Then followed: Dec., 1911, fracture left femur an inch below small trochanter; May, 1912, fracture right femur 2 inches above condyles; Aug., 1912, fracture left radius 2 inches above distal end; Dec., 1912, fracture right femur 3 inches above condyles, or an inch above that of May preceding.

All resulted when child was walking on level floor covered by a heavy rug; no violence except falls, which seemed to be merely giving way. In each instance repair was rapid and complete, and there was no swelling following fractures until after 36 to 48 hours had elapsed.

Child was bright, but rachitic and had flat-foot and blue sclerotics. The heredity of the case is traced in this present paper.—EDITOR.

American Proctological Society.

The eighteenth annual meeting will be held at Detroit, Mich., June 12th and 13th, 1916. For program and announcements address Dr. Alfred J. Zobel, 518-520 Shreve Building, San Francisco, Cal.

Faradism and High Frequency Currents in the Treatment of Ordinary Constipation.

By SAMUEL FLOERSHEIM, M.D.,
204 West 86th Street,
NEW YORK CITY.

By ordinary constipation is meant an inefficient or delayed evacuation of the bowel which is characterized by the absence of severe pathological conditions, such as extensive adhesions, bands, atresia, new growths, foreign bodies acting as ball valves within the lumen of the gut, intussusception and volvulus.

The cases I have had under treatment included atony, ptoses, paralysis, spastic condition of the gut, sensory, psychic, occupational and post-operative neuroses as well as the so-called hysterical and neurasthenic types, medicament habitus and various types of enteritis and colitis.

It is acknowledged that a number of papers on the subject have been published, and the excuse offered is that the work has been carried on for over eight years on a varied number of patients, both private and in public clinic, into the many hundreds.

Galvanism and Faradism.

Many forms of treatment were tried and the one particularly centered upon as most efficient is to attach the positive of the battery to a large flat electrode which is moistened, and place it upon the spine of the patient between the eighth dorsal and second lumbar vertebræ, the patient to lie heavily upon this electrode. This position solves what is generally known as the area of the solar plexus within the abdomen.

The negative pole is attached to a moderate-sized movable electrode which may also be employed as a massage applicator. This electrode is used upon the abdomen.

Technic.

When the current is turned on it will be noted that the electric current travels in the physiological nerve direction, from the spine to the abdomen. A reverse current is never applied.

The electrodes in position, current is applied sufficiently strong yet not really uncomfortable for that patient, at this time with the movable electrode upon the abdomen, slow manipulation is made, beginning at the umbilicus, in a spiral movement, until the electrode traverses about the area of the colon. Then three or more applications along the area of the colon are made, ending with the spiral application of the abdomen. The same course is repeated three or four times, when up-and-down and side-to-side applications are

practiced a moderate number of times. This being completed, one starts all over again. The treatment should last at least twenty minutes and at first three times a week, gradually lessening the treatments as material improvement is noted.

When it is known that the cause of the constipation does not lie above the sigmoid flexure, a greater number of cases give better results when the positive electrode is placed upon the abdomen over the sigmoid area and the negative pole is attached to a rectal electrode. The current passes, during the treatment, in the direction of the physiologic activity of the lower colon.

Results.

Many a time only one treatment good results have been obtained, though they were not of permanent character. One patient in particular, who had invariably to take daily doses of laxatives for twenty full years, otherwise he could not defecate, was benefited at the first treatment, and in his own words, " * * * after leaving your office it was less than twenty minutes that I had to respond to the call of 'Nature,' the first time that such an incident has happened to me without medication in over twenty years." This patient takes a laxative once every two to three months to get a good "cleaning out" though he has a good stool nearly every day. Other patients have experienced good results in the beginning of the treatment though they were not as striking as this case.

After the treatment it will be noted that there is a marked increase in the peristaltic activity of the intestines, seen more prominently in the less adipose and in the ptosed. In a number of the severer cases, hand massage for about five minutes following the electric application was practiced. It may be that the beneficial effects observed can be attributed more to the combined electro-massage manipulations above described.

Belief is expressed that additional advantages are obtained when set advice as to regular hours to eat, partaking of the more ordinary foods, time taken to empty the bowels, fresh air exercise and a rapid decrease or cessation of physic medication. In a number of cases treated the usual methods pursued as to food, exercise, etc., were not changed, much improvement being also apparent.

High Frequency Currents.

For three years past I have tried the high-frequency current. I use the bipolar method; *i. e.*,

the positive pole on the spine and the negative pole and electrode upon the abdomen.

Not very many patients were treated by this current, but in the majority of those treated more or less material benefit was experienced. This current has given the best results in the post-operative neurotic and mild post-operative adhesion cases. The beneficial effects produced were

not purely psychical, as the patient was not told that an effect on the bowel may occur. Voluntary statements were given by these patients.

The treatment takes time and should not be given in a haphazard manner; and if beneficial results are to be expected in this irksome complaint, time and patience must be given to each case.

The Persistent Occiput Posterior.

A Method of Manual Rotation with a Brief Review of a Series of Cases.

By J. O. ARNOLD, M.D.,

Associate Professor of Obstetrics, Temple University Medical School; Assistant Obstetrician, Samaritan Hospital.

PHILADELPHIA, PA.

There are at least two reasons why I have chosen to write another paper for THE MEDICAL COUNCIL readers on the subject of Occiput Posterior. One is that when the Editor very kindly asked me, recently, for a contribution on obstetrics, I had just been reviewing some of my case-records for another purpose, and in doing so found, to my surprise, that for the last two years or more practically *one out of every four* deliveries I have had for other physicians has been an occiput posterior.

The other reason is, that since describing what I then called the "modified Porter method of rotating the occiput," in this journal five years ago, I have had numerous inquiries and calls for "reprints" on the subject, which I have not been able to supply lately, from the fact that the article referred to has been for some time "out of print."

It being apparent, therefore, that there is still a demand for practical help in the management of this troublesome class of cases, I have thought it might be worth while to republish this method, along with some facts and figures gathered from more recent experience in its use. I began using this particular manipulation some nine or ten years ago, after hearing it described by Dr. William D. Porter, of Cincinnati, and with the modifications defined in my former paper, I have found the method so entirely satisfactory, both to myself and to many whom I have taught to use it, that I do not hesitate to proclaim it the *simplest, safest and best* means so far devised for terminating labor in persistent occipito-posterior positions of the vertex.

A Trimanual Method.

It would, perhaps, be more accurate to designate the manipulations I am about to describe

as a "trimanual method of rotating the posterior occiput," for it is necessary to supplement the two hands of the obstetrician with a hand from the anesthetist. In other words, no physician should undertake this procedure without an assistant to give the anesthetic, and at the same time "lend a helping hand" in accomplishing rotation.

Assuming that the natural forces of labor have failed to effect rotation within a time considered safe to mother and child, and that the os is fully dilated, or easily dilatable, the patient is given a general anesthetic and placed in position for forceps delivery. Under anesthesia the diagnosis of posterior position is verified, if necessary, by *touching the child's ear*. We shall take for granted that the occiput was originally to the *right posterior*, and that therefore the body of the child is toward the mother's right. If, as in nine out of the fifty cases here reported, the *left posterior* position is present, we have simply to remember, in the description that follows, that the "internal" and "external" hands are just reversed.

The Technic.

The obstetrician now standing or sitting directly in front of the patient, with his *left* hand in *supination*, rotates his palm outward until the *little finger is pointing upward toward the mother's left*, and the *thumb downward toward the mother's right*. In this attitude the hand is inserted in the vagina with the palmar surface of the fingers applied to the right side of the *baby's head*.

If the head be high, it will be necessary to insert the whole hand; if low, only the half hand need be introduced. Let me say by way of caution that right here is where many fail to fully understand one of the *distinctive features* of this method. There *should be no attempt to grasp or hold the head with this internal hand*. This is contrary to all other methods of manual

rotation, and is one of the points wherein this procedure is *superior* to other methods, especially for cases where the head is in low occipito-sacral position.

Faulty Technic.

I find men every now and then who *think* they are practicing this "trimanual" method, but who evidently have never understood it at *all*, for they are still using the old method of attempting rotation by grasping the head in one hand. Such attempts usually tend to force the head up out of the pelvis, or to disturb its normal attitude of flexion; both of which occurrences are especially to be avoided. In many cases it would be very difficult or impossible to grasp the head securely between the thumb and fingers, and thus to exercise force enough to produce rotation, but I have never yet found a case where there was not plenty of room to insert the inverted hand, as above indicated, without danger of pushing the head up, or diminishing flexion.

The Role of the Second Hand.

So much for hand number *one*. Hand number *two* has an equally important place and work. With the *left* hand placed as indicated, the fingers of the *right* hand are pressed firmly on the abdominal wall above the pelvic brim until they come in contact with the *left frontal region* of the child's head. This is also an essential part of the manipulation that is overlooked by some who attempt to follow this method. One of the functions of this *external* hand is to hold the head in the pelvis, and the *other*, by its lever-like action, to aid the *left* hand in producing rotation. When properly placed, the two hands thus hold the head firmly between them, and rotation is accomplished by their *combined* action,—the *internal* hand as it untwists making pressure directly against the side of the occiput and crowding it *forward* to the *right*, thus making room in the left side of the pelvis for the brow, which is pressed *downward* to the *left* by the external hand.

The Third Hand.

The *third* hand, that of the assistant (who is usually the anesthetist), now makes manipulations through the abdominal wall with a view to *swinging the child's body* from the mother's *right* side toward the *left*. This moving of the body of the child by the assistant is done coincidentally with the rotation of the head, and not only *greatly facilitates* the latter process, but by moving the body along with the head, and thus avoiding the twisting of the child's neck, the chief cause of the tendency of the head to return to the faulty position is removed. At the same time, the *third* hand by maintaining the body

in its new position, which is easily done by continuing pressure on the side from which it was rotated, effectively controls the head in the brief interval between the removal of the internal hand and the application of the first blade of the forceps.

The three hands thus working together, with the patient properly anesthetized, are capable of exerting, if necessary, a *tremendous rotating power*, but my experience has been that rotation is usually *surprisingly easy*.

Are There Contraindications?

I have also found that the depth of the head in the pelvis, and the firmness with which it is sometimes impacted there, are no contra-indications for the use of this method, notwithstanding a prevalent idea to the contrary among those who have not tried it, or who champion the more potentially dangerous method of *instrumental* rotation. A pelvis that will permit the child's head to descend to the mid-plane or lower, in a posterior position, will invariably permit of this "trimanual" method of correcting the faulty position; and what is *equally true*, as experience has frequently demonstrated, the *lower* the head the *easier* it is to rotate.

Rotations vs. Forceps.

Having succeeded in rotating the occiput to one of the anterior positions, and in swinging the body forward at the same time all of which can be done *quickly* and *easily*, the further conduct of the case may proceed according to circumstances and conditions. In the majority of cases I have felt that it was better to apply forceps and complete the delivery before the patient awoke from the anesthetic, while in others I have removed the anesthetic and allowed the normal forces to end the labor.

Before quitting this part of my paper I want to say that I do not deny that there are other good methods of rotating the persistent occiput posterior, any and all of which may be preferable to delivery in the faulty position. Expert obstetricians may be justified in the use of the *forceps* as a rotator, but I am convinced that the *manual method* here described is a far safer procedure for men who are *not* experts, than this use of the forceps for a purpose for which it was never intended.

Some Clinical Data.

Now to a brief consideration of some data gathered in the practical application of this method. Fifty cases of persistent occipito-posterior, taken just as they come, were used as the basis for this little study. These cases show some interesting facts, interesting to *me* at least; and perhaps what has been interesting and helpful to

me may not be entirely without value to others. A much larger number of cases, going back over a longer period of time, might be still more interesting, but these of comparatively recent date are no doubt fairly typical of their class, and will therefore serve my present purpose.

Analysis of Fifty Cases.

The fifty cases here reviewed were all seen in consultation with other physicians. Thirty-one of them were primiparæ and nineteen were multiparæ. In nine cases the occiput was to the left posterior, and in forty-one cases the original position was right posterior. The ratio of the fourth, compared with the third position, is slightly higher here than is usually given. They were in all stages of advancement, from arrest of the head at the inlet, to the impacted occiput in the hollow of the sacrum.

The weight of the babies ranged from 6½ pounds to 11 pounds, the average weight being a little over 8 pounds. All were delivered head first by the vaginal route, after rotation by the method just described. A general anesthetic was used in all cases; twenty-six had ether, nineteen had chloroform, and five had chloroform followed by ether. I mention this point because I find a certain number of physicians attempting rotation, version or other major manipulations, *without* an anesthetic, and then wondering why they do not succeed. Such attempts are almost, if not quite, as futile as the heartless use of the forceps without an anesthetic is brutal.

In spite of the large proportion of primiparæ in this series, and the number that had repeated forceps attempts, only *fifty per cent.* of the mothers had as much as *first degree* tears of the perineum. In only one case was there a second degree laceration, and one other was probably saved from an extensive tear by episiotomy. When I think of the comparatively large number of lacerations completely into the bowel, that I have seen result from forcible delivery of the unrotated head, I sometimes wonder if, after all, fate isn't trying to be *kind* to the man whose forceps slips off.

The Record.

There was no maternal mortality in this series, and so far as my records show, no serious maternal morbidity. I wish I might say as much for the babies, but unfortunately the infant mortality ran up to *eight per cent.*, which is entirely too high for this class of cases, and in my opinion *could* have been, and *should* have been, avoided.

In view of this high infant mortality, it is significant that thirty-six per cent. of these cases had been subjected to one or more unsuccessful attempts at forceps delivery before I saw them.

The child mortality in this *latter* group of cases was sixteen and two-thirds per cent., or *three times* as great as in the much larger group of cases that had not been thus attempted. In other words, *three* out of *eighteen* babies died, either in birth or shortly after, where forceps were unsuccessfully used, and *one* out of thirty-two babies died, where rotation was done manually before the instruments were applied, and this one died, according to my notes, *not* from the *delivery*, but from injuries sustained by waiting too long before *attempting* delivery.

How Long Shall We Wait?

This latter point suggests one of the *real problems* that confronts the obstetric attendant in all cases of occipito-posterior position, namely, how long to *wait*, or how soon to interfere with manual or instrumental help. That labor in such cases is usually greatly prolonged and causes a peculiarly aggravating type of "pains," are facts well known to every obstetrician. It has been my observation that a rather large percentage of doctors, on account of these facts, yield *too early* to the demand for instruments; while on the contrary, a much smaller number err in the *opposite* direction, and wait entirely too long for Nature to do the work. The results may be equally disastrous in both cases.

The shortest time allowed before attempting delivery in any one of this series was *five* hours, and the longest time *seventy-two* hours. The general average for the fifty cases was seventeen and one-half hours. In the eighteen cases subjected to unsuccessful attempts with forceps, the average time allowed for labor was only *fourteen* hours, while in the remaining thirty-two cases, an average of *twenty-one* hours had elapsed before the attending physicians called for help. It would be interesting in this connection to know the relation between the number of physicians who had made the *correct diagnosis* in these two groups of cases, and the time allowed for *labor* in each group, but my notes are not complete on this point. My impression is, however, that the correct diagnosis of position was made more often by those who gave their patients the longer period of labor; or, in other words, the men who knew they were dealing with posterior positions also knew that a longer period of "watchful waiting" was necessary.

I scarcely need remind my readers that in a series of cases, sixty-two per cent. of which were primiparæ, an average of seventeen and a half hours was short enough time to give for a trial of labor, even had the occiput been in one of the anterior positions, and was certainly *far too short*, when the posterior position prevailed. If this is

true of the seventeen and a half hour period, what explanation may be offered for those eighteen men who only permitted an average test of fourteen hours before they decided that the natural forces had failed?

The answer to this question would be interesting, but far too long for this paper, for it would involve the discussion of such vitally important themes as the relation of the diagnosis of position to the duration of labor; the ante-partum and intra-partum study of the child, and birth mortality; methods of relieving undue suffering in labor, and the doctor's ability to follow the dictates of his better judgment; and the rather pertinent question as to how far the *moral right* of the general practitioner will permit him to assume obstetric responsibility—all subjects entirely too big to be even touched upon at this time.

4149 N. Broad St.

Serum Therapy and Protective Vaccination Against Typhoid Fever.

By S. R. KLEIN, M.D., Ph.D.,
Formerly Army Surgeon and Pathologist in the
Austro-Hungarian Army,
NORWICH, CONN.

Dr. Chantemesse, of Paris, one of the most promising workers on typhoid fever and its serum therapy, has reported favorably upon the serum treatment of typhoid. There are, of course, as is usual in early reports upon researches, some observers who found the serum from animals inoculated with typhoid bacilli or their products possessed but little influence, if any, upon the course of the disease in man.

In the great majority of cases protective vaccination against typhoid has been markedly successful, although the different vaccines are not identical in composition except that they all contain killed bacteria, or bacteria-derived substances, and the differences in technic of preparation consist principally in the degree of heat used and its duration. I believe the number of killed bacilli per cc. has little importance upon the question at large; but the *condition* of the patient is important. Is he strong or weak, sick or well, and what are his working conditions?

In ninety-nine of one hundred hospital and military cases, protective vaccination is effective.

During the present European war, except in Serbia and the southern part of Russia, there were a very few cases of typhoid fever—none in the German army. As I have seen the hospital reports of my former Austrian colleagues, I can

report but 24 cases during 19 months in the southern Austrian army.

The German Army.

Over six million German and Austrian soldiers have been inoculated to date. Distinguished bacteriologists and internists are with those armies, such as Werner Korte, W. His, R. von Hausemann, Leopold Landau and, last but not least, Dr. von Wassermann. Each military unit has its own well trained bacteriologists, chemists, surgeons, physicians and genito-urinary experts.

Anti-typhoid vaccination consists in giving three injections at intervals of ten days. The first injection is of 500 millions of killed typhoid bacilli suspended in salt solution; the second and third injections, one billion each.

Preparing Vaccines.

The vaccine is prepared from an old culture of little or no virulence but which yields an abundant growth on agar. After eighteen hours incubation on a broad agar surface, the culture is washed off into sterile salt solution and the living bacilli are killed by heating at 55 to 56 degrees C. for one hour. The suspension is standardized by counting the number of cells it contains, being then diluted to the point where 1 cc. contains one billion killed bacilli. A preservative (0.25 per cent. tricresol) is added, and the purity of the suspension, as well as its freedom from live organisms, is tested by cultivation and animal inoculation.

As a rule the reaction following inoculation is not severe, although occasionally fever, chills, nausea and some nervous symptoms are observed.

The American Army.

Brilliant results were obtained in our own American army by the methods of vaccination introduced by army bacteriologists in 1911. During the summer maneuvers at San Antonio, Texas, in 1911, an army division of about 12,800 men were in camp for about four months. All of the men were inoculated, and only a single case of typhoid fever developed in the entire command.

With, probably, twenty million soldiers exposed to the dangers of typhoid in the European war, fighting and destroying each other over an immense area, typhoid has not been an appreciable factor where the anti-typhoid inoculation was employed.

In Civil Life.

These records should convince the civilian doctor, as they have the sanitarians and the army services, that herein is a great measure of safety for the patients under our care, and especially now that summer vacations and summer typhoid dangers impend.

Intra-Cranial Injuries.

*First Aid and the Surgeon's Part in the Company's Organization.**

By CHARLES M. HARPSTER,

Ph.G., M.D., F.A.C.S.,

Surgeon Toledo and St. Vincent's Hospitals;

Surgeon Toledo R. and L. Co., T. O. B.

and N. R. R., T. and W. R. R., etc.

TOLEDO, OHIO.

I appreciate the opportunity of saying a few preliminary words on organization. We have through the earnest co-operation of the operating officials and ably assisted by Mr. D. C. Bailey, Jr., and Mr. G. O. Smith, organized the different systems which the Doherty Company operate in our community. I was appointed Chief Surgeon for these different properties, and we have local surgeons wherever necessary. I believe in this plan of organization, and believe the State should have a head surgeon, as well as the entire country.

In a short paper it would be almost impossible to cover the entire field of first aid. I will confine my remarks almost entirely to first aid in head injuries. We have many cases every year of this type of injury.

Just a few words regarding the Industrial Commission in Ohio. I trust an effort is being made to co-operate with the physicians of this great State; and, in the end, for the benefit of the injured man directly, this *must* be done. I will not throw cold water, at this time; but will ask the Commission not to throw all the charity part of the administration of this act on our over-worked, under-paid shoulders.

Concussion of the Brain.

In concussion of the brain we have incomplete insensibility; partial muscular action; special senses act partially; patient can answer questions if roused; pulse quick, feeble, often intermittent; skin cold; temperature falls to 94 to 95 degrees; respiration feeble and quiet; nausea and vomiting; pupils irregular and contracted, eyelids often stand open; urine voided; feces retained. In compression of the brain we have complete insensibility; paralysis; special senses do not act; patient can not answer questions if roused; pulse slow (40-30) and laboring; skin hot and perspiring; temperature 102° to 104°; pupils irregular and dilated; eyelids irregularly closed; projectile vomiting if any is present; retention of urine and involuntary escape of feces.

These observations have been made after many hundreds of cases were analyzed by myself and associates.

Classification.

We must realize we can not have any satisfactory classification of intra-cranial injuries. One thing is certain, we must not view these cases (as many surgeons do) purely from the standpoint of fracture of the skull. The X-ray has found fracture of the skull in many cases which were not diagnosed before the ray was used. The least important condition in injuries of the cranium is the fracture of the skull.

Hemorrhage.

I have seen probably 30 cases in which the patient would get up and walk away after a blow on the head from a street-car, and in some of these cases, they would resume their ordinary duties, then *progressively* or very rapidly become worse, and die, the attending physicians often not realizing that these cases die from an intra-cranial hemorrhage, with pressure or compression.

Competent Care.

I bring up this subject for your consideration, because we have such a diversified opinion in the handling of these cases. The surgeon rendering first-aid has the *key* to the situation, and after his dismissal from the case, or his failure to *act*, all chance of saving a life has slipped away.

The company surgeon is often placed in the position of rendering first-aid only (to passengers this especially applies). The injured person frequently falls into the hands of some agent or representative of some lawyer, whose consideration and interest in the case is only that of fattening his own purse, rather than the rapid and complete recovery of the injured. The company surgeon is discharged, and some one called often not able to cope with the situation from lack of experience in these cases, and the patient very frequently dies. Who is to blame? The mass of the people often look upon the company surgeon as devoid of all sympathy, forgetting that his greatest interest is the recovery of his patient. The person who has the competent surgeon displaced and some one called who has had very little experience or training in traumatic surgery is the one who *must* bear the blame. The company surgeon is selected for his ability to handle cases with the least loss of efficiency to the individual, following any given trauma. How can we overcome this evil and curse to the patients

*Address given before the Ohio State Industrial Commission, Cleveland, Jan. 24, 1916. Symposium, "Head Injuries," the author, as Chief Surgeon, Henry L. Doherty & Co., New York, speaking on intra-cranial injuries.

themselves? By the proper propaganda coming from the Industrial Commissions, organizations, etc. The injured should be cared for by surgeons who have been trained in traumatic surgery and are best able to serve them. The injured should not be exploited by lawyers to their own detriment for the sake of the money consideration. I know of many cases who have refused proper surgical aid in order to secure greater damages (money).

Unconsciousness.

Following a rapid hemorrhage (intra-cranial) we have again unconsciousness (often following a period of consciousness) or in other words, primarily unconsciousness, then consciousness, then unconsciousness again. This is very important to remember. Let me illustrate. A young man was on the front step of a crowded car, stuck his head out and was struck by an automobile. Sent to St. Vincent's Hospital. When I arrived, diagnosis had been made (fractured skull). I talked a few words with the young man. He gave his name, etc., he then lapsed into unconsciousness; coma, symptoms of paralysis began to develop; stertorous breathing (a very important symptom; in fact, the most important), choked disk, unequal dilated pupils, etc. I did a right temporal decompression at once. Young man recovered at once; well and working today. Temporizing in this case meant death. I have had many of these cases with about 50% recoveries, where decompression had been done. The rapid onset of the second period of unconsciousness is a serious condition, and often speaks for a fatal termination. Where this second period of unconsciousness is especially rapid, I find a great number of these cases die whether we do a decompression or not; but I believe a decompression is their only ray of hope, although I must admit this is often very meager.

Pressure.

Pressure sufficient to cause anemia of the brain cells, lasting 10 to 30 minutes, they (the cells) will not regenerate; and brain tissue lost or torn will never be replaced.

Fracture.

In fractures of the skull we find that the important condition is the injury to the skull contents produced by the trauma, or the circulatory disturbance. Death is not due to a fractured skull, but to the injury to the brain and other cranial contents. It is not necessary (as so many think) in injuries of the head to have a fracture in order to cause intra-cranial disturbances and death. A force sufficient to fracture the skull is usually sufficient to cause intra-cranial injuries, however.

Krause says: "All injuries of the skull, with or without an external wound, or complicated by fractures of the skull, may give rise to cerebral concussion, cerebral contusion, and cerebral compression." All these conditions may appear together to a more or less marked degree. This would be a good classification if we could tell the one positively from the other.

Often the best we can say is that the patient has an intra-cranial injury, and if pressure (intra-cranial) is present, we have solved the problem of treatment, provided we can decide if the pressure is more than the brain can stand.

The Soft Parts.

We have edema, a round cell infiltration, and an extravasation of blood. This process, as you see, is a space restricting one, or, in other words, the brain swells; and an increase in the amount of the cerebro-spinal fluid increases the internal pressure of the brain. In this way lumbar puncture is useful; also it determines whether we have had a subdural hemorrhage.

A cranial injury may show, by its location and the neurological symptoms, what treatment is necessary.

An unlocalized injury is one where we have no symptoms to guide us, or no neurological data that we can gather to help us.

Basal Lesions.

Also in fractures of the base of the skull, with increased pressure we may have an unlocalizable condition. Fractures of the base usually originate in the vault (85%).

Basilar fractures are much more serious than vault fractures, as great trauma is necessary to cause them, and more cerebral disturbances are produced; also the vital centers are attacked, and I have lost numbers of cases from unpreventable sepsis, through the nose, mouth, and ears.

Fractures of the base involving the petrous portion of the bone are followed by hemorrhage from the ears, nostrils, and mouth: These hemorrhages are always looked upon as fairly accurate diagnostic signs: most of these cases die the first few hours after injury.

Decompression.

Ligation of the external carotid in hemorrhage from the middle meningeal is good surgery. In those cases of unlocalized cranial injury I wish to insist on the more general use of the method devised by Cushing, or the split muscle subtemporal decompression.

The advantages of this method of approach are so evident I will not waste your time in going over same. The skull is a closed box, and the brain can not expand under pressure, and we

have anemia of the vital centers and then death.

Decompression gives relief from the pressure and drainage of cerebro-spinal fluid and extravasated blood. It should not be used in all cases, as in cases of basal fracture with free discharge

of blood, etc., from ears, nostrils and mouth, operation *per se* is not indicated.

The most vital point is this: The *decompression* should be done soon after the injury, as the *earlier* it is done the better the prognosis. 701-703-705 Madison Ave.

A Plea for the More

Careful and Frequent Examination of the Feet.

By CHARLES CROSS, M.D.,
275 Post Street,
SAN FRANCISCO, CAL.

A few days ago the following-worded, large, double column, advertisement appeared in the San Francisco newspapers:

"If you have any trouble with your feet at all—now is the time to let us hear about it! A specialist on foot ills is here this week. So come at once, or telephone ahead for an appointment, so you won't have to wait. He corrects all foot troubles—No knife! No torture! No trouble! No charge for advice.

"No matter what you're suffering from—corns, bunions, flat-foot, weak arch, painful heel, pains in the back or calves of legs, or in sciatic nerve, rheumatism due to foot trouble or anything else with the feet.

"He can help you. He eliminates the cause. Nature does the rest."

About the same advertisement has appeared in the newspapers in every State in the Union. But it seems that the Board of Medical Examiners in other States paid no attention to it.

What a State Board Did.

As soon as the above advertisement began to appear in California, the California State Board of Medical Examiners began an investigation. As a result, the so-called specialist did not continue his work in San Francisco for a week, as advertised. Following an interview with representatives of the State Board of Medical Examiners, the shoe store withdrew their advertisement and the work of their foot specialist ceased after two days.

It is probable that the same thing will not again be repeated in California, because the State Board is determined to eliminate all encroachments upon the Medical Practice Act.

About a year ago the same shoe firm conducted the same sort of a clinic under the same conditions.

Being interested in all kinds of examination work, I called at the store where the clinic was held and had a very interesting interview with the salesman. The representatives I met and

talked with were men of exceeding affable personalities. The firm by whom they are employed is to be congratulated on selecting such men to represent them.

This record is no complaint against the salesmen, the firm that employs them, nor the shoe stores that utilize their services, but it is a record written as a compliment to the watchfulness of the California State Board of Medical Examiners and with the object of calling attention of my colleagues to this neglected part of the body.

Neglect of the Feet.

In the examination work for a large number of life, health, and accident insurance companies, and as United States Examining Surgeon for more than fifteen years, I have been astounded at the apparent habitual neglect of the feet by both patients and physicians, and especially by parents and physicians.

To one case of foot trouble that comes for surgical operation I feel safe in asserting that there are ten thousand cases of foot distortions that are neglected and need treatment, and can be remedied without a surgical operation.

In some medical circles there appears a great antipathy to examination of the feet. It cannot be more undignified to examine one part of the body than another. To me it appears that it is time for physicians, especially family physicians, to give a little more attention to such examinations. Therefore, I make this plea, for the more careful and frequent examination of the feet of all patients.

Whatever my colleagues or the public may think or believe about the dignity, or indignity, of making examinations and treatment of the feet, I believe there is no grander mission on earth than to go through life preaching the doctrine of good feet and efficiency. Is there any other part of the body so absolutely essential to business, social, or professional success as a pair of good feet?

Some Suggestions.

To the reader of this article who wants to learn the rudiments of practical podology I make the following suggestion:

Get a few sheets of thin white paper cut in size 12 inches by 18 inches. Have your patients remove shoes and stockings and stand erect, with feet parallel, about three inches apart, on this paper.

With a podograph make an outline tracing of each foot. Hold the pencil perpendicular to the paper and make a tracing exact size and shape of the foot. Study each tracing as it is made and then, from time to time, compare with other tracings, also compare them with what are called normal feet. If you are a close observer you will ascertain that several conditions that have been handed down as normal are strictly abnormal. While such study will give a good idea of the numerous cases of neglected foot distortion, the proper diagnosis and successful treatment of distorted feet is a matter of personal instruction.

I know of no subject in the realm of examinations more interesting than the feet. The reader might begin by holding a clinic on his own feet, or on the feet of his family. It would be safe to venture ten to one that there is a pathological condition, not in the domain of the chiropodist, but in his own domain, or what should be his own domain, which corrected, will increase the efficiency of the person.

As no form of appliance will correct more than about eight per cent. of the cases of foot distortion, without other methods of treatment, it appears advisable that physicians should familiarize themselves with and be able to treat the neglected ninety-two per cent. of this class of patients. It is for that reason the plea is made for the more careful and frequent examination of the feet.

Between the work which properly belongs to the orthopedic surgeon, and the work which belongs to the chiropodist, there is a vast field of neglected foot distortions which need intelligent and scientific treatment.

Synthetic camphor, made from turpentine, is said to be entirely available for internal use. Better not accept this conclusion too quickly. Levy and Wolff claim the synthetic product to be more toxic than the natural. This reminds us of the contention regarding natural and synthetic salicylates. We are still sticking to the salicylates from true oil of wintergreen.

Saves a dollar. So much more convenient.

Send \$3.00 for FOUR years.

when remitting for subscription.

Oliver Wendell Holmes and the Genesis of Drug Nihilism.

THOS. W. MUSGROVE, M.D.
Sultan, Wash.

To be a really true physician, a man or woman must be, *sui generis*, A DOCTOR; must not love money or fame more than grateful patients. The drudgery of financial, social and political detail does not appeal to the born doctor.

The atmosphere of the hospital and sick room do not promote ulterior development of character. If you have read Ian Maclaren's "Doctor of the Old School," in the Bonnie Brier Bush, you will know what I mean. If not, it will pay you to read it, especially if you relish Scotch dialect.

In our day we are trying to round out all the doctors into perfect physicians, business men and politicians. Perhaps we are helping some good souls to look after themselves as well as they look after their patients.

Doctors Must Be Born, Not Made.

But a doctor, like a poet, must be born, not made. There are many doctors who are pharmaceutical nihilists. I am satisfied such men are defective in their mental make-up and cannot see symptoms clearly—symptomatically they are color blind.

Dr. Oliver Wendell Holmes was my teacher at Harvard. He was professor of anatomy when I was there, 1870-1, and he had no more idea of the action of drugs than an ordinary drug clerk, and he had given up practice many years before I saw him and he wrote that famous paragraph that has been quoted so often, "That if all drugs were cast into the sea, mankind would be better off, but it would be hard on the fishes," or words to that effect. Professor Holmes was a congenital therapeutically color-blind doctor. With all his literary ability, he could not see how symptoms could be aborted, modified or changed by drugs.

Insight Into Disease.

"Dr. Weelum McLure," of the Bonnie Brier Bush, is represented as having a wonderful insight into the intricacies of diseases, as well as into the idiosyncrasies, physical and moral, of the sick folks, and the well also. And the doctors of the present day need to have similar ability. Our colleges do not teach as much as they should of the vital importance of studying the natural history of health and disease.

If 100 cases of pneumonia, as they run, were studied carefully and not given any drugs—simply treated as though they were simply having a physiological fight with the pneumococci; simply give nature a chance—we would soon get the natural history of the disease. Then treat 100 cases by the best known means, and find out how many more recovered, how much shorter time was required to recover. A few cases of

any disease thoroughly studied by a clear-brained doctor will give better data than many only run over and guessed at.

Guesswork Literature.

So much of the stuff we get in books and medical journals is simply guess-work. For instance, read the articles on yellow fever that were in the text-books of the 1860's, and compare them with the articles we have today, and we have a good sample of the difference between guess-work and real knowledge.

But the personal factor is the hard thing to correct, when not good. I have belonged to several medical societies and I have found that it is about impossible to reform the majority of the members. And yet some progress has been made during the half century I have been affiliated with medical men. I began the study of medicine in 1866. When I began to read medicine there were few medical societies in Canada, where I was, and doctors were autocrats of the most pronounced types, as a rule. In 1885 I was Secretary of the New Brunswick Medical Society and found some grand men in it. But petty jealousy was the bane of the society.

Petty Jealousy on the Decline.

In 1889 I came to this State and was Secretary of the Tacoma Medical Society for a year, and found the same trouble. I have been Vice-President of the State of Washington Medical Society and have found enough members who are above petty jealousy to make it a most successful society for 25 years. I have been a member of the Snohomish Medical Society for ten years and find nearly all the doctors in the county are members and much harmony exists amongst the members. The monthly meetings are well attended and generally interesting and helpful. The *esprit de corps* is much better than it was ten years ago; but on the political questions there is not much union. Upon the whole, the medical societies of Washington, Oregon and Idaho are growing stronger and better each year. But there is too much evidence of the "green-eyed monster" yet to hope for a perfect combination.

Purpura hemorrhagica is coming under control by using one or more of the following measures: Subcutaneous or intravenous injections of human blood serum, blood transfusion, and intramuscular injection of whole fresh human blood. This latter is especially easy and is often surprisingly effective. About 20 cc. may be injected at one time.

Powdered veratrum destroys the larvæ of the fly in manure, and it does not decrease the fertilizing value of the treated matter.

Therapeutics *from the* *Racial Standpoint.*

The Indian.

By BACIL A. WARREN, M.D.,
First Lieutenant, M. R. C., U. S. A., in Charge
U. S. Government Hospital,
LEUPP, ARIZ.

(Concluding Paper.)

Absurd Medical Beliefs.

Even in the seventeenth and eighteenth centuries there was a belief (among whites) that dead bodies had medicinal virtues, and mummies were obtained and ground to powder for making brews and broths and terrible decoctions. It was said that the mummies for this industry were obtained in Egypt. So it appears to me that our present-day Indians are a little more advanced than that and, indeed, perhaps they are only a short way behind our own germ theory, for the Navajos say that their witches dig up the bodies of dead people after burial and use certain parts of the diseased and partly decomposed carcass with which they bewitch or kill the living. They say, further, that these witches are particularly fond of cutting from the dead body the two bones of the forearm (radius and ulna) and making a bow of one and an arrow of the other. Then the witch will dip the point of this arrow in the putrid, diseased body fluids and use it to shoot some one whom she wishes to kill or bewitch.

Indian Remedies and Methods of Treatment.

It is not so long since the barber and the surgeon were one, and we were mere herb doctors and, later, pill peddlers. Indian medicine is now largely in a condition of necromancy from which we white physicians have emerged. There are, too, some shining examples of part or full-blooded Indians who are today highly educated physicians. It is said that the Indians of South America trephined long ago. I have mentioned that our present-day Indians commonly use their "sweat houses" for sweating out fevers, and Capt. John Bourke mentions observing that a bladder and hollow bone were used among the Indians for giving enemas. I have mentioned the use of the buffalo or cow's horn for cupping, also that blood-letting and scarification is more or less common among them. I have heard of their using well-shaped pieces of bark as splints and

bending over a sapling to secure continued traction on a broken leg. It has been claimed that we owe to the Indians the use of coca, ipecac, jalap, sarsaparilla, guaiac, cinchona, seneca root, moxa, and massage. The Winnebagoes in Wisconsin gather and use ginseng, bloodroot, blackroot, sarsaparilla, and golden seal to some extent as medicines. They also gather pitch and gum from several of the native trees and apply them as plasters. These Navajo Indians use the pitch of the pinyen tree in the same manner. Among the Kiawa and other tribes of Indians in Oklahoma, as well as some other parts of the United States and in Old Mexico, the Indians use the mescale plant both as a medicine and as an intoxicant. [Called anhalonium in medical works.—Ed.]

Sacred Formulae.

I read that the Cherokee had 600 sacred formulae, half of which were medical. Among them it is said that 800 plants were used medicinally. Many of the plants used had medicinal qualities, some had none. Most of those that had medicinal qualities were not used correctly, while 25%, it is stated, were used correctly. "They cured neuralgia by incantation, rubbing with warmed thumb, and local applications of decoctions and tobacco smoke. Chills were treated with decoctions of wild cherry and Indian tobacco. The Ojibwas used oxgall and rattlesnake blood; also 58 plants, most of them now in the United States Dispensary. They had a potion that would remove an enemy, and one that would produce facial paralysis." "Candidates for the degree of doctor danced until all but one was exhausted—he got the diploma."

Neglect of the Dying.

I believe the California Indians used cascara sagrada and yerba santa as medicines.

Dr. J. F. Llewellyn says about the California Indians, "If the patient is old and slow in dying, they cast him out into the forest." This corresponds to the way that these Navajos treat those who are sick unto death. They seem very much afraid of a dead human body and of a body from which the life is about to depart. Accordingly when one of their number is so sick or injured that they think him about to die they will not go near enough to him to so much as cool his parched lips with a cup of water or apply a cool compress to his burning head, though he be lying out in the broiling sun on the Arizona Desert.

An old employee of the Indian Service tells me of the custom of "dying by the witch" among the Otoe Indians.

When, to the patient, death seems inevitable,

the witch sits on her knees at the head of the patient, who is lying down, and watches her opportunity. When she thinks that the patient has become too weak to offer successful resistance she closes the nares by pressing against the nose with the thumbs of the two hands and holds the mouth tightly closed with the fingers of her two hands and thus rapidly suffocates the victim.

Peculiarities Encountered by the White Physician in Treating Indians.

It is thought by some physicians practicing among various tribes of Indians that there is considerable difference between different tribes in regard to their ability to stand pain or, in other words, their "nerve" as we would say. For example, the Pueblos are said to stand pain poorly and to be afraid of the white surgeon's knife, while the Navajos and Apaches are thought to bear pain well. I presume that this is true, generally speaking.

I think the common notion among white people who do not know Indians that the latter can stand almost any sort of pain or torture better than the white man is quite fallacious. In practice among Indians I have, of course, had occasion to put them to the test of standing pain frequently and I do not find that the average Indian has any more, if indeed he has as much "nerve" as the average white person. They make, generally, much complaint and fuss about the pain of teeth extraction, lancing of an abscess, reduction of a dislocated bone, etc. Individual Indians, of course, show considerable "nerve" at times. An Indian recently came and asked me to cut open a large and very painful saddle boil. I made deep crucial incisions and evacuated a lot of pus, and he never flinched or whimpered, and I did not use any anesthetic. Later he came back and had me open another boil in the same manner. Indians are like white people in that some have "nerve" and some do not.

Indian Reaction to Drugs.

I do not find that Indians react to medicines or treatment, generally speaking, differently than whites. I treat tuberculosis and syphilis among them along the same general lines as among whites. One might naturally think that the Indians in generations of outdoor life would have built up such iron constitutions that they would be strongly resistant to tuberculosis, but the reverse of this seems to be true. That is, they do not seem able to stand housing-up nearly as well as the white man. Both Indian children and adult Indians easily succumb to tuberculosis when kept indoors much of the time, and

tuberculosis today is three times as prevalent among our American Indians as among whites in the United States.

Tuberculosis and Trachoma.

Tuberculosis and trachoma are the disease scourges of our American Indians, and the Indian branch of the Department of the Interior of the U. S. has been making an intensive fight against these two diseases for several years. In some places the U. S. Government has established open-air schools for the Indian children, and I am sure this is an excellent idea. In this fine climate of Arizona there is no good reason why these Indian children should ever be put into school rooms. They can be given all the academic work they need in out-of-door classes.

Trachoma is very prevalent among the Indians and results in many cases of blindness among them. We think we cure it, but the treatment must usually be given almost daily for several months or even years. We generally do the expression operation where there are considerable masses of granulations and then follow this up with daily applications of the copper sulphate pencil. Various other medicaments, however, such as argyrol, protargol, thuja, silver nitrate, and boric acid are used, according to the particular condition of the case. People have often joked about having their "eyeballs sandpapered;" but instead of doing the expression in operation, or in connection with it, we not infrequently use a fine grade of sandpaper to remove the trachomatous granulations and it gives good results.

Pneumonia.

In all of the otherwise typical cases of pneumonia that I have had in this hospital, I have noticed that there seems to be a marked tendency to bleed from the lungs. Instead of the "rusty sputum" that we expect to get, these Indians spit up pure, fresh, frothy blood. Other physicians among the Indians have spoken to me of observing the same thing. Their tendency to tuberculosis may have something to do with this.

Manner of Life.

Most peculiarities encountered by the white physician in treating Indians come from the Indian's mode of life, his environment, his traditions and superstitions, and a lack of mutual understanding between the white men and the Indian. Let it once be positively known among the Navajos that an Indian had died in a certain hospital and that particular hospital may just as well close its doors as far as ever getting any camp Indian to remain there long for treatment.

They think the building is full of disease demons that effectually prevent a person from getting well. Their medicine man tells them, if he is allowed to visit them, otherwise he sends word by someone who can get a chance to see them, that they will surely die if they do not get out of that building. It once happened, before I was stationed here, that an Indian was sick unto death in this hospital; but the physician here at the time knew Indians and was accordingly wise enough to remove the patient from the hospital into the yard just before (or after?) death. Even the occurrence of a death near this hospital made the Indians for a long time very shy of the place.

Dirt and vermin are natural accompaniments of the life they lead, and particularly so in this country, where water is often so scarce that it really would seem wasteful to use enough to take a full bath. I must give them credit, especially the Indian women, by saying that they have really seemed very glad to bathe often when in the hospital where we had an abundance of clean, warm water and a porcelain bath tub for them to use.

"Navajo Sores."

A very common disease among them is what people have gotten to call "Navajo sores." It is impetigo contagiosa. I have seen the Indian children covered from head to foot with these sores. Daily soaking with warm water and green soap, followed by careful drying and the application of Ung. hydrarg. ammon. effects a rapid cure.

Diagnosis.

Diagnosis is often made under great difficulties, especially with Indian women, for out in the camps it is sometimes impossible to get them to submit to the necessary examination. She grunts and covers up her head. Their medicine men make diagnosis by gazing into a crystal, and they cannot at first understand why it should be necessary to make such examinations of the body as we do to find out what is the matter with them. I have had them call me out in great haste to see a woman with a post-partum hemorrhage, and when I reached the camp I found that Indian woman as pale as a full-blooded Indian could well be, yet examination and the application of treatment in the one and only place where it could do much good seemed entirely foreign to their minds and not to be allowed. However when I get these cases in the hospital I make all necessary vaginal, uterine, and other examinations, deliver their babies, do curettements, etc., for them and they seem to take it as a matter of course.

Conclusions.

A white missionary, in talking to our Indian children in this school and to the employees of this Government Indian School, recently said that Indians are not different from white people; that they think, act, learn, love, hate, cheat, lie, are charitable, kind, do wrong, do well, sin, etc., generally speaking, just the same as whites, and in a general way do and are the same as whites. Applying this to the Indian children who are taught and practically raised in the Government Schools, I would almost or perhaps quite agree with the minister; but the Indian modified, or perhaps we might better say controlled, as he is by his own peculiar religious beliefs, his traditions, superstitions, customs, and last, but not least, the medicine-man, I am sure is very different from a white person and must be treated in a very different way if we are to help him.

In short, I think it is the Indian's environment (very largely) that makes him what he is, and I think this true also of the Caucasian and all other races. The Indian is naturally lazy, but so is the white man. The Indian has made himself, also some white people, at times, believe that he is too proud, too noble to work; that work is beneath him. We have all heard of the "noble red man" and he can be and is sometimes noble, just as other men of any race or color are noble. I have not found his nobleness so pronounced or conspicuous that I would place him above any other race of people with which I am acquainted in this respect. Certainly he is no nobleman when it comes to work; he is just plain lazy. But I think we whites might be just as lazy as the Indian if our civilization did not compel us to be industrious. We work because we must. The Indian is dirty and vermin-infested, commonly, for about the same reason. It is a part of the environment in which he lives. Along medical lines, the Indian is suspicious, fails to understand, fails to appreciate the ways of the white physician because of his superstitious environment and the power that the medicine-man has over him.

Religion.

In religious matters I imagine that the missionaries find much the same things to be true. The Indian's religion is one in which fear is an important factor. You may say that the same is true of our own Christian religion; but while we fear things above us, as God, the Indian to a great extent fears things beneath him, as a snake, a bug. Reliable and experienced missionaries among the Navajo Indians claim that they actually worship the rattlesnake and

a certain small bug in the same way as a Chinaman worships a wooden image.

I have tried to give a reasonably suggestive and accurate picture of the Indian as I have found him and I have tried to give you some idea of the methods and medicines used among Indians in the treatment of disease, also the methods that must be employed by the white physician in treating disease among them.

The Indian is not such a bad fellow after all. He appreciates real help when he is sick much the same as the white man does; and the medicine-man, with all his foolishness, is after all no more ignorant nor harmful in matters of health and medicine than are the so-called Christian Scientists in our own much-vaunted civilization.

We physicians in the U. S. Government Service can, and I am sure we do, help the Indians very much along medical, surgical, and health lines, though we are hampered on the one hand by great difficulties of diagnosis, treatment, and preventive medicine among Indians and by government red tape on the other hand. Only those who have been in "The Service" can fully appreciate this last point.

The U. S. Government will never get the best results from its medical service among the Indians until it takes all of its physicians out from under the control of laymen and politics and puts its medical department under the control of a medical head, as is now the case in the Public Health Service and the United States Army. But that is another story which I might tell you at another time.

"Some Fracture Heresy."

It has been my fortune, or misfortune, to treat many fractures during the last twenty years, and I cannot resist the temptation to express my full agreement with your "Some Fracture Heresy," in your March number.

If I suffer a fractured bone, I do not want further traumatism unless time shows it absolutely necessary; but I do want a good man "with eyes in the ends of his fingers" to apply traction, manipulate the fragments into the best possible apposition, apply extension, adjust fixation splints, take an X-ray plate a few days later and be guided by it in further manipulation and change of dressings, and then trust to Nature's healing powers.

There is no place where good common everyday sense is needed so much as in the treatment of fractures. No routine rules can apply.

I thank you for that article, for it is a move in pushing the pendulum back to where it was twenty-five years ago.

A. A. STAFFORD, M.D.
Alameda, Cal.

OUR OPEN FORUM

A department of Current Comment, Instructive Case-Records, Short Original Articles, Clinical Discussion and Matters of General Interest.

Contributions to this Department should be short, pithy, kindly in expression, of true scientific value, and carefully prepared.

This department of the MEDICAL COUNCIL is open to free exchange of proper opinion, criticism and matters of professional interest. Space precludes printing all letters in full, but so much of those received as will interest or instruct our readers will find place here.

Pelvic Mechano-Therapy.

From the fact that so many requests are coming to me from various sources for "fuller details," and more information regarding "pelvic mechano-therapy," it would seem that quite an interest is being created in the subject.

As I have been working and writing on this subject for a number of years, it stands to reason that it would be impossible to include under one heading, and in one brief article, all the information desired on this *big subject*—one of the biggest in the medical field today.

I am pleased to note, however, that the papers have been interesting enough to suggest these questions and calls for "more."

It has occurred to me that possibly a special clinic might be arranged for, at some convenient time and place, with a view to bringing together those interested in this line of work.

With a few selected cases for clinical demonstration, the whole technic of office treatment, kind and method of packing, etc., could be given in detail, and the various malpositions treated by the special methods applicable to each.

Actual demonstration upon one case would be more satisfactory than pages of printed matter.

It would give me the greatest pleasure to cooperate with medical societies or any one who could furnish cases for clinical demonstration.

Perhaps you might be able to suggest some way of bringing this about. I could not possibly answer in detail all the queries propounded by those having read the articles in THE MEDICAL COUNCIL.

Pittsburg, Kans. FRANCES A. HARPER, M.D.

A New Definition for Abortion.

The rank and file of medical practitioners, as well as specialists and writers of text-books, are prone to follow the beaten paths of custom—even of tradition.

Thus we find that practically all writers speak of abortion as the "Spontaneous expulsion of the human fetus or ovum," and Williams says, "It is customary to make certain arbitrary sub-

divisions, such as miscarriage and premature labor," according to the time of termination of the pregnancy.

Now, the writer believes that it is less confusing and more descriptive—as well as more scientific—to confine the term "abortion" solely to the death of the fetus, occurring prior to its maturity or viability, and that the *expulsion* of the fetus—dead or alive, from the uterus—is a separate process entirely, with a distinct etiology.

Williams tells us plainly that "the etiology of abortion practically resolves itself into determining the cause of fetal death."

In like manner we may say that the process of expulsion of a fetus had its own etiology which is to be sought among those influences which stimulate the uterine muscles to contract. These influences may act as factors in causing the fetus to die. But they do not constitute abortion. Death of the fetus usually precedes its expulsion, but quite often follows this process.

Now, the best dictionaries define abortion thus:

"A coming to naught,"

"An arrest of growth,"

"A failure to reach independent existence."

Does not any one of these terms describe a human fetus which dies before its maturity?

Abortion, therefore, is a condition of the fetus, not a process of expulsion. Thus, in considering extra-uterine or ectopic pregnancy, which usually terminates by rupture within the first few weeks of gestation, the fetus dies, a true *abortion* takes place, yet it is obviously impossible for such a fetus to be expelled from the uterus. The "customary" definition, therefore, fails us in such cases.

Again—consider the cases of so-called "delayed abortion," where a dead fetus lies for several weeks within the uterine cavity before it is expelled (fetus papyraceous). Here, then, the abortion occurs when the fetus ceases to live and grow. Its expulsion becomes a practically physiological process. In those cases where the fetus is expelled alive before the age of viability, abortion is secondary to the process of expulsion, and the expulsion becomes a *cause* of abortion, which is an exact reversal of the "customary" definition.

While it is admitted that the correction suggested involves only a technicality, without adding any new knowledge of the subject clinically, yet in the modern trend toward exactness of expression, it is fitting that we readjust some time-worn definitions. The word abortion has for years been shrouded with a certain suspicion or odium, because of its occasional criminal application, and yet, used in its true sense as here proposed, it moves up to a plane of dignity and usefulness in the nomenclature of obstetrics.

To sum up briefly, therefore, let it be stated: abortion in its true meaning relates to a condition of the fetus itself, and not to the process of its expulsion from the uterus.

Delmont, Penna. WM. N. SHIELDS, M.D.

And We Learned What a "Closed Hospital" Is.

When the sky is overcast with heavy clouds, and the wind blows strong and steady from the east, the indication is for rain. When we see here and there in the county medical journals (with the MEDICAL COUNCIL, the mouthpieces of the rank and file of the profession) complaints against conditions existing in most of our hospitals in relation to what the average physician is receiving from the staffs of the so-called "closed hospitals." When we hear from the lips of many physicians fault-finding of the treatment they receive from these "closed hospitals," you can make up your mind that the days of arrogance and unethical conduct on the part of these pompous gentlemen (?) is near ended.

Recently the writer of these lines called at a local hospital to ascertain if a room could be secured for a patient. The female superintendent, with all the grace and dignity of a queen, gave the information that vacant private rooms could be secured at from \$20 to \$30 a week. In answer to the inquiry as to whether or not I would be allowed to attend to my case in a private room, I was told I could if I secured the approval of two of the staff physicians. Then I realized I was under the domination of my brother physicians, and if I had not been descended from a good "hard shell" Baptist, I would have said: "Damn the staff that works under such a rule," for I was "hot under the collar;" but, being born under such religious conditions, I could only relieve myself by saying: "Consider the lilies how they grow; they toil not, neither do they spin, yet Solomon in all his glory was not arrayed as one of these."

I have seen many thousands of cases of sickness, have tried to use my medical brethren on the square and have endeavored to keep abreast with medical progress, but here I was face to face with a condition, not a theory. To grant a favor is most gratifying, but to ask such a favor as this would be most humiliating. I had learned what a "closed hospital" means.

Sequel: The patient went to the Northwestern General Hospital of Philadelphia, where I can treat the patient to my heart's content, and I hope to the benefit and satisfaction of the patient and all parties concerned. The same privileges are granted at the Grand View Hospital at Sellersville.

The "handwriting is on the wall," and the time is nigh here when "closed hospitals" and their staffs will be ostracised by the general practitioner of medicine, even if it is necessary for them to establish their own hospitals, for there is nothing that will make a fight like the infliction of an unjust indignity, or an invidious or discriminating comparison.

"And we learned what a closed hospital is."

Hatboro, Pa.

J. B. CARRELL, M.D.

A Modified Cold Pack.

While working in the tropics, I saw many cases of a vicious malaria, the temperatures of which ran very high. Antipyretic drugs did little, or nothing, to lower the temperatures, but much to lower the vitality of the patients.

I noticed the natives throwing ordinary cold water over such patients and getting desirable results. Later, experimenting with this, and other ways of securing evaporation, I learned of a modified "cold-pack" that would produce the most gratifying results, in reducing fever, without the *undesirable* features of the ordinary methods.

I offer it here, believing that its ease of application and splendid results will get for it a welcome in places where ice is hard to get and skilled nurses quite impossible to secure.

It is nothing more than a wet sheet, or light blanket, wrapped about the body, and a gentle current of air fanned over it to produce evaporation.

We all know how quickly, surely and safely, an over-heated *well person* can be cooled off by dipping the hands in cool water. In ordinary fever temperatures the wrapping of the hands and forearms in wet towels, and the evaporation produced by fanning, will get fine results.

One of its nice features is, that by using water of ordinary temperature you avoid anything like shock to the patient.

Where it is desirable to keep a patient very quiet, the wrapping of a limb or two can be done with ease. Also where a patient is unconscious and unable to swallow, it works nicely.

WM. R. LEE, M.D. Los Angeles, Calif.

The Physicians' Exchange Not For the Country.

A physicians' exchange might succeed in the cities. I am not sufficiently acquainted with the details of the practice in the large cities to have an opinion. But it could not succeed in the towns and country. The Carnegie Foundation has reported that there are four times as many physicians in the United States as are needed. Then in a town where one physician is needed and there are four, or where two are needed and there are eight, such an exchange could not be carried on amicably. Such a dream would be on the assumption that all those physicians had similar ability, had similar chances, similar aspirations, similar virtues, and that all were conscientious. Impossible!

The kind of advertisement every honest physician would like to see were such as would convince the community of the true merit of the resident physicians. But a man of merit never has been properly recognized and honored in his own country and his own house, and never will be till human nature shall have changed very greatly.

Brownstown, Ind.

P. A. ZARING, M.D.

While we, as physicians, desire to be scientific students and practitioners of medicine, and that is the primary purpose for which this journal is published;

THE BUSINESS SIDE of Medical Practice

"The laborer is worthy of his hire."

yet, for the welfare of our dependent ones and our standing in the community, we must secure a fair compensation for the services we render our fellowmen.

"Our Legal Handicaps"

By G. M. RUSSELL, M.D.,
CHELAN, WASH.

I have read the articles recently appearing in your Journal on the above subjects, as well as those on the "Psychology of Patronage," with deep interest, and I believe I have some thoughts along those lines that may prove of interest to your readers.

Is it not a fact that the laws governing the practice of medicine in the various States were framed by, or through, the aid and assistance of the State Medical Societies of those States? Is it not a fact that they were really originally passed more for the protection of organized medicine, to keep down competition, to discourage the young man from taking up the study of medicine by making it as difficult as possible for him to become a legalized practitioner, than to raise the standard of medical education, admitting that the latter result has been attained? If this were not the case, would there still be several States in this supposedly free country refusing to recognize licentiates from other States whose requirements are perhaps more stringent than their own? Can any other interpretation be placed upon it?

While undoubtedly the main reason for the existence of these laws is the protection of the legalized physician, they have accomplished good in the way of bettering our medical colleges and forcing more medical knowledge into the student before his graduation, but on the other hand they have certainly been unjust to the old practitioner, and perhaps prevented many a man, unable to obtain a license, from doing some good that the licensed man is unable to do.

The medical lobbyist, and those responsible for his being, contend that examinations are necessary to determine whether or not the would-be practitioner has fundamental knowledge sufficient to enable him to properly discover what is the matter with his patient. The issuance of a certificate by the politically appointed Board implies that the holder has that knowledge. To be worth anything it should guarantee his ability to discover what is the matter with his patient.

Poor Diagnosis.

Several years ago Dr. R. C. Cabot, under the caption, "A Study of Mistaken Diagnoses," announced in the *Journal of The American Medical Association* that post-mortem findings revealed a high percentage of incorrect clinical diagnoses. He listed 1761 cases where he compared the autopsy findings with the clinical diagnoses and data. The average percentage of correctness of these diagnoses in these cases, taken as a whole, was 47.3 per cent. In 1913 the Committee on Inquiry into the Department of Health, Charities and Bellevue and Allied Hospitals in the City of New York, compared the autopsy findings in Bellevue Hospital with the clinical diagnoses, and this comparison revealed the fact that clinical diagnoses were confirmed in only 52.3 per cent. of the cases.

If such a poor showing is made in such institutions in the largest city in the world, where every diagnostic apparatus known is available, and the assistance had of the best men in every branch of medicine, experts in chemistry, pathology, bacteriology, serum diagnosis, etc., what may be expected of the smaller man out on the cross roads armed with a stethoscope, clinical thermometer, test tube and sphygmomanometer, and with no learned consultants to call in? It would be interesting to know what percentage of the diagnoses of the average man throughout the country in the smaller towns is correct.

Searching Questions.

Assuming that the percentage of correct diagnoses all over is 50 per cent. (and it is not probable that it is nearly this high), legalized physicians are treating at least 50 per cent. of their patients without knowing what is the matter with them. The unlicensed man would probably not do very much worse. According to these statistics the very best that the medical profession can do today is to furnish an accurate diagnosis in 50 per cent. of the cases. Granted that a correct diagnosis is made, in the present chaotic state of therapeutics, how much medication really produces any beneficial results? How much of it really affects the pathology? What percentage

of our methods of treatment really benefit our patients? What percentage does them no good? And what percentage does them positive harm? Until we can answer these questions what right have we to say that other forms of treatment with which we are unfamiliar do less good, do more harm, or are neither beneficial nor harmful as compared with the methods we use?

It seems to me that in the present ignorant, less than 50 per cent. efficient condition of the medical profession, we are in a very poor position to assume the right to prohibit anything.

State Board Examinations.

I contend that the procedure of endeavoring to ascertain any physician's qualifications, or of determining that he is a safe man to practice medicine, through a written examination of ten questions on each subject is a huge farce. As Dr. Morris says on page 54, February COUNCIL, "Men who pass the best examinations are by no means necessarily the best men." Carry this farther and how many of the men who flunk on a State Board examination would not prove themselves excellent physicians in practice? Might not some of them prove more valuable to medicine and the public than those who pass? Some of these men have undoubtedly been done an injustice, and perhaps the communities in which they live deprived of a better doctor than any other that ever existed there.

We are very particular to see that no new recruits come in without passing a rigid examination, and apparently come up to an arbitrary standard on paper. Should this be a safe, sane, honest method of determining a physician's knowledge of medicine? Is it one by which it can be determined that the applicant has the ability to put his knowledge successfully into practice, and if he can, that he will in all cases? Does the fact of his passing such an examination insure that five or ten years later he would still be able to come up to the then standard? Is the man out 30 years up to the present standard? If not, is it not as much of a crime to permit him to practice and forfeit the lives of patients through his failure to keep up to those standards as to permit a young man just out of college to do the same if he falls below grade?

Is the Public Protected?

Any law intended for the definite and specific purpose of protecting the people from incompetence should have provision for the physician's future ability as well as for that of the present. If the purpose of these laws is to protect the patients, sentimentalism associated with years of practice should not be considered, and some provision should be made to follow the physician

through his professional career and see that he keeps up to date, and maintains the highest degree of efficiency.

What is Quackery?

Dr. Kennedy, in "Our Legal Handicaps," says, "If medicine were an exact science, the quack would be an impossibility, but the fact that probably 90 per cent. of diseases will recover in spite of improper treatment, or no treatment at all, makes the quack a possibility."

How much of this applies to the legalized physician? If 90 per cent. of our patients would recover anyhow with no medication, or in spite of our improper treatment, are we not also quacks to the extent of 90 per cent. in assuming treatment of them? Then, if in the balance of 10 per cent. which really require treatment to recover, we arrive at a correct diagnosis in only 50 per cent., are we not quacks to the extent of the other 50 per cent. in holding ourselves out as *being able* to diagnose them and give proper treatment? Further, in what proportion of the 50 per cent. in which we do arrive at a correct diagnosis do we invariably apply treatment that is effective? In what percentage of these cases which we are able to do nothing but palliate might not the irregulars do better? Who can tell? Why is it not intelligently tried out?

I am admitting that patients go to an "irregular," who should go to a surgeon or internist, or perhaps a specialist. On the other hand who can deny that some who go to the surgeon, internist or specialist, might fare better in the hands of the "irregular?" Is it any worse for one to go to the irregular when he should go to a surgeon than for one to submit to a Lane operation for stasis, resulting in the horrible, irremediable pathology illustrated by Dr. Jas. T. Case, in the *Journal A. M. A.*, November 16, 1915, for a condition that can easily be permanently relieved by simple judicious treatment, if you know how? And hundreds of these operations have been perpetrated by men considered the best surgeons in their communities, to the everlasting regret of the patients. Is it right to legalize such stunts as that? How is passing a Board going to prevent it?

Some Patients Who Flew the Track.

Within the past three months I had a patient who could eat but little. Gastric analysis revealed total absence of free HCl and very low total acidity on repeated examinations, and he failed to improve on diet and usual remedies. He adopted one of the recent cults and within a very short time was able to eat anything, apparently is perfectly well, and is at work. He had been treated by other physicians for the

same condition during the past four years with no better results than I obtained.

Another patient whom I did not treat, but know very well, had diagnosis of good men in the city of Portland, of tuberculosis of bowel, and was sent home to die. He also took up with a cult, and writes me that he is absolutely well, having gained thirty pounds or more.

How are you going to explain these occurrences? Do they not show some merit in methods we ridicule? When people we can do no good are at least relieved of suffering by these means, no one can blame them for adopting them, and to my notion any law that would prevent a sufferer from being permitted to receive such relief would be pernicious and certainly not for the good of humanity.

Ridicule Answers Nothing.

It does no good to ignore or ridicule. These are facts that must be faced. So long as medical science is not a science at all, but merely a hodge-podge—50 per cent. efficient—we have no right to assume that because we cannot understand how a change can come about in a patient as outlined above that it is not done and *cannot* be done. The diagnosis may or may not have been correct. That makes no difference to the patient. What he wants is results, and if you cannot give it to him, although you learnedly tell him what is the matter with him, and the irregular can, just so long those methods of treatment are going to have followers, and rightly, too. If I were a patient in that predicament I would certainly want the privilege of employing any mode of treatment that offered any prospect of relief or recovery. Any suffering person who has tried out the diagnosis and treatment of “regulars,” with no or indifferent effect, should be at liberty to have other forms of treatment. If the “regular” is not qualified to administer such treatments, the patient should not be prohibited from going to those who can. If the “regular” does not wish to see his patient go to another, he should perfect himself in those modes of treatment and be honest in the use of them.

I believe that every practitioner, whether he passes the Board or not, has some good in him; that however obscure his origin, he may know and be able to do some things valuable in medicine that the biggest man in the city does not know and cannot do. I believe there is some good in the “vagaries” or they would cease to exist.

Surgeons and Surgeons.

Not every surgeon throughout the country has the ability that Dr. Kennedy has, and is not able to keep down his mortality record to one-third of one per cent. Many who hold themselves out as surgeons have had but little training, have

poor surgical knowledge and judgment, are bunglers, and while they may save some lives that would die if not operated, they do ill-advised surgical stunts that, on the other hand, result in life-long misery, and in many cases shorten the lease of life as well. If you have a monopoly of only men of the highest standard of efficiency, knowledge, judgment and ability, but a small portion of our country would be served. There would not be enough of that type to go around, and there is a limit to the amount of work a small coterie of such men can do.

No surgeon can compel a patient to have an operation performed, and if he refuses he should not be denied any other form of treatment he may desire. There is just about as much justice in a law outlining the definite form of treatment one shall employ for his own person as there was in the old one compelling a certain religious belief for the salvation of his soul; and the persistent trend of medical legislation toward that end will result eventually in a revolution similar to that which took place against compulsory religious belief.

Any form of treatment with no merit is doomed to “disappear into oblivion,” as Dr. Keister says. Then it is assumed that those which do not thus disappear have some merit. If that is the case, why should not that portion showing merit be adopted by the medical profession? Survival of the fittest applies to medicine as well as to everything else. If recent cults had absolutely no merit they would cease to exist.

Therapeutic Uncertainty.

The medical profession possesses the one great fault of arrogating to itself all knowledge of therapeutic measures, while as a matter of fact they are floundering in their own quagmire of therapeutic uncertainty, and yet denying any virtue whatever in other forms of treatment, although they have not investigated them, and are entirely ignorant of them.

There are just two ways in which to handle these irregulars:

First, to blindly ignore any virtue in them whatsoever, and intolerantly suppress them by law, thus arbitrarily obliterating the good that is in them, and denying those who know and recognize that good from employing it.

Second, to thoroughly investigate them, every one, cull out the positive good we find and use their methods honestly, conscientiously as they would use them, in the cases in which we find them applicable. Have their methods taught in our medical colleges by men drawn from their own ranks. Under these circumstances how long would your “vagaries” exist outside of the regular medical profession?

We have not yet arrived at that exalted position where we can afford to ignore proven therapeutic measures of any description, whatever may be their source.

The State medical societies advocated medical legislation; but, by the time the bills were enacted into law, many of them could hardly be recognized. Then, too, they have had riders and amendments galore; and many were all but negated by all manner of pathies securing legal recognition as well. And it is a fact that politically inclined coteries of physicians, medical colleges desiring favors, and other factors, have brought just criticism upon the administration of the laws, which at present are, many of them, grossly unfair to the physician desiring to change location.

It impresses us that the whole matter, if it is to remain in the hands of the States, should be placed in the keeping of the several Educational Departments and to be regulated much as teachers' certificates are handled. This would divorce the issue from medical politics and from medical sectarian or "regular" contention.

Dr. R. C. Cabot is a reformer and full of the idea that the only worthy medical unit is the large and modern hospital. In *American Magazine*, for April, 1916, he begins a series of articles exploiting this idea and urging that doctors be wholly upon salaries and that all medical and surgical care, or most all, be institutional. And yet this is to give "Better Doctoring for Less Money," the title of his articles. He is also the militant gentleman who criticised women physicians so severely that there was a sharp comeback from the women themselves as well as from a host of men physicians who appreciate what women are doing in medicine. From a strict pathological basis, there never will be a large percentage of correct diagnoses; but we simply don't believe at all that, from the clinical standpoint, Dr. Cabot's figures are at all justified. Assuming that they are correct, for argument's sake, we don't believe that similar comparisons would reveal even one per cent. of correct diagnoses by practitioners of the modern cults and isms.

Dr. Russell is correct in advocating keeping the doctor up to standard; and we wish he would figure out how to do it. The average doctor has a hard time keeping his family, as things are now. State Board examinations are a farce; so would be their re-examinations. Unfortunately, it is only too true that many physicians are incompetent; but we don't believe they want to be. How shall they be brought up to standard, and what is "standard"?—EDITOR.

Physicians' Exchange.

From time immemorial the Sacred Book has cautioned its readers not to hide "your light under a bushel," which, freely translated into modern language, signifies: "It pays to advertise." Our medical ethics have placed the *noli me tangere* stamp on the Biblical injunction, but individual members, or groups of members, have differently interpreted such injunction. Some have boldly rejected all advice, have surrounded their little flames with modern high magnifying lenses, and thus have enlightened the obscure corners of the world; they raised no strenuous objections when their confrères called them quacks, as long as they were basking in the golden sunshine. The "root of evil," thus diverted from its legitimate course, caused consternation among the general membership of the profession, in consequence of which Mother Necessity created another being, hitherto unnamed; he is fully aware of the fact that it pays to advertise, but he hates to pay for the advertisement that pays, at least openly over the counter; besides, he hates to be called a quack, though he quacks and quacks incessantly, and the old duck, bedecked with alien plumage, would like to create the impression that he is a fowl of another name. His light is not excessively brilliant, just the ordinary one-candle power, but he places it in so favorable a position that the passers-by cannot fail to see it. Whenever he articulates a few words at the weekly meeting place of the Mothers' Club, the press gives full information; if he reads a paper at the local academy of medicine, his words of wisdom, culled from the foreign press, are carefully brought to the notice of the reading public; and, if perchance you honor him with some office, his likeness is immediately reproduced in every issue of every paper of the day; he performs rare operations, ligates the dorsal artery of the penis, excises the cranial bumps, and daily informs his readers of the progress of his cases.

Shorn of both varieties of quacks, the ordinary run of the profession tends to its own affairs; it does not hide its light under a bushel, mainly because the bushel fell into *innocuous desuetude* long ago; his light is often of very brilliant intensity, though he himself knows not its power, nor cares to know; he finds ample reward in his work well done; after long and weary years of service, people will recognize the value of such service.

There is another class, with large membership, whose labor deserves recognition; their light glimmers along the byways of life; it is of varying intensity, always of good quality, but it is so obstructed by the shading bushes of adverse circumstances, that the toiler may fall exhausted by the wayside, if not some strong arm lend timely assistance. Such a strong arm may be offered by judicious advertising, as outlined

by the editor of this journal. But, in order that the central organization may be justified in recommending the services of any particular member, such services must potentially be equal to the standard requirements. Who shall set the standard? Who shall be the judge?

A few years ago a number of doctors were invited to discuss a somewhat similar question. When the viands were consumed, when the last cup was drained, even when the echo of the post-prandial song was still reverberating through the banquet halls, the guests were handed the parchment, which proclaimed them charter members of the organization. Thereafter a standard was adopted for the new members. Shall history repeat itself? Shall a chosen few in any community become charter members, who thereafter shall dictate to the rest merely because they attended the first feast of Bacchus? In every community there are capable, conscientious, up-to-date physicians, who are especially well qualified in some one branch of medicine; let these prescribe the standard for such community in that particular branch. If any member desires to become sufficiently conversant with that particular branch, so that the central organization is justified to recommend his services, he must qualify himself.

This introduces the question of post-graduate instruction. That post-graduate instruction, as offered today in this country, is of great benefit is beyond question of a doubt, but that such instruction is absolutely inefficient for the needs of the large body of the profession, who desire to become thoroughly qualified specialists is also beyond question of a doubt.

He may view, but not work; the best that is offered to him is the cadaver and the dog. At much sacrifice he visits such institutions, to return home disgusted; he feels that he has been tricked. There is plenty of material in this country, but the material is constantly guarded and monopolized by the favored few. Place such material into the hands of the ambitious, under the guidance of the master, and a new medical fraternity will come into existence; the quack and his cohorts, the patent medicine vender and seller of "rubber goods," will disappear from the fair face of the great United States. Then, and not till then, may an established central organization find justification to recommend its members.

F. A. GRAFE, M.D.

522 Rosemont Ave., Cincinnati, O.

The Journal of Immunology.

This new journal is published bi-monthly by Williams & Wilkins Company, Baltimore, Md. Edited by Dr. Arthur F. Coca, assisted by a distinguished board of editors from the research laboratories, the publication promises to represent the best thought upon the problems of immunology. Subscriptions are taken only by the volume (approximately 600 pages) and not by the year, the price being \$5.00 a volume.

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Practical points gathered from many and varied sources, grouped under the three important heads: Surgical Scissors, Practical Therapeutics and Clinical Diagnosis.

Surgical Scissors

As wielded by Douglas H. Stewart, M.D.,
F.A.C.S.

The scissors of an editorial office are bright, keen, polished and practical. May this space imitate them and its quality be helpful.

End Results in Seventy Consecutive Cases of Umbilical Hernia.

Boston Med. and Surgical Journal, March 9th, 1916, Channing C. Simmons, Boston.

Small umbilical hernia in thin adults, and umbilical hernia in children, may be cured by any operation which removes the sac and closes the defect in the abdominal wall.

Cases of umbilical hernia in stout adults are difficult to cure. The Mayo operation of transverse closure of the ring, with an overlap of the aponeurosis, gives the best results.

In adults, closure of the ring by any other method than the Mayo, in a general hospital, is followed by 46.4 per cent. of recurrence.

Recurrence, if it is to take place, usually does so in less than one year.

The suture material employed has no relation to the liability to recurrence.

Skin sepsis is very likely to occur, but, apparently has no relation to recurrence.

Concerning Rubber Gloves.

N. Y. Med. Record, March 4, 1916, Robert T. Morris, M.D., F.A.C.S., N. Y. City.—Most everyone will agree that there is a time and place for gloves and a time and place where they are disadvantageous. They may be worn in most of the so-called external operations, amputations, hernia, etc., and in the presence of pus. The article is well worth reading; but, like all writers

on the subject, the author seems impressed that blunting of touch amounts to something of considerable consequence.

If one gets a careful neurologist to test this blunting with a delicate æthesiometer, it will be found to vary from one-half to one-eighth per cent., according to the training of the hand tested; inasmuch as any hand will improve with experience and custom. Well-fitting gloves being taken for granted, surely a loss of one two-hundredth of one's sense of touch is no great or easily recognizable matter.

Bone Grafting.

Albee, in *Annals of Surgery*.—In the treatment of fractures, metal plates are unqualifiedly condemned. Such foreign bodies cause osteoporosis and defeat the conditions that they are supposed to help. Metal plates or wire cause absorption of bone. Bone-grafts cause a deposit of bone.

Causes, Mechanisms and Treatment of Flat-Foot.

Wm. Jackson Merrill, A.B., M.D., Philadelphia, in *Surg. Gyn. and Obst.*, Mar., 1916.—A condemnation of foot-plates, as used in countless instances, cannot be too strong. It is important to emphasize the dangers incident to the use of ready-made arch supporters which unscrupulous shoe dealers and brace makers urge upon the customer, not because they have the wisdom to advise treatment, but because the traffic is profitable.

With the essential data in mind, the physician should employ constitutional and local treatments suited to his case, and should teach his patient the cardinal laws of prevention if he desires to accomplish a permanent cure.

Sign in Fracture of Pelvis.

G. P. Coopernail, M.D., Bedford, in *Medical Record*, March 4, 1916.—From one to three days after injury look for black and blue spots (ecchymosis) in the perineum, scrotum, or labia, as the sex of the patient may be. These may be absent in fractures of the iliac crest: if small; but if extensive or in the pubes they will be evident.

Windage and Decompression in Military Surgery.

Windage is the effect of air compressed by the passage of a large shot. The latter may be solid or not.

Decompression is the result produced if an explosion blows a hole in the atmosphere; and, when its force is spent, particles of air rush in to fill that hole. Thus a man standing near an

exploding shell is subject to an enormous atmospheric pressure with a duration of, say, half a second, and due to the particles of air which are blown aside. But the force of the explosion ceases at once and leaves the hole in an elastic medium; consequently, to fill that hole or vacuum which an explosive force created and abandoned, air rushes in from all directions. The air in the man's blood effervesces like the gas in a charged mineral water and his capillaries are filled with bubbles (air-emboli). It is as if the man were placed under the bell of some pump which furnished a prodigious pressure with one stroke and a complete vacuum with its return-stroke. The result is a death so rapid that the man cannot so much as change his position before he is dead.

The Possibility of Neutralizing the Dangers of Prostitution.

A. Neisser, in *Deutsche Medizinische Wochenschrift*, Berlin, Nov. 18, 1915.—Is it really wholly impossible to make prostitution innocuous to bodily health? This deals with the prophylaxis of venereal diseases and, incidentally, with the management of gonorrhœa and syphilis. One thing that would impress an American, almost immediately, is the confidence that the author puts in vaseline as a mechanical, film-making and efficient protection against the transference of infection from one party to the other. The mouth of the vagina, the vulva and vestibule are to be thoroughly smeared with it and a cotton pad soaked with it is to be placed over the os uteri.

To keep an American physician from adding a germicide to the vaseline would be quite as difficult as keeping a duck away from a pool. Yet, Professor Neisser's opinion carries weight.

Fatality Following Use of Horse Serum.

N. Y. *State Journal of Medicine*, T. H. Farrell, M.D., Utica, N. Y.—Patient was a young man (19). Nose previously operated upon without unpleasant sequelæ. Portions of inferior and middle turbinates removed. Operation performed 9 A. M. Cocaine anesthesia. Persistent oozing from nose, unnatural depression of good spirits and lack of animation in conversing ensued. Ten cc. horse serum given (subcutaneous injection), after which patient felt hot, nauseated, and breathing difficult. Became unconscious, with weak pulse, with swollen and livid lips, and died in a few minutes, despite the use of pulmotor and restoratives. The rapidly fatal ending was appalling, but any one who uses horse serum must be prepared for this eventuality.

As for the other side of the picture, the words of the writer fully explain that by stating:—"I had come to have a feeling of security against serious postoperative hemorrhages in the positive control afforded by the subcutaneous injection of horse serum. In all my cases 10 cc. administered once had been sufficient.

Besredka says in regard to desensitization:—"In using intravenous serum injections, first a drop, a half minute later a few, after a little time some more, and so on." Then any size dose he considers safe.

Diagnosis of Genito-urinary Conditions in Women by Means of the Röntgen Ray.

Archives of Diagnosis, Oct., 1915, G. S. Peterkin, M.D., Seattle, Wash.

By means of the X-ray and the X-ray pessary (invented by the author), pathological conditions in the genito-urinary apparatus in women may be seen as they exist before operation, as well as exact, immediate and late postoperative results may be recorded. Statistics of value regarding the effect of various operations (for suspension, cystocele, etc.) may be compiled. Until the advent of this pessary every one of us could surmise, but could not demonstrate the exact pathological condition and operative results. Now, when a patient comes with urinary symptoms, frequency, etc., and with various diagnoses as to degree and form of uterine malposition, one can demonstrate his findings in black and white upon an X-ray plate. This makes such diagnoses an exact science.

Modern Indications for Cæsarean Section.

John T. Williams, M.D., Boston, in *Boston Med. and Surg. Journal*, March 30, 1916.

No obstetrics can be considered successful when the mother is left an invalid or the child permanently injured. Two particularly pernicious traditions may be singled out: first, the teaching that 95% of all cases of labor may terminate spontaneously; second, that difficult, high intrapelvic operations, having considerable fetal mortality, are without danger to the mother. The experience of every practitioner will refute the first and the author considers the maternal mortality of the second essentially as great as that of early Cæsarean section.

The pelvis may be measured, the size, position and relations of the child may be estimated, but the exact date of labor, the amount of moulding, the degree of ossification of the head, the resistance of the soft parts and the action of the uterus—all these may not be foretold. Patients have sometimes had a hard operative delivery

with loss of child in the first labor, but all was of rapid and normal progress with the second.

The indications for Cæsarean section are: first, marked pelvic contraction; second, marked disproportion between head and pelvis; third, high abnormal presentations in primipara; fourth, late primiparity (all women over 35) because of the danger of deep tears, profound shock and loss of baby.

Cæsarean Section Overdone.

Foster S. Kellogg, M.D., Boston, in *Boston Med. and Surg. Journal*, March 30, 1916.

This paper is not written to cover Cæsarean section, nor to bring forward statistical arguments against it. It does not belittle its honest value, but it objects to exploiting a good thing, because a good thing exploited is "apt to go bad."

De Lee is quoted: "In spite of most vigorous asepsis and a perfect technic, the operation has a high mortality." Ten recent cases in the hands of well-trained obstetricians were cited: Seven died, three recovered after being so sick that life or death seemed a matter of chance. The proportion that these cases represent to the whole number of Cæsareans performed by this group of men is not the point. They occurred within a year, in this community, and among a small group of good obstetricians. If the question is asked "On what indications is it being advised?" the honest answer is "Almost anything that prevents a baby from flopping into the world itself." The decision for or against Cæsarean rests on the size of the child and whether the presenting part may be or may not be put into the pelvis. Or does it or does it not override the symphysis if it cannot be put in?"

In a disease with the mortality of eclampsia, a live mother with prospects of more babies is enough to satisfy the most exacting. The aforesaid is but a faint outline and the paper is well worth reading, if only for its evidence, that it was written by a man who "had been there himself."

End Results of Fourteen Operations for Perforated Gastric and Duodenal Ulcers.

C. L. Gibson, M.D., F.A.C.S., N. Y., in *Surg., Gyn. and Obstetrics*, April, 1916.

Diagnosis is formed from consideration of the history. Previous gastric disturbance; the onset of sharp, stabbing pain; more or less collapse; board-like rigidity of abdominal muscles, particularly of the upper abdomen; and the possible vomiting of blood, are absolute characteristics in early cases, but later a diagnosis of peritonitis of unknown origin is necessitated by the tendency of extravasation to gravitate to

right flank and simulate a spreading peritonitis from a perforated appendix.

In a few cases a fleeting symptom, lasting but few minutes and then disappearing, has been a sharp pain referred to either supraclavicular fossa (chiefly the left).

Perhaps a considerable proportion of cases of perforated gastric ulcer in its later stages always will be operated on for an appendix, but the escape of gas, the sour smell and the mucilaginous character of the abdominal fluid are guide-posts. Gastro-enterostomy is rejected as unfitted for a condition which is going to be cured in any event (perforation itself is one of Nature's steps toward healing), opening the peritoneum after putting water in the wound allows the bubbles of gas to be seen and a double purse-string suture, made rather wide, is the simplest, speediest and sufficiently efficient operative precaution.

Rectal Drainage of Appendiceal Pelvic Abscess.

V. L. Schrager, M.D., Chicago, Ill., in *Surgery, Gyn. and Obstets.*, April, 1916. A small incision in anterior rectal wall and a scissors' blade introduced. The pus generally rushes out, showing that it was held under tension. Pressure upon lower abdominal wall is an aid. One rubber tube is inserted high up the rectum and a second tube is introduced into the abscess cavity. This proceeding prevents feces entering the abscess. Leave tubes in place and they will usually be expelled in a few days. Non-drainage of a dependent abscess causes slow convalescence for cases of suppurative appendicitis, but in either desperate or suitable cases rectal drainage, based upon the findings of rectal examination, is a gratifying procedure.

The article is so clear and concise that it merits only commendation, but it may not be amiss to state that in the handling of any recto-pelvic abscess two things are fundamental, viz., that the rectum shall be thoroughly cleansed and after such cleansing it shall be widely dilated. The manipulations of the old, well-known but often forgotten "Hilton's method" hold good as to principles in any abscess work. Particularly so when that abscess is in a deep and dangerous situation. It is good for the timid operator and indispensable for the bold one. It is "Incise skin and deep fascia, push a director into abscess, pass a pair of forceps along director and when they have entered the abscess cavity open the blades. The opening should be dependent, free and parallel with or to important structures."

Clinical Diagnosis

Gleanings on diagnosis from current medicine. Points you can use in your practice tomorrow.

The Diagnosis of the Glycosurias.

Prof. Jas. S. McLester, Birmingham, Ala., in *Southern Medical Journal*, Feb., 1916, states the difficulties in distinguishing between mere glycosuria and diabetes. Regarding the assimilation of sugars, Allen says: "If, with a given dose, any utilization of carbohydrate occurs at all, an increase of the dose causes the utilization of a larger quantity." Should dextrose be given an individual already glycosuric, not all of this sugar serves to augment the glycosuria; but diabetic glycosuria offers an exception, for a developed case shows an *absolute limit* of sugar tolerance, and the ingestion of added sugar shows an equal or surpassing increment in the urine.

To the true diabetic, sugar is a diuretic; to others it is anti-diuretic. This is because sugar circulates in the crystalline state in diabetes, and as a colloid in other persons.

Non-diabetic Glycosuria.

Non-diabetic glycosuria may result, in the intestinal system, from hunger, dyspepsia and cachexia; in the hepatic system, from poisons, drug-using, foreign albumins and serums, pregnancy and asphyxia; in the renal system, from diuretics and the excretion of phloridzin; in the nervous system, from asphyxia, infections, heat and cold, fever and internal secretion irregularities (adrenal, thyroid, parathyroid and hypophysis).

True diabetes seems to involve only, in this regard, the pancreas and nervous system.

The ailmentary glycosurias are not important; and it is not today believed that the excessive use of sugar in the normal individual is apt to induce diabetes, though the question is somewhat in doubt. The liver does not originate the glycosuric impulse, unless a poison, such as phosphorus, destroys liver cells and releases glycogen. A long-continued, true hepatic glycosuria does not exist. But there may be a genuine renal glycosuria, especially from the action of caffeine [From regularly drinking soda water syrups carrying caffeine even more than from coffee.—Ed.] and some other diuretics. The nervous system has an intimate relationship to both diabetes and glycosuria, but no antagonistic relation between the pancreas and adrenal has been proved, despite nervous influence upon adrenal function. None of the organs of internal secretion, excepting the pancreas, have at au-

topsy shown an anatomic relationship to diabetes.

Diabetes is a disease *sui generis*, not a symptom, as is glycosuria. Diabetes is, largely, a pancreatic disease, and animal experimentation proves this, and island changes in the pancreas of diabetic human beings may be demonstrated. It is believed that lack of the internal secretion of the islands of Langerhans produces diabetes. Unfortunately, feeding pancreas extract does not seem to supply the lacking substance.

Taking all of these factors into consideration, the differentiation between a simple glycosuria and diabetes should not be difficult.

The Quick Diagnosis of Syphilis.

Dr. W. H. S. Stalkartt, in *The British Med. Jour.*, describes this quick method for the detection of *S. pallida*:

Take a smear of blood and serum from the sore, the exudate being obtained after cleaning and rubbing or scraping the sore, or making a small incision in its margin. The sore should not previously have been treated with antiseptics, or, if it has, should be dressed for several days with a simple saline dressing.

1. Fix in a 1 per cent. glacial acetic acid and 8 per cent. formalin. Rough dry the slide.

2. Wash in alcohol and flame off.

3. Gently heat in a 5 per cent. solution of tannic acid.

4. Wash in water and stain with slightly warmed ammoniated silver nitrate solution. (To a 5 per cent. solution of silver nitrate add ammonia solution until the precipitate first formed is just dissolved; add a few more drops of silver nitrate solution until the precipitate just reappears.)

5. Wash in distilled water and dry.

The films should be chestnut colored. If they have only become yellow the staining from the tannic acid onwards should be repeated at once.

The slides must not be mounted in balsam, but examined in neutral cedar-wood oil in the ordinary way. The spirochætes are very clearly demonstrated by this method.

A weak solution of oxalic acid removes permanganate stains; then carefully wash with warm water and soap.

Willson's post-mortem findings showed a myocarditis in every fatal case of pneumonia studied by him; and he believes that cases who recover all have had more or less damage to the heart. How unwise, then, to give circulatory depressants!

Practical Therapeutics

Giving in concise usable form the therapeutic points from current medicine that are really of value to the busy practitioner.

Arthritis Deformans.

Dr. Geo. F. Butler, Kramer, Ind., in *The Lancet Clinic*, lays stress upon the fact that the diet suitable for gout is quite unsuited to the arthritic; he should have whatever he can best digest and assimilate. Meat should be taken freely with, of course, a balanced diet of the other food factors; but he should not have very much sugar, especially in his drinks, which latter should not be acid.

Moderate exercise and warm clothing is necessary, and a warm and dry climate is recommended. Thermal baths and electro-therapeutics the author commends.

Guaiacol carbonate, arsenic and iron are the drugs recommended. Sodoxylin will correct the common acid gastric fermentation. Keep the bowels open. Holadin and bile salts will aid when the pancreas seems to be at fault. Keep up the supply of lime in the system. Autogenous vaccines are recommended, but local treatment usually accomplishes very little.

Bichloride Poisoning.

Lambert and Patterson, in *Archives of Internal Medicine*, recommended an emetic of apomorphine; the prompt swallowing of the whites of a dozen eggs and then gastric lavage. Then, every two hours, they give 8 ounces of the following: Bitartrate of potash and sugar, of each 1 drachm; lemon juice, 1 ounce; water, 16 ounces. In alternate hours give 8 ounces of milk. Wash out the stomach and rectum once daily, and use drop-by-drop rectal irrigation continuously with a solution of acetate of potassium, 1 drachm to a pint of water.

The Pineal Gland.

Dr. W. E. Dandy, at Johns Hopkins, according to *Southern Medical Journal*, has removed the pineal gland, once considered as having a valuable internal secretion, from a number of puppies. No influence upon their growth or development resulted. From this it would look that pineal gland extract is inert.

Laryngeal Tuberculosis.

In *Medical Record*, Mar. 4, 1916, Dr. Malcolm F. Lent, Lake Kashaqua, N. Y., in addition to climatic treatment and vocal rest, individualizes in local treatment, using the whole range, from

alkaline sprays up to formalin, argyrol and lactic acid applications, though he most favors the electrical cautery. Insufflations of powdered orthoform give much relief from suffering. He suggests dissolving on the tongue a tablet of 1 gr. orthoform, 1-10 gr. menthol, and 1-10 gr. camphor.

Sodic Citrate in Pellagra.

Alessandrini and Scala still maintain, according to *The Lancet*, that colloidal silica may, and often does, cause pellagra; but carbonate of calcium and the alkaline carbonates prevent the toxicity of the silica. Their technic for the administration of sodic citrate is to give intramuscular injections of 1 cc. of a 10 per cent. aqueous solution. Most excellent results are reported.

The Treatment of Psoriasis.

In *Boston M. and S. Jour.*, Feb. 24, 1916, Dr. Arthur P. Perry, Boston, reports the use of normal horse serum in the treatment of psoriasis. It comes in aseptic glass syringes ready for use. This is injected subcutaneously at weekly intervals for six weeks. Do not use the serum intravenously, and do not neglect indicated constitutional and local treatment. The series of cases reported indicate that the use of horse serum is well worth a trial.

Basham's Mixture.

Dr. H. C. Wood, Jr., in *Jour. A. M. A.*, April 8, 1916, does not favor the use of Basham's mixture in the treatment of Bright's disease, since astringents do no good in this disease; but he does not deny the value of iron in certain cases of nephritis, as the anemic cases, even though iron does not specifically influence the kidney. This preparation, and the ferric chlorid, Dr. Wood thinks, are abused; they are too astringent and irritating. The ordinary Bland's pill is just as effective and is not irritating; and, if a solution is desired, the citrate of iron and ammonia serves admirably.

Chronic Poisoning by Emetine.

H. H. Dale, M.D., F.R.S., in *The British Med. Jour.*, Dec. 18, 1915, raises the question of the possible cumulative action of emetine, cases having occurred in which continued administration induced diarrhea and intoxication. Dr. Dale conducted experiments upon animals, and his preliminary report gives a measure of support to the cumulation theory. The effect varies somewhat in different animals, but diarrhea, emaciation, intoxication and even death have resulted

from continuance of doses which at first appeared harmless.

The warning is sounded against the indiscriminate and unguarded use of emetine beyond the limits which expert observation has laid down for its employment with safety and benefit.

Tetanus in Military Hospitals.

Sir David Bruce, C.B., F.R.S., F.R.C.P., Surgeon-General, A. M. S., in *The British Medical Journal*, October 23, 1915, analyzes the cases of tetanus received in home military hospitals from the seat of war.

The mortality was 57.7 per cent., cases of short incubation being the more fatal. The therapeutic effect of antitetanic serum was not well marked, intrathecal injection being the more favorable method. There was no favorable evidence as regards treatment with magnesium sulphate or phenol. Good surgical treatment is of first importance, serum standing next. Chloral and chloretone were the sedatives of choice.

Insanity by Contagion.

Dr. B. Henry Mason, Worcester, Mass., in *Boston Med. and Surg. Jour.*, Jan. 6, 1916, gives the history of epidemic obsessions, religious, social and political, and he states that more modern epidemics have been paranoid or hysterical. There must be some underlying mental disorder to be precipitated by epidemic emotionalism. The author asserts that mild manifestations are quite common.

During a "campaign" by one of the blatant *Me-und-Gott* type of alleged "evangelists," we had seven cases of insanity precipitated by the disgusting emotionalism of the "tabernacle." Most of them were mild, and all in persons whose relatives should have had better sense than to permit them to attend the revival, which doubtless did good to many, but also hurt these unstable persons. Christianity is a splendid thing so long as it is kept splendid; but make it puerile and it injures those whose nervous systems are unstable.—EDITOR.

In exophthalmic goitre Abrahams recommends complete isolation and rest. He gives 5 to 10 minim doses tincture strophanthus three times a day to overcome the rapid heart action, and moderate doses of bromides for the nervousness. One-fourth grain of codeine may be given when retiring if there is too frequent urination.

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THE NEWER MATERIA MEDICA

AND

ARMAMENTARIUM.

Quarterly Supplement, June, 1916.

Presenting *EXCLUSIVELY* the newer drugs, biologicals, dressings, instruments and appliances which are additions to science as well as to trade. Mere pharmaceutical mixtures of well-known drugs will not be given space here.

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needs. To co-ordinate this fresh material into a *CAREFULLY EDITED* quarterly supplement of practical information, we believe, meets a real need.

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The Newer Drugs and Preparedness.

THE MODERN tendency is away from bulky drugs; and the newer drugs average rather small in dosage. The successive revisions of the pharmacopeias of the leading nations show a consistent deletion of syrups, elixirs and other bulky preparations, and an inclusion of many proximates and active chemicals. The extensive use of tablets by dispensing physicians is a move away from the bulky to the compact.

The medical services of the various governments have long become accustomed to service kits containing few bulky drug preparations; and physicians generally are becoming accustomed to the proper handling of the active and compact agents, especially since they are put up as handily as sardines in a tin. On our desk as we write there are illustrations of this, as preparations used in office hours and not yet put away are in sight. These things catch the eye of the writer: 1 cc. Vacamps of Digitone (Norwich Pharmacal Co.), Cupric Applicators (Antiseptic Supply Co.), First Aid ampul 3½ per cent. iodine solution (Mulford Co.), K-Y Lubricating Jelly in tube (Van Horn & Sawtell), triturates Tuberculin "B E" (Mulford), urinary test reagents in tablet form (Eli Lilly & Co.), Lactampoules of *B. bulgaricus* (Fairchild Bros. & Foster), normal horse serum (H. M. Alexander & Co.), gonococcus vaccine (P. D. & Co.), and a number of official drugs, dressings for minor surgery, etc. And, writing this with the stuff in sight, one can't help but wonder over our lack of preparedness twenty years ago, when these reliable and handy things were not at hand, and when bulky and unscientific products not standardized or sterilized were our only resource.

Office Preparedness.

The beauty of these newer products consists in the fact that they put the doctor's office to the forefront in preparedness; and these products are

for the *doctor* to use and not for self-medication by his patients. The newer drugs are, largely, put up in ounce packages and are really stock packages, not cartons to last *one patient* for a few days. These things are compact and ready to place in one's emergency bag and be safe to use anywhere and everywhere; and they will never be advertised to the public at large. They are real professional helps, and it pays the doctor to use them.

Military Preparedness.

Doctor, if you could see the big war orders pouring into the large pharmaceutical houses, you would note the preponderance of biologicals, sealed packages and ampoules, tablets in tins, and other of the newer products or newer ways of putting up old ones. If this country, unhappily, becomes involved in war, it will be the doctors who have learned office preparedness who will be to the front in military preparedness in the medical and surgical services, not the ones who are messing around with syrups and elixirs and whose bandages are torn from old sheets and shirts.

The list of firms making these modern products used to consist of about 80 per cent. foreign and 20 per cent. American houses. Gradually the relative proportions have changed until now America is largely making her own biologicals and surgical dressings and tablet goods, and is gradually taking up the making of fine chemicals. Present international conditions will immensely stimulate this tendency, as well as prompt the physicians to use in civil practice those newer products that are serving so well in the camp and field.

Gynocardates in Leprosy.

Merck's sodium gynocardate (derived from chaulmoogra oil) is being used by subcutaneous

injection in the treatment of leprosy. Rogers, Heiser and Bahadur are giving a maximum of 4 grains once or twice a week. Results are favorable. Chaulmoogra oil is nauseating and disturbs digestion. Gynocardic acid is derived from it. We wish American authorities would try out the gynocardates in external tubercular lesions. The agent seems to influence tubercular forms of leprosy so favorably that one would naturally expect it to influence non-leprosy cases.

A New Intestinal Antiseptic.

In a paper recently read to the members of a Connecticut medical society Dr. J. T. Ainslie Walker brought forward a new intestinal antiseptic which, he claims, is really effective. Countless excellent antiseptics have been employed in the past for the purpose of lessening the putrefactive processes that occur normally in the intestine, and when unduly free produce symptoms of disease. To mention only a few out of many, calomel, mercuric sulphide, salol, resorcin, various bismuth salts, betanaphthol, and naphthalene tetrachloride have all had their vogue as intestinal antiseptics, and all have proved failures in the hands of the great majority of medical practitioners. As a result of this we have seen other methods of lessening intestinal sepsis recommended and practised, notably the use of the lactic acid bacillus advocated by Metchnikoff and the more drastic surgical procedures of Sir Arbuthnot Lane. The new drug so strongly recommended as an intestinal disinfectant by Dr. Walker is a benzene derivative, 1-2-4-5-6-trimethylmethoxyphenol, with the formula $C_6H(CH_3)_3(OCH_3)OH$. He does not mention how it is formed or where it may be obtained. It is administered by the mouth in the form of $2\frac{1}{2}$ minim gelatine capsules containing a 50 per cent. admixture of the drug with a vegetable base, and alternatively as a syrup, for infants and children unable to take the capsules. A 50 per cent. gelatine emulsion of the drug is known for short as "trimethol." It is stated to have a Rideal-Walker co-efficient of 20, or in other words to be twenty times more efficient than pure phenol as a germicide, and is not, it is said, decomposed in its passage through the alimentary tract, and is excreted unchanged in the feces. It appears from the cases quoted by Dr. Walker that up to twenty of the capsules of trimethol described above may be given to an adult daily; offensive diarrhoea, enteritis, ulcerative enteritis, mucous colitis, and ulcerative non-amebic dysentery are mentioned among the intestinal disorders in which the new drug proved strikingly effective. As every medical man knows, intestinal sepsis is nowadays credited with being the *fons et origo* of many diseases that may at first sight appear to have little connection with it—rheumatoid arthritis, for example, and pernicious anæmia. Dr. Walker certainly makes out a good case for the further trial of trimethol in both acute and chron-

ic septic disorders of the intestine.—*British Medical Journal*.

Kalak Water.

This is an artificial carbonated water rich in calcium and magnesium. Thus it is highly alkaline. The base is distilled water, and to it is added a mixture of the carbonates, bicarbonates, chlorids, and phosphates of sodium, potassium, calcium and magnesium. It is devised to promote the rapid alkalization of persons suffering from the various manifestations of acidosis. We find it a particularly palatable water. Most alkaline waters are disagreeable; this one is not. The makers, The Kalak Water Co., of N. Y., Inc., 19 Bush Terminal, Brooklyn, N. Y., supply to physicians free of charge a reliable set of acid indicators which give an approximate quantitative estimation of total acidity in the urine.

Prostatic Extract.

Thaon, in *Bull. de L'Académie de Médecine*, calls attention to the extreme toxicity of prostatic extracts, especially upon intravenous injection. In addition to toxicity it definitely raises blood-pressure. Bazy records cases of toxicity in prostatic hypertrophy which recovered after prostatectomy. Thaon attributes prostatic toxicity to labile fats or lipoids acting like a true internal secretion. From this it would appear that prostatic extract is too toxic to use therapeutically.

Acetous Magnesium Hypochlorite Solution.

Dr. Douglas H. Stewart's New Formula.

C. Mayer, in *Paris Médical*, Feb. 19th, 1916, recommends a solution of magnesium hypochlorite as having advantages over Javelle and Labarraque preparations. The present writer, after trying it two hundred and fifty times, believes that Mayer is quite correct and that its efficiency from a clinical standpoint is very high. It is well tolerated by living tissue, it has slight odor and is not likely to produce the annoying chlorine eczema. Mayer's process is rather clumsy for emergency work, and an acetous solution is better than an aqueous one. All that is necessary to carry in a satchel is two powders, viz.—chlorinated lime and Epsom salts. Vinegar may be obtained in any household.

Put into a wide-mouth four-ounce bottle six tablespoonfuls of vinegar and one level teaspoonful of the lime. Into a cup put two tablespoonfuls of water and a heaping teaspoonful of Epsom salts. When the salts are completely dissolved, pour their solution into the bottle and tie a single thickness of gauze to its neck to act as a strainer.

Put this mixture on your hands and also upon the wounds of the patient. If, in addition, ordinary castor oil be smeared on the dressings which come in contact with the wound, the combination will be found to be most satisfactory. Why not try it, compare it with what you are using and report your findings to the Council? Be particular to state in your comparison just where it comes short in price or value (two different things).

Almost every one who has seen or used the solution insists upon being told what the fine, smooth precipitate is. It probably is a poor grade of gypsum or plaster of paris, or at least it looks like it, acts

like it and tastes like it; consequently it is quite harmless, but not beneficial, hence the need of a strainer.

Some dentists and oral surgeons are interested enough in the solution to give it a thorough trial in their line of work. Reports thereon may be expected in due course, because there are only too many physicians who are fighting a losing battle against some septic bodily condition which has its focus in the mouth; but manifests itself through joint, skin, heart, lung or kidney channels. Anything which will help in such an emergency will prove of widespread value. Whether this solution is such a help remains to be determined.

Toxicity of Resorcin.

Boeck reports a case in which a 25 per cent. resorcin paste caused death from a peculiar intoxication. Kyrle reports a case in which the application of a 10 per cent. watery solution produced grave but not fatal intoxication. In both cases the skin was intact. The lesson is to avoid strong preparations applied over large areas or to the skin of children, since toxic quantities may be absorbed.

Chloramine in the Treatment of Wounds of the Mouth and Jaws.

A. R. Fisher says that the septic character of all gunshot wounds involving the mouth and the disadvantages attending the use of the common antiseptics led him to try chloramine (Toluene sodium sulphochloramide) in seven cases, five being compound fractures of the jaw and two flesh wounds involving the mouth. A two per cent. aqueous solution of this agent was used for irrigation, which was carried out every hour during the day and as often as possible during the night. Chloramine besides being a powerful antiseptic has the property of penetrating the tissues, and is not so readily neutralized by albuminous discharges as the simpler chemical antiseptics. It is bland and non-irritant. While the number of cases treated was small the results were most encouraging.—*British Med. Jour.* via *Med. Record*.

New Remedies Characterized by Elimination of Bad Taste and of Local Irritant Action.

Dr. Bernard Fantus, Chicago, in *Illinois Medical Journal*, makes a valuable point regarding remedies for administration to children and the fastidious. In an article covering a wide field, he says:

One of the most prominent tendencies of the newer materia medica lies in the direction of eliminating bad taste and local irritant action.

No longer is it necessary to offend the taste and to derange the stomach by giving, as anti-diarrheal, tannic acid or one of the vegetable astringents. The tannate of albumin—*tannalbin* [Merck]—is tannic acid, whose affinity for proteids has been satisfied before it is put into the stomach, thereby eliminating action upon this organ. It reaches the intestine in probably the same form in which tannic acid given uncombined would reach it, namely in combination with proteid, from which combination the tannic acid is slowly split off on digestion of the proteid. The dose of this light brown, odorless and tasteless powder is rather large—1 to 4 gm. (15 to 60 grains) for adults, and even infants may get as much as 0.5 gm. (8 grains). It is so inoffensive that it may readily be administered to the little ones mixed with food.

Creosote carbonate [Non-proprietary. *Creosotal* (Bayer) is similar. Also of same type is *Calcreose* (Maltbie)] is so much easier to take than creosote, and acts like it, excepting as far as influence upon the stomach is concerned, that it ought to be generally preferred to the crude drug. It is an excellent expectorant in bronchitis with profuse secretion and in tuberculosis, given in drop dosage progressively increased up to 30 or more drops three times a day after meals; best administered shaken up with milk, coffee or wine.

Betanaphthol benzoate [Merck, also Hoffmann-La-Roche and non-proprietary products] probably deserves to supersede betanaphthol as an intestinal antiseptic, at least in pediatrics, as it is insoluble until it arrives in the intestine, therefore is tasteless and free from irritant action upon the stomach. I have seen betanaphthol produce vomiting in a child. *Betanaphthol benzoate* may be given to adults in 0.5 gm. (8 grains) doses; maximum single dose is placed at 1 gm. (15 grains) daily; maximum daily dose at 4 gm. (60 grains). To children it could be administered in the form of sweet tablets.

When iodides disagree with the stomach, we may entirely circumvent action upon the stomach by giving *sajodin*, [Bayer] which is an insoluble soap of an iodized fat that becomes digested in the intestine and after absorption yields iodide to the system. Of course, it is slower in developing its action than is potassium iodide and it probably is also feeble, containing as it does only one-third as much iodide. However, the ease with which it may be given compensates for the latter defect; and, by giving two or three times as much as we would give of the iodide, we can obtain the same results, even to the extent of producing iodism. Have used it for the last few years, rather extensively and with satisfaction as an expectorant in children, to loosen up a tight cough, giving it in doses of 0.06 gm. (1 gr.) every 2 to 4 hours in form of sweet tablets, which are as pleasant as real candy (Fantus).

Am less certain of the value of *Sabromin* [Bayer], the bromine compound analogous to *sajodin*, it having been shown by Ellinger & Kotake that its distribution in the system differs from that of bromides in that it accumulates in the fatty tissues, while bromides accumulate in the fluids of the body. It may, however, be used with expectancy of some results when bromide treatment is indicated but cannot be employed in other form because of gustatory or of gastric hypersensitiveness on the part of the patient. Have a number of nervous patients who have been taking it for months or years in doses of 0.30 to 0.60 gm. (5 to 10 grains) three or four times daily with results satisfactory to them. In one of these patients the same dose of potassium bromide produces coryza, while she can take *sabromin* without ill effect.

Aspirin, or acetylsalicylic acid, is probably too well known to require discussion here. *Salophen* [Bayer], however, which is a salol-like combination of phenacetin and salicylic acid, deserves to be better known. As it is broken up in the intestine, it has the analgesic and antipyretic properties of its constituents with the additional action of an intestinal antiseptic. It is at the same time free from taste and from tendency to produce gastric irritation, which cannot be said of aspirin. Its dose is from 0.3 to 1 gm. (5 to 15 grains) in powder, cachet or capsules. Have used it extensively and with satisfaction in dose of 0.06 gm. (1 grain) every two hours in form of sweet tablets (Fantus) in the minor

fevers of childhood. In cases in which the depressant action of the phenacetin in the before-mentioned compound may seem objectionable, *Saloquinine* [Bayer], a salicylic ester of quinine, may be used in the same manner and dosage.

Our old friend quinine is no longer one of the most difficult medicines to give to children. Equinine [Merck], meaning "good quinine," has been called the "children's quinine"; but *aristoquin*, [Bayer], is, as its name indicates, better, *i. e.*, less bitter still. It is quinine carbonate, so tasteless that it is easily disguised, yet sufficiently absorbed to give quinine action (Dreser). One grain of it is easily given in form of a perfectly delicious 5-grain chocolate tablet (Fantus), especially if a trace of sodium bicarbonate is added. Have used it in this form with some satisfaction in a number of cases of whooping cough.

[Firm names in brackets our own.—Ed.]

Intolerance to Picric Acid.

Rare? Yes, but always accompanied by bitter resentment. Everything appears to go wrong at once. Personally, the writer has abandoned its use because his alternate is a man upon whom it has an effect similar to poison ivy. To use the gentleman's own words, it converts him into "a non-intoxicated rummy." Large clinics have had no trouble with it; but if they did have any trouble, then it was the trouble that was large. Cushny says:—"An ointment has been employed in a few cases of eczema and gave rise to poisoning in one case."

For example:—Imagine a malpractice suit threatened because you had damaged a man with picric acid. The plaintiff would only have to show his yellow eyes, scaling, swollen face, his chronic body urticaria, and a bottle of his red urine, to a jury: then you might imagine yourself already condemned in their eyes, yet compelled to explain things away. Innocence or guilt would make small figure here. The only question is: "Is the risk worth while?"

My intolerant surgical friend remarks in Latin that "Picric makes a picnic," but the Merck people say:—"Do not apply in substance or ointment; as then toxic effects are caused." The meaning is the same.

D. H. S.

Xylol in Dermatology.

JOHN E. LANE, M.D., *N. Y. Med. Journal*,
Oct. 16, 1915.

Information in Various Merck Reports.

This excellent article appears to have stirred up quite an inquiry about an old, a valuable, but a neglected parasiticide. Xylol is a homologue of benzene; it is dimethyl-benzol and its common name is xylene. It has quite a literature; it is efficient, easily handled and cheap. It evaporates quickly, penetrates the skin, kills the mites and dissolves the comedo of acne. It is a good application for adhesive-plaster eczema and an excellent substitute for iodine if the color of the latter be objectionable. (Ringworm, favus, seborrhea, etc.)

Its internal use is a matter foreign to this discussion, but Powlowski (Merck's Reports, 1909, page 305) found its effect, as an internal disinfectant, marked in typhoid, etc. Dose: 5 to 20 drops in capsule. A surgeon doing rough-and-ready work will find xylol valuable. He can destroy with its alcoholic-ether solution almost any external parasite, immediately, can put it upon any dermatosis with

benefit or at least without harm, and can use it internally for gaseous distension. The writer's old teacher, Edward Curtis, left these words behind him: "These second grades of so-called impure carbolic consist of cresol, xylol and other phenols of a higher boiling point than carbolic and contain none, indeed, of the latter substance, all the carbolic of the original crude substance having come over in the earlier distillations. They have similar germicidal and antiseptic powers to carbolic." D. H. S.

Pituitary Extract in Placenta Previa.

Paul Gallagher, M.D., Hiram Gallagher, A.B., M.D., the former of El Paso, Texas, the latter of Los Angeles, Cal., in *Surg. Gyn. and Obstetrics*, April, 1916.

The drug is of inestimable value; its results were uniformly good, but even if it should ever prove to be inefficient, our position in such a case could be no worse than before its administration.

Four deliveries, with no mortality, of patients found with marginal placenta previa and discharged possessed of living offspring, is the record.

The suggestions of the paper are that everything be in readiness to do a version or any other indicated procedure.

Pituitary extract should be given in ½ cc. dosage, with advisable repetitions during the latter part of first stage and followed when dilatation is complete by a single large dose (1 to 1½ cc.s.). The operator should restrain his impatience, should be prepared to give an intravenous saline, and should be superlatively aseptic.

Inasmuch as it is reduction of pressure consequent upon loss of blood that often kills such patients, the writer feels it necessary to call attention to the surgical proceeding known as "cording the extremities." This is perhaps the first expedient that would occur to the mind of a surgeon and it is possibly the last adopted by an accoucheur.

D. H. S.

Emetin in Hemoptysis.

Bulletin de la Société Médical des Hôpitaux, Paris, Nov. 27, 1914. Dupont et Troisier.

Emphasizes much that Americans have written. Its interest lies in its statement about cases of thoracic wounds in which hemorrhage never recurred after it had been arrested by emetin.

This history may prove of some interest in this connection: Mrs. M. Her child sustained a rupture of kidney. Sleighing accident. Sent for the late Dr. Darobaru. He was operating, City Hospital. Sent for the present writer. Hemorrhage arrested. One grain emetin hydrochlor., in two doses by hypo. One grain of cotarnine phthalate, in two doses, per os. Hemorrhage ceased at time of Dr. D's arrival (about four hours' delay), upon which I retired and heard nothing further about the case. It now appears that the same treatment would arrest urinary bleeding for from twelve to twenty-four hours. Did this for eight days. Eventually the kidney was cut down upon and sutured. Child looks well.

This would rather tend to show that almost any hemorrhage may be arrested for a long enough time to tide over an emergency. It must not be forgotten that a ruptured kidney is less hopeless than injury of other viscera.

D. H. S.

Hormone Therapy.

The most interesting announcement in this department is the discovery by E. C. Kendall of the active principle of the *Thyroid Gland*. A crystalline substance containing 60 per cent. of iodine, apparently di-iodo-hydroxy-indol, has been isolated and is shown to be responsible for the physiological activity of the gland (see *Prescr.*, Sept., p 175). The influence of this gland upon dental caries has been the subject of a communication by H. E. Waller to the Royal Society of Medicine. He concludes that dental caries can occur only when the saliva is deficient in alkalinity; that this alkalinity is the result of errors in calcium metabolism; that such errors depend either on defective power of assimilation or on excessive excretion; that though dental caries is prone to occur at times when there is an obvious strain upon calcium metabolism, yet uncivilized races are able to pass through these times unscathed, though we cannot do so; that as brain work is dependent upon adequate thyroid activity, it is probable that modern conditions are responsible for increased thyroid activity; and that this increased thyroid activity either causes increased elimination of calcium or prevents its proper assimilation, thus leading to defective alkalinity of the saliva, and to dental caries.—*The Prescriber*, Edinburgh.

Dr. Henry R. Harrower, 715-19 Baker-Detwiler Building, Los Angeles, Cal., who is specializing in internal-secretion therapy, is interested in knowing if sufficient support would be given to make successful a proposed organization to be known as the *Association for the Study of the Internal Secretions*. Gentlemen who are interested should write to him.—*EDITOR*.

Galyl for Syphilis.

Spence, in *The Lancet*, reports 1,000 consecutive intravenous injections of galyl, which is a substitute for salvarsan. It is the tetraoxydiphosphaminodiar-senobenzene of Mouneyrat and contains 35.3 per cent. of arsenic and comes in 0.5 grm. tubes. In this series of cases the drug acted similarly to salvarsan and no fatality resulted. In fact, none has been reported from any source, as against 150 reputed to be due to salvarsan. This, however, may be due to the precautions now taken with both salvarsan and galyl. There were a few cases of erythema resulting from the injections of galyl.

Magnesium Hypochlorite.

C. Mayer, Paris, *Paris Médical*, Feb. 19th, 1916.—There exist three well-known solutions of hypochlorites, but the greatest confusion obtains in regard to them. In order to clear the air it may be well to state that Javelle water is named after the mill of Javelle, where it was first made and named "Eau de Javelle." It is the solution of the hypochlorite of potash. Formula 237 of the Nat. Formulary terms it "Liq. potass. chloratæ," or Solution of chlorinated potash; and directs: Potass. carb., 58 parts; chlorinated lime, 80 parts; water, to make 1,000 parts.

Labarraque's solution is the hypochlorite of soda, and the U. S. P. terms it "Liq. sodæ chlorinatæ," or solution of chlorinated soda, and directs: Sodium carbonate, 65 parts; chlorinated lime, 90 parts; and water to 1,000 parts.

The solution recommended by Mayer is the Liq. magnes. chlorinatæ. All three solutions have eman-

ated from French sources, but it is claimed that magnesium is milder and altogether less irritating to the tissues than either the soda or the lime. Mayer dwells upon its efficiency, its cheapness and other good qualities. Dissolve 19 parts of Epsom salts in 200 parts of water; in another jar mix and stir in 10 parts of chlorinated lime in 200 parts of water: mix both liquids together; let them precipitate. Decant or use the supernatant fluid without shaking. Apply to wounds or dressings. Mayer says use freely. Report on its efficiency will come after due trial.

D. H. S.

A Few Facts Concerning Agar.

Agar is a gelatinous substance obtained by the Japanese from several species of algae or seaweeds that abound on the coast of Japan and adjacent territories. It is known, also, as Japanese isinglass. It is the same substance as the agar-agar used to make culture media in bacteriologic work.

Agar does not dissolve nor is it digested in the gastrointestinal tract. Physiologically it is inert. It absorbs water like sponge, swells and softens, becoming gelatinous in consistence, and in that form is intimately mixed with the feces, increasing the bulk of the colonic content.

Medical authorities state that many cases of functional inactivity of the bowels are due to the fact that a scanty residue remains after the soluble and digestible portions of the food have been absorbed. That is, in our modern dietary we elect chiefly highly concentrated and almost completely digestible pabulum, as the sugars, starches, egg-albumen, casein, butter-fat, etc. The result is, very little remains to distend the colon and sigmoid and by its presence there mechanically stimulate peristalsis. Under such conditions an inert vegetable substance, like Agar, that is entirely unirritating and harmless, serves the purpose normally fulfilled by coarse vegetable residues.

Agar is marketed by Parke, Davis & Co. in the form of a coarse granular powder, and is given in doses of one or two heaping teaspoonfuls to one or two heaping tablespoonfuls, once or twice a day. The Agar may be eaten dry, or it may be mixed with a cereal and served at breakfast with sugar and cream. It may be incorporated in bread or biscuits. Other methods of administration will suggest themselves.—*Therapeutic Notes*, P. D. & Co.

Tolamine (Chloramine-T).

The importance of the contribution entitled "Studies in Antiseptics" (Dakin, Cohen and Kenyon, *British Medical Journal*, January 29th, 1916), describing the advantages of para-toluene-sodium-sulpho-chloramide as an antiseptic for irrigating infected wounds, etc., has been recognized by the medical profession, and Messrs. Burroughs, Wellcome & Co. have prepared compressed "soloids" of the substance in two strengths—8.75 and 87.5 grains. The title chloramine-T was suggested by the authors of the paper, but for many years a combination of other medicinal agents has been issued bearing the name chloramine. To avoid confusion, therefore, Messrs. Burroughs, Wellcome & Co. have decided to use the name "Tolamine." The statements contained in the paper by Dr. Dakin and his colleagues as to the strength in which the antiseptic has been found suitable in the conditions mentioned may be summarized as follows:

For irrigating infected wounds: 4 per cent.; gr. 8.75, two in 1 oz., or gr. 87.5, one in 5 oz. of water.

For use as a mouth wash: 1 per cent.; gr. 8.75, one in two oz., or gr. 87.5, one in 20 oz. of water.

For irrigating bladder and uterus in septic cases and for chronic urethral infection: 0.5 per cent.; gr. 8.75, one in 4 oz., or gr. 87.5, one in 20 oz. of water.

It will be seen by reference to p. 161 of the *Journal* of January 29th that Dakin and his colleagues found that the germicidal action of chloramine, when tested against the ordinary organisms found in infected wounds, is about as powerful as an equal weight of sodium hypochlorite; as the molecular weight of chloramine is about four times that of sodium hypochlorite, the germicidal action of one molecule is about four times as great; as it is less irritating, it may be used safely at a concentration five to ten times as great; it is readily soluble in water and neither precipitates nor coagulates proteins such as blood serum. Its mode of action is thus summed up by its discoverers:

Chloramine represents an active antiseptic containing a store of chemically combined chlorine in a form which is quite stable and non-irritating under ordinary circumstances. But when brought in contact with proteins and similar cell constituents containing basic (NH_2) groups, it acts like a chlorinating agent, losing its chlorine to the basic substances, and thereby exerting its antiseptic action as needed. Chloramine, being a highly reactive substance, should not be mixed with other antiseptics. Both alcohol and hydrogen peroxide are decomposed by it.—*The British Medical Journal*.

A Substitute for Ichthyol.

Subitol is introduced to succeed ichthyol (ammonium sulpho-ichthyolate). It presents the same chemical properties and the same consistency of ichthyol, and therefore may be regarded as possessing the same therapeutic properties. We understand that it is manufactured in Japan. Ammonium sulpho-ichthyolate has a number of therapeutic applications. It has been given in rheumatism and skin affections, while it has also been reported as a useful intestinal antiseptic. But perhaps it has been used more extensively externally in chronic skin disorders. It has also been prepared for use in the form of a tampon or as a pessary or suppository.—*The Lancet*.

The English, French and Japanese are actively introducing new chemicals. These are coming into the United States. What are we doing in this line?—EDITOR.

Jasmin Oil for Diphtheria Carriers.

In a recent number of the *British Medical Journal* (Dec. 11, 1915), W. Ewart calls attention to the value of jasmin oil in the prophylaxis of diphtheria and other infections which own an ori-nasal origin or extension. It reaches beyond the feebly moistened glottis, and gives relief to an inflamed tracheal or bronchial mucous membrane. Its greatest benefit, however, is in easing acute catarrhal conditions associated with upper nasal obstruction, as well as all acute and chronic catarrhal affections of the nasopharynx, fauces and upper larynx.

Careful instructions are given with regard to its use. The appliances required are an egg cup and pen filler. The patient must lie on a bed or couch with a bolster under his neck and his head well thrown back, a towel being spread well up to his chin or higher. Both nostrils are then charged with the oil, which is put in drop by drop, and the head must be kept in that position for a half to one minute. There is no unpleasant effect, except perhaps when the oil trickles into the pharynx. Jasmin oil is free from irritating effects, and is pleasanter to use than many of the oils of its class. The author considers that the use of this oil has been neglected in this country.—*The Prescriber*.

Preservation of Cocaine Solutions.

This solution is a very old and reliable one, with the ability to keep unchanged for four months or longer. It is as safe as any similar mixture, since it contains both cocaine and its antidote, atropin.

Atropin. sulph., gr. 1/10; phenoresorcinol, gr. viii; cocaine hydrochlor., gr. xv; chloral hydrat., gr. v; aq. rosæ (or menth. pip. or cinnamon or gaultheria) ℥i. M. et sig. :—Anesthetic for hypo. use.

Adrenalin may be added or omitted, inasmuch as the phenoresorcinol takes its place well. It prevents absorption, sums up the value of either. Quinine bisulphate, gr. v, prolongs the anesthesia sometimes for several days. But, if the ingredients are of good quality and the solution is carefully filtered, why then there are other solutions; but men who are familiar with this will rest satisfied with it, and will find no necessity either for change or addition.—*Mulford's Vet. Bulletin*, Jan., 1916.

Simple Test for Iodine in Urine, Saliva and Other Secretions.

One of the most simple and expeditious methods shown for detecting iodine in the urine, saliva, and other body-fluids consists, according to J. Schumacher, in the use of ammonium persulphate, in tablet form. Simply deposit one of the tablets on a bit of white filtering-paper, then allow a few (5 to 7) drops of the fluid to be tested upon the re-agent. According to the amount of iodine present, the paper will assume a sort of violet hue, shading into a deeper blue with increasing percentage. This test is asserted to detect organically combined iodine in amounts when even the Lesser test fails. However, there are exceptions to the rule in the case of some organic compounds, hence, control-tests are advisable when results are negative.—*Practical Medicine*.

The County Medical Map is omitted from this issue. It will appear again in July.

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Book Reviews

Handbook of Massage for Beginners.

By L. L. Despard, Member and Examiner, Incorporated Society of Trained Masseuses. Cloth, illustrated, 247 pages. Oxford University Press, American Branch, 35 W. Thirty-second street, New York City. Price, \$2.00.

The larger text-book by this author has been the subject of much favorable comment in America. This shorter volume came into being on demand for training incident to so many wounded soldiers requiring capable massage treatment that a six-months' course of instruction for operators required a short treatise upon the subject. This work well supplies the demand. But the book is not one limited to military surgery and mechano-therapy, but covers the subject of massage and all allied treatments quite adequately. The concluding section is upon electro-therapeutics, and the subject is well treated.

The Journal of Cancer Research.

The American Association for Cancer Research has fathered a new quarterly journal of scientific character, the first number of which has appeared, edited by Richard Weil with the assistance of Jos. C. Bloodgood, Leo Loeb, Ernest E. Tyzzer, H. Gideon Wells and Wm. H. Wogdom. It is published by Waverly Press, Williams & Wilkins Company, Baltimore, Md. The Cambridge University Press will handle the Eng-

lish interest. The subscription price is \$5.00 per year. Each volume will contain approximately 500 pages.

The first number shows the new journal to be one of high scientific character, but not containing articles upon the clinical treatment of cancer. Essentially a research journal, it will attract much attention from investigators.

The Proctologist and Gastroenterologist.

The *American Journal of Gastroenterology* has combined with *The Proctologist*, the two forming a modern journal under the editorial control of Drs. Lewis Brinton, Anthony Bassler, A. L. Benedict and Rollin H. Barnes, the latter being managing editor and publisher, with headquarters in the Metropolitan Building, St. Louis, Mo. The new journal will be a quarterly with a yearly subscription of \$2.00. An authoritative journal of this character is needed, and we bespeak for it the support of the profession.

The American Year-Book of Anesthesia and Analgesia.

This annual, ready about June 1st, will be devoted to exhaustive articles on current advances in these subjects by eminent surgeons, anesthetists, dentists and research workers. It will be profusely illustrated, artistically bound in cloth, printed on India tint paper, contain 352 pages and cost \$4.00 postpaid. Surgery Publishing Company, 92 William Street, New York City.

(Helpful Points continued one leaf over.)

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In the treatment of Summer Complaints of Infants and Children

"The clinical basis of treatment is antiseptics and disinfection of the intestinal tract; not with a purpose to completely destroy the offending bacteria and their toxins, which we know to be neither possible nor necessary, but to assist the normal defenses of the body to gain the ascendancy."

"There are four principles of therapy which govern the treatment of these infections:

- "(a) To give the gastro-intestinal tract physiological rest."
- "(b) To remove as much as possible of the infective elements."
- "(c) To stimulate natural defenses."
- "(d) To reinforce these natural defenses with local antiseptics."

"By local antiseptics we can inhibit many of the pathogenic bacteria in the bowel before they enter the mucosa. The antiseptic agent must be selected with a view to certain requirements; for example, it must not be strongly acid. It must not coagulate mucin. It must not be astringent. It must be easily soluble and not upset osmotic conditions, and finally it must be non-irritant and non-toxic."

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The following rules for the prevention of tetanus are from an editorial in the Journal of the American Medical Association, 1909, page 954:

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- "2. Carefully and thoroughly remove from the wound every particle of foreign matter.
- "3. Cauterize the wound thoroughly with Tincture of Iodine.
- "4. Apply a loose wet boric acid pack.
- "5. Inject subcutaneously 1500 units antitetanic serum (Tetanus Antitoxin).
- "6. In no case should the wound be closed; it should be allowed to heal by granulation. The dressing and packing should be removed every day."

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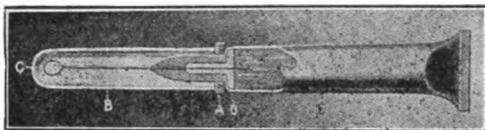
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Helpful Points

The American Journal of Orthopedic Surgery, has been transferred from Philadelphia to 126 Massachusetts avenue, Boston, Mass., with Dr. Mark H. Rogers in editorial charge. Henceforth it will be issued monthly at a subscription price of \$4.00 per year.

Little Damage to the Abbott Laboratories.

A small fire with explosion of gases occurred April 21 on the top floor of one of the buildings of The Abbott Laboratories. Newspaper reports of the extent and character of this accident were grossly exaggerated. The damage was very small, consisting mainly of broken window panes and cracking of temporary partitions. The plant and machinery were injured but slightly, and the entire force went to work the next morning as usual. The Abbott Laboratories have issued a statement positively denying the newspaper reports that this firm is or has been engaged in the manufacture of ammunition or explosives.

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(Helpful Points continued one leaf over.)

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(Helpful Points continued one leaf over.)

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Helpful Points

A Change in Name Only.

The name of the Gatlin Institute (Drug and Alcohol Addiction) has been changed to the Pine Sanitarium. The management remains the same, and the institute, as heretofore, will be conducted strictly along ethical lines. Scientific care is given to drug and alcohol cases, under home conditions; the system used is rational, being based on the pathology of chronic intoxications. Free booklets explaining either treatment will be sent on request to The Pine Sanitarium, 1919 Prairie avenue, Chicago.

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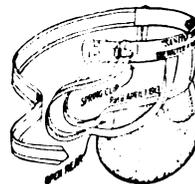
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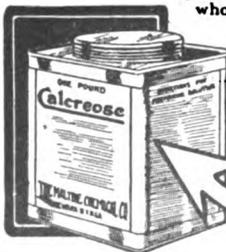
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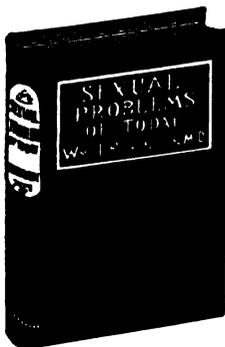
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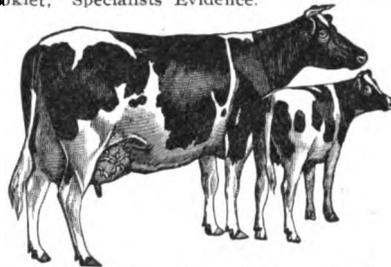
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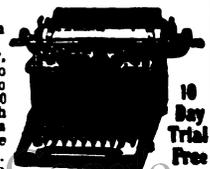
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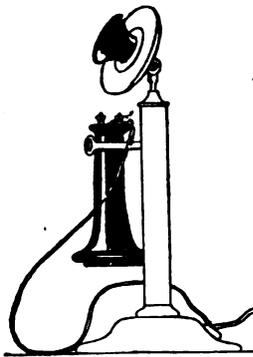
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July, 1916

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Philadelphia, Pa.

No. 7

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Oral Hygiene in its Wider Range.

THE DAILY CARE of the teeth, the "tooth-brush drill" for children, etc., is a subject not at all beneath the dignity of the physician, though so obvious that it is not necessary to repeat platitudes. But, or so it seems, few physicians have studied the outreaches of the subject, thus realizing the importance of ordinary oral hygiene.

Miller, of Berlin, first presented a comprehensive study of the bacterial flora of the mouth. He proved that nearly every pathogenic and non-pathogenic bacterium liable to infect any portion of the human economy is, at once time or another, an inhabitant of the oral cavity and its related structures. Then, too, the entameba buccalis, various mycelia and other organisms non-bacterial are frequently found.

The Scientific Foundation and Research Commission of the National Dental Association commissioned Dr. Thos. B. Hartzell to investigate various factors of oral and dental infections. His published findings in *The Journal-Lancet*, April 15, 1916, and elsewhere, are well worth study, especially as is involved in the anatomical consideration and dental pathology. This article is, in part, based upon his report.

The range of dental findings of recent years recalls the statement of Dr. C. H. Mayo that the next great step in preventive medicine must be made by the dentist; and the splendid work on "Diseases of the Mouth and Jaws" by Vilray Papin Blair impresses one with the thought that there is need for the dentist to look out for his laurels, else the surgeons will advance his specialty more rapidly than he does himself.

The Blind Dental Abscess.

The confined abscess and the pyorrhoeal pocket is as great a source of metastatic infection as is trouble in the crypts of the tonsils, and perhaps even more so, since a crypt drains more readily than does an abscessed tooth. Joint-inflammation is as apt to result from a bad tooth as from a defective tonsil. What we call rheumatism

is most apt to come from just such a focus of infection. These foci are dangerous. At present we have a case of septic meningitis due to a pustule. Vaccines can do little so long as septic organisms are working in any blind pocket, be it tonsil, tooth cavity, ovarian tube, or what not.

Some dental cases actually become bed-ridden, develop endocarditis, have disturbances of blood-pressure, and may even develop albumin in the urine: they need the joint care of a physician and a dentist. Dental-path infections are not sufficiently regarded by the physician, nor by many dentists. Indeed, the criticisms by Hunter, of London, angered many dentists not so long ago, for they were guilty of the unhygienic practices in technic Hunter charged against them.

Pathogenic organisms on the tooth surface may work down under the gum-margin to the endothelium of the vessel ends, induce a cloudy swelling, block the return flow in the venous capillaries, thus inducing endarteritis and edema. The result is a calcareous deposit on the tooth's root surface, which may be sharp and become a mechanical irritant and foster bacterial growth.

The Tooth Joint.

The tooth set in its socket is really part of a joint, and it is just as liable to infection as is any other joint, and even more so, since it has no protecting capsule. This gomphosis joint moves just enough during mastication to set up considerable inflammation when conditions are abnormal, and the inflammation becomes a continuous process until after the removal of the calculus or the tooth itself. The application of emetine or other drugs in such conditions is only adjuvant to necessary dental surgery.

Pyorrhoea.

Pyorrhoea is an extension of the process outlined above, and millions of microorganisms are proliferated daily, largely streptococci and amebae. There is some destruction of the perice-

mental fiber. The calculus and pitted coat must be curetted away, lightly touching the alveolar process to induce the formation of new bone. After callus forms, the patient must use antiseptics, emetine-bearing tooth washes or pastes, and daily massage the gum tissues about the tooth, causing it to shrink and close off the entrance of infecting agents. This massage is, also, a sort of autovaccination.

The Dental-Pulp Canal.

Decay of the tooth and exposure of the dental pulp opens a path to infection in another direction. This is especially apt to occur in old roots, which should be extracted or, if of sufficient size and in some cases, crowned. Dentists, in treating the root canal preliminary to filling, should carefully exclude saliva and sterilize the canal. The saliva constantly carries organisms productive of myocardial degenerations.

Pulpless or dead teeth are more liable to abscessing than are live teeth; but, with proper aseptic and antiseptic technic, the pulpless tooth may be preserved for years. But this takes careful oral hygiene, both on the part of the dentist and of the patient. Adults have as great, or greater, need for careful oral and dental hygiene as have young people.

Rheumatism and Bad Teeth.

Many cases of rheumatism are cured by eliminating dental infection. On the other hand, rushing work on a number of suppurating teeth may cause rheumatism, for such work imposes upon the leucocytes an overload of bacteria. Especially does the *Streptococcus viridans* from confined dental abscesses produce rheumatism. Dentists should be especially careful not to unnecessarily stir up streptococcal pockets and canals; and the most rigid asepsis should be the rule, else rheumatism and chronic joint infections may result. And it must not be forgotten by dentists and physicians that both the teeth and the tonsils may be septic at the same time and both require attention. Don't work upon both teeth and tonsils at the same time; and it is to be noted that vaccine treatment may aid in the management of these cases.

A Good Antiseptic.

A good antiseptic to use about abscessed teeth is made as follows: Incorporate in Merck's beechwood creosote as much iodine as it will dissolve. Apply this full strength and immediately follow with a liberal application of a saturated solution of tannic acid in glycerine. This will stick to the parts for a day or two.

In addition to dental troubles many infections

may occur in the mouth, such as stomatitis, noma, syphilitic lesions, and many surgical troubles. These must be considered as a part of the problem of oral hygiene.

Keeping Everlastingly At It.

The foregoing shows that oral hygiene is no amateur or simple affair when considered in its wider range. But the range may not become wide if proper and persistent attention be given to the daily and, yes, thrice-daily attention to the mouth from infancy to old age. The toothbrush, antiseptic washes, dental powders and pastes, the use of floss instead of the toothpick, the avoidance of too hot and too cold substances in contact with the teeth, with skilled dental and medical attention to the teeth, tonsils and other tissues, will save a world of trouble in the mouth, as well as serious rheumatic infections and cardiac lesions due to neglect.

Autotherapy.

THE AUTOGENOUS filtrates of Duncan are, in a certain sense, autogenous phylacogens. At all events, autotherapy and phylacogen-therapy are somewhat of a kind, and they stand or fall together. This will be denied by advocates of both forms of therapy; but we believe time will demonstrate the correctness of this opinion.

Entirely neutral, as we are, regarding Dr. Duncan's and Dr. Shaffer's theories, yet we must concede that they have both brought to the fore forms of treatment worthy of the most careful scientific and clinical study. That permanent advantage will result from both we firmly believe; but we also believe that time will bring certain modification to both of these theories and practices.

Duncan's "rule" that an injected bacteria-free toxin-complex tends to the development of antibodies is quite rational from the theoretical point of view, and it is fair to assume that it will work out in practice, with the limitations not yet definitely ascertained as regards certain microorganisms; but his "corollary" to the effect that unfiltered exudates of extra-alimentary and extra-pulmonary infective lesions, if placed in the patient's mouth, will also tend to the development of antibodies, impresses us much as does "vaccination" by mouth or the oral administration of crotalin. Of course the analogy is not quite parallel, but it serves to make the idea clear. At all events, whether we are right or wrong in this matter of oral administration,

certainly the injection of the filtrate is definite, can be made fairly exact, and would usually be more efficient. So what expression is to follow is based wholly upon the injection-of-the-filtrate method, and not upon the oral administration.

Active Immunity.

The formula that the administration of end toxins endows the body tissues with power to rapidly form antibodies sounds very simple. If it were in reality that simple, we would have serums, vaccines, autogenous filtrates, etc., upon a beautiful mathematical scale to meet every possible bacterial invasion. But there are toxons as well as toxins; there are endo- and exo-toxins; there is Vaughn's theory of the specific proteins, as opposed to that of the so-called toxins; there is the problem of selective affinity, of proteolytic ferments, and of sensitization; and there is an involved nomenclature dealing with agglutinins, precipitins, opsonins, etc., and we are still much "at sea."

There is no doubt that bacterial filtrates, autogenous or other, are excellent sensitizers. The protein which is activated gives the "reaction," dead protein sensitizing more rapidly than living; so in disease these filtrates sensitize rapidly. Not so, however, *in situ*, where it is probable the diseased process has exhausted the ferments necessary to activate the proteins. We say "probable," and that is all we can say; for this matter is not well understood. Our point is that the matter of producing active immunity cannot be worked out by rule of thumb, either by autotherapy or by any other method.

Mixed Infections.

The bacterial filtrates are urged, more especially, for treatment of the mixed infections; and this is rational. But when an infection has reached the stage that it is mixed, specificity has become improbable in a remedy—serum, vaccine, tuberculin or straight phylacogen. The mixed products, stock or autogenous, are not specific in any essential sense; but they do tend to raise the opsonic index. Now this is our own view, as based upon practice, and it may not be accurate; but we can't help but feel that these mixed infections are, in each case, a separate problem. Some cases will clear up in short order under the influence of a mixed vaccine, a phylacogen or Duncan's autogenous filtrates; and others simply do not clear up at all, chronic gonorrhoea being a frequent instance.

Yet it must be admitted that Duncan has a strong argument here. In making an autogenous vaccine we are not at all certain that *all* of the involved organisms incubate and develop their specific toxins; but in autotherapeutic methods

we are quite sure *none* are missed, since the filtrate is made from body secretions. Another strong argument for Duncan's method is there is no foreign protein involved and hence no anaphylaxis.

Criticism is easily expressed upon any of the newer forms of treatment; and it is probably true that the more generally recognized forms of bacterin treatment are open to some of the same criticisms as is autotherapy.

A Warning.

Physicians, by following the Duncan technic, can make their own autogenous filtrates. The outfit for making them costs only a few dollars; but we would not advise any physician unfamiliar with bacteriological laboratory methods to make these filtrates himself. And don't forget that the filtrate is not a stable product, like the commercially marketed vaccines, and that its degree of toxicity depends upon the length of incubation. Furthermore, a weak place in the method is the determination of dosage. There is no way of standardizing the filtrate except approximately; therefore much judgment as to dosage is demanded. On the other hand, the man who is qualified in laboratory technic should find no trouble in making the Duncan filtrates; and, if he uses them wisely, will doubtless benefit many of his patients.

Blue Sclerotics and Fragilitas Ossium.

The comprehensive article by Dr. Remy in our June issue doubtless raises the question in many minds just why there is a relationship between blue sclerotics and fragilitas ossium. C. E. Caldwell, in *The Lancet-Clinic*, April 8, 1916, quoting Hoffman, Burrows and Adair-Dighton, goes on to explain this relationship.

Blue scleræ are due to deficiencies in the development of the scleral connective tissue permitting a dark discoloration from the underlying choroid. The sclera and the bones are both developed from the mesenchyme, the scleral portion insinuating itself between the lens and the surrounding ectoderm; and from this same mesenchyme the whole osseous system is evolved.

In many animals the sclera undergoes transformation into cartilage, that of fishes being mostly cartilaginous, and among the saurians there is a delicate ringlet of bone platelets. So, then, there is an analogy as regards man.

It is pretty definitely established that syphilis has nothing to do with the matter, the whole anomaly depending on a congenital inferiority in the mesenchyme derivatives.

Medical School Mergers and Post-Graduate Instruction.

Philadelphia physicians and the graduates of Philadelphia medical colleges are coming to a practical agreement over the desirability of a working union among the several schools and looking to a more complete utilization of the immense clinical resources of the city in post-graduate instruction. That the plans now maturing will work to the advantage of the profession at large goes without saying.

The West has learned that a public school system as a feeder to the State universities is an asset to the whole body politic. Pennsylvania will find a handicap to advanced professional instruction in the fact that the Russel Sage Foundation lists the public school system of Pennsylvania as twenty-third in the Union, twenty-two other States being ahead of her, despite the fact that Pennsylvania, as a State, spends more money for education than does any other of the States. It is to be hoped that the profession in Pennsylvania will take a hand in the necessary campaign to standardize high schools and place the public schools at large upon the same basis of efficiency already attained by the higher institutions of learning and by the professional schools. Medicine is building well at the top, but it should look after some poor foundations.

And the same enterprise that promises so much for the maintenance of high professional efficiency through rendering post-graduate instruction readily available, may well be adopted by the country at large. Within the next few years there will be a vast increase in post-graduate study and in the number of practitioners pursuing it. And the busy physician will not want to go hundreds of miles away to study, except on special occasions. He will want to spend his week-ends and holidays in study, and thus not dislocate his practice overmuch.

Other cities with good hospitals and multiple medical school facilities should watch the progress of the merger in Philadelphia and then develop post-graduate centers readily available from all parts of the land. But let them begin by an examination of the public school system, repairing all deficiencies therein. This is fundamental to success.

The growth-controlling principle from the anterior lobe of the pituitary body is called tethelin. It is said to have a remarkable effect in stimulating tissue repair. And yet, it has been used only experimentally and no dose can be stated.

Therapeutic Notes.

An emulsion of sulphur in glycerine is a good antiseptic.

Iron and arsenic in full dosage is recommended in acromegaly.

Tincture of ferric chlorid is recommended by Slack in the treatment of burns.

Diarsenol, a substitute for salvarsan, for a while gave bad results. It is now said to be safe.

The Dermatological Research Laboratories, 1818 Lombard street, Philadelphia, is supplying at about cost arsenobenzol, which closely approximates salvarsan.

Several observers have noted that antibodies are not readily formed in a patient who consumes much alcohol. Konrádi has proven this as regards cholera by laboratory tests.

Purpura hemorrhagica is being successfully treated with normal horse serum, procurable in tubes from makers of serums. Ten cc. is given subcutaneously daily for ten days. Slight nervous symptoms result from the injections, which are controlled with codeine. Do not give intravenously.

Lipscomb treats pruritus of the limbs by the application of hot water. Wrap the parts in heavy Turkish toweling and pour water over the toweling as hot as can be borne and maintain the heat for thirty minutes; then unwrap and apply cold cream. This application may be safely made daily for a month, if necessary.

Serotherapy in the treatment of epidemic meningitis is proving brilliantly successful in the experience of physicians serving in the armies of Europe. The mortality has dropped from 70 to 80 per cent., the former figures, to 20 per cent. and lower. The process for the making of anti-meningitis serum has recently been improved.

A combination of kaolin and calomel is claimed by Wiener to be effective in the treatment of infectious dysentery. The Flexner dysentery bacillus is found to be responsible for many cases in the war camps. Animal charcoal is also coming into prominence in the treatment of dysentery and diarrhea. In any treatment, however, proper diet is of primary importance.

Quinine and phenol have both been recommended in the treatment of rabies, and this despite the preventive antirabic treatment. Fielder, of the New York City Department of Health, has investigated the matter thoroughly. He finds no authentic cases of recovery from the use of either quinine or phenol, and his own experience in this form of treatment has been wholly discouraging.

The following papers are contributed exclusively to this journal. Republication is permitted if credited as follows: MEDICAL COUNCIL, Philadelphia.

ORIGINAL ARTICLES

Sentences, like sunbeams, burn deepest when most condensed.

We are not responsible for the views expressed by contributors: but every effort is made to eliminate errors by careful editing, thus helping the reader.

Superheated Steam in the Treatment of Superficial Cancer.

By WM. J. GILLETTE, M.D.,
Surgeon to Robinwood Hospital,
TOLEDO, OHIO.

In a short article published in the *New York Medical Record* of Jan. 8th last, I presented to the profession, my experience with superheated steam in the treatment of superficial cancer, together with a cut representing the apparatus employed, and a description of it.

I have used steam in the treatment of superficial cancer for a little more than two years, and although it has not by any means solved the question of the universal cure of these cases, yet it has, I am fully convinced, a distinct value, not possessed by any method yet employed in their treatment.

The results obtained are far better than obtained with radium, the X-ray, the high-frequency current or any other agent used for the destruction of cancer masses.

Steam cannot, however, take the place of these agents in the treatment of internal cancer nor can it take the place of the most valuable method of treating cancer of the uterus by heat, as devised and advocated by Dr. J. F. Percy, of Galesburg, Ill. In most instances the knife or electric cautery are used in conjunction with it, for the purpose of removing sufficient of the cancer mass to enable steam to penetrate to its furthest recesses.

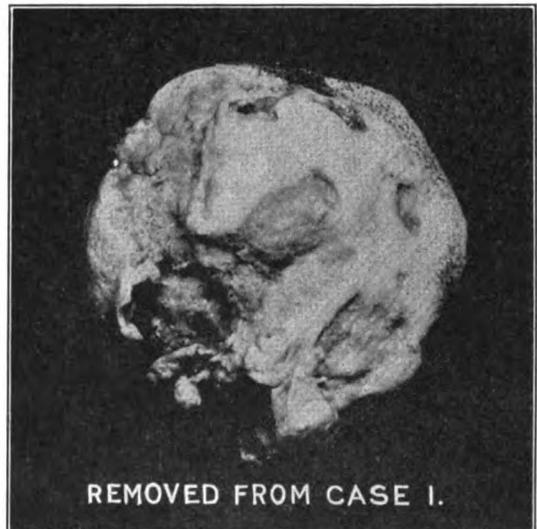
I have now used steam in more than twenty cases, and this experience I can say fully justifies the foregoing assertions as to its superior value.

From the correspondence I have had with a number of physicians and surgeons widely separated over the country, the method seems to have awakened a very considerable interest, which seems to be growing.

Removes Odor.

In a number of cases treated, far advanced and with most offensive odor, the odor has at once disappeared and the area subjected to steam has

shortly presented the appearance of a normal, healthy, granulating, sweet wound. If steam had



CASE I. SIZE AND APPEARANCE OF GROWTH REMOVED FROM SCALP.



CASE I. APPEARANCE OF CICATRIX AT DATE. NO RECURRENCE.

no other value than this, converting a disgusting stinking mass into a perfectly odorless clean wound, its use would be entirely justified.

Removes Pain.

Another very valuable property is its power of destroying the sensory nerves involved in the disease, so that patients who, prior to its employment, have suffered such intense pain that large doses of morphine would hardly control it, find immediate relief, and morphine no longer necessary. It is well known that radium and the X-ray do, in a measure, control the pain of cancer; but in comparison with steam, their power for this purpose is exceedingly feeble.

Penetration of Steam.

The penetration of steam (I employ it at from 50 to 55 pounds boiler pressure) is another of its most valuable characteristics.

Cancer tissue usually presents a texture of little firmness with lessened resistance, and by reason of this fact steam often follows its ramifications without doing material damage to other near structures. It is well known that the cancer cell is destroyed at a much lower temperature than the normal, so that cancer cells deeply situated may be promptly destroyed by steam, with small damage to the tissue invaded.

Case Reports.

The four cases reported and represented in the cuts, are the character of growth I believe best suited to the employment of steam.

Case 1 is that of a young lady; white, age 26; a patient of Dr. W. J. Kirkbride of this city; admitted to Robinwood Hospital, Jan. 12, 1915, with a history of having noticed, about five years previously, a small warty growth on the scalp, which had gradually enlarged.

A year ago Dr. Kirkbride removed it completely, as he thought. It soon after reappeared and, at the time of admission to hospital, was 3 inches in diameter at its base, elevated above the scalp $\frac{3}{4}$ of an inch, and ulcerated at various points. I saw the case with Dr. Kirkbride on her admission, and advised the use of steam, to which he consented.

The most prominent and elevated portion of the growth was removed by excision; however, a ring of the cancer tissue was left, for it covered so wide an area, and seemed so malignant, that the amount of scalp involved necessary to remove it completely would be most disfiguring, and our experience with steam led us to believe it unnecessary.

Steam was now applied and the diseased area thoroughly cooked. The mass removed is well illustrated in the cut.

Prompt healing occurred with the exception of a small area in the center about the size of a silver half-dollar. This was later skin-grafted and now after more than a year, the cicatrix pre-

sents a perfectly healthy appearance without the slightest evidence of recurrence.

I had the pleasure recently of showing this young lady to Prof. Joseph C. Bloodgood, of Johns Hopkins, and he very kindly examined a section of the growth removed and sent us the following report:

"The section is a very interesting one to me. It is not fully developed carcinoma of the spiral or prickle-cell type, but an overgrowth of epithelium, particularly of the cube-cell type of malignant wart. * * * In my opinion all pathologists would look upon this as a malignant epithelial growth."

Case 2 is that of a man; white, 52 years of age; referred to me by Dr. W. K. Nihart, of Edgerton, Ohio. He gave a history of a small growth, having appeared a year previously on the outer side of his right leg, just opposite the knee joint. The growth gradually increased in size until it had become a very considerable bleeding mass, which Dr. Nihart removed three weeks prior to the patient's admission to hospital. It recurred almost immediately, and had reached the size as it appears in the cut in the astonishingly short time of three weeks.

Prompt amputation of the leg would have been, in this case, entirely justifiable; but the patient was a laboring man, and very much averse to the loss of his limb, so I finally decided to employ steam in the hope of saving it for him.

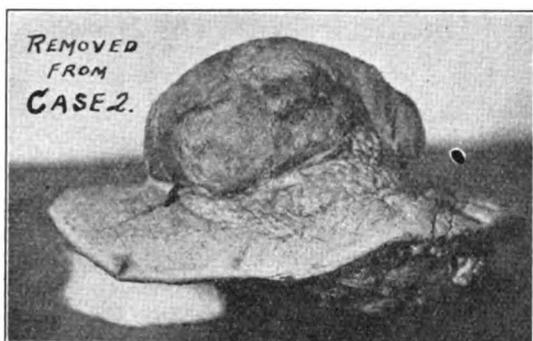
I amputated the mass with an electric cautery, and then applied steam.

To facilitate healing, I transplanted to the denuded surface a flap from the anterior portion of the leg, as soon as granulations appeared, and this, with the aid of a few skin-grafts, shortened greatly the period of healing.

At date, though the leg presents a rather severely scarred appearance, its function is restored, with no evidence of return of the growth.

Following is the condensed report of Dr. W. E. Moseley, pathologist to Robinwood Hospital, of his examination of the tissue removed: Case No. 789, Mr. S—. Elevated mass, smooth, purplish-red in color and bleeds on slightest touch. Microscopically a mass of small, round cells resembling lymphoid tissue. Very vascular, with endothelial proliferation. Numerous mitotic figures present. Diagnosis: small, round-cell sarcoma.

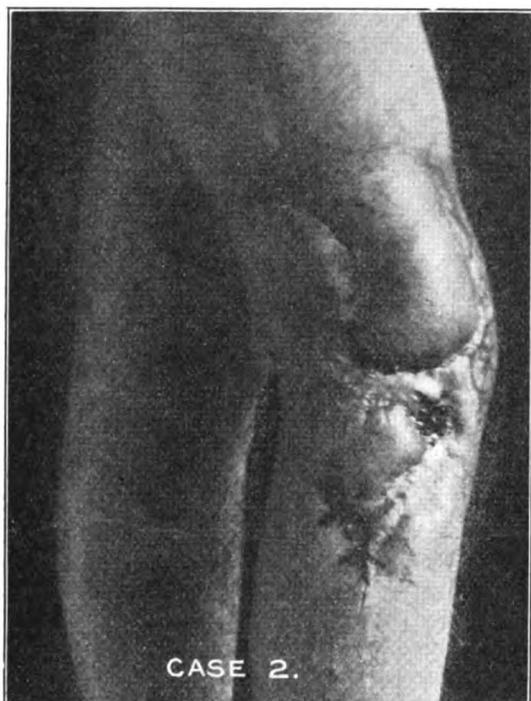
Case 3. Patient white, male, 42 years of age; was referred to me by Dr. Wade Chamberlain, of Tiffin, Ohio, with a history that 12 months prior, he had had a small bluish growth, the size of a large hickory nut removed from his wrist. Recurrence had been rapid, not only at the point of removal, but by metastasis.



CASE 2. PHOTOGRAPH OF GROWTH AFTER REMOVAL.



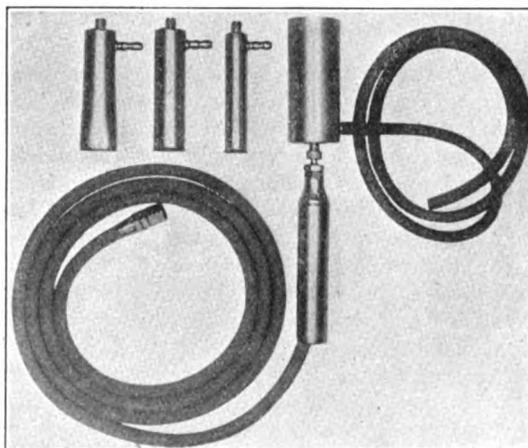
CASE 4. APPEARANCE OF EPITHELIOMA BEFORE STEAMING.



CASE 2. APPEARANCE OF LEG AT DATE. NO RECURRENCE.

On admission to hospital on Nov. 10, 1915, new growths had appeared in a number of places on the inner side of the arm, and the axillary space was filled with masses the size of pullets' eggs, bound together by connective tissue into a mass larger than an orange. I removed them by excision, and steamed the dissected areas. One of large size behind and above the clavicle presented so many difficulties to its complete removal that I allowed it to remain after thoroughly cooking it.

At this date it has entirely disappeared, illustrating well the possibilities of steam for the destruction of such masses. There has been no recurrence with the exception of three or four very small suspicious nodules, at the bend of the elbow, that are apparently quiescent under the in-



fluence of the X-ray. It is too much to expect that there will not be recurrence in this case, for the disease was so far advanced at time of operation as to be practically hopeless. I am sure, however, its progress will be greatly delayed by the use of the steam.

The following is Dr. Moseley's condensed pathological report of his findings: Discrete masses along anterior surface of arm ranging in size

from 1 cm. to 3 cm. Axilla filled with nodular masses, imperfectly encapsulated and bound together by extensive connective tissue formation. Microscopically, nodules are made up of large and spindle connective tissue cells which are undergoing rapid cell division. Vascular, with proliferation of endothelial cells. Diagnosis: mixed-cell sarcoma.

Case 4. Male, white, 43 years of age. Eight years previously had suffered with tubercular glands of the neck for which the X-ray had been employed.

A year prior to his admission to Robinwood Hospital, he noticed a small mass arising from a cicatrix produced by the X-ray on the side of his neck, which gradually enlarged until it presented the appearance shown in the cut.

On March 29th last, upon the advice of his physician, Dr. Lendfesty, of Mt. Clemens, Mich., I steamed it, when in two days the entire mass came away, leaving an entirely clean surface, upon which normal healthy granulations have appeared. The odor and severe pain and discomfort have entirely disappeared and complete restoration is anticipated.

Dr. Moseley presented the following report of tissue removed: Irregular mass on neck 6 cm. by 10 cm. Elevated edge on posterior border showed extensive invasion of connective tissue stroma by epithelial plugs, and numerous concentric epithelial whirls, considerable round-cell infiltration, due to associated inflammatory changes. Diagnosis: epithelioma.

These cases, of course, are not conclusive as to the ultimate curative value of steam as here used, but they are typical of the character of the cases in which in my opinion it should be employed, and they demonstrate that steam is an agent immensely destructive of cancer and has great future curative possibilities.

For the employment of steam, I have had DeVilbiss & Co., of this city, make me some metal shells, as shown in the cuts, enclosing tubes of small diameter through which steam is forced into cancer tissues, at a boiler pressure of from 50 to 55 pounds. The shells act as a protection to structures it is not desired to treat. They are made in four sizes and used attached by a handle to a 6-foot length of fiber-tubing able to withstand a pressure of 120 pounds.

The used steam is carried from the shell by way of the small nipple, at its upper end, to which is attached a rubber tubing leading to a pail of water. This instrument, while crude, and leaving many improvements to be desired, is yet efficient, and I have employed it with a very high degree of satisfaction.

Varicose Veins in the Broad Ligament.

By CHAS. W. DELANEY, M.D., F.A.C.S.,
Gynecologist to Altoona Hospital,
ALTOONA, PA.

This condition is seen not infrequently; but in gynecic literature is rarely mentioned. It is a condition very easily overlooked if not kept in mind and not visualizing upon the causation of so many of the pelvic symptoms in the female. The symptoms are too frequently attributed to viceroptosis, kinks, displacements, and membranes, and not, to say the least, to mental conditions. It is of very serious import to the sufferer, and it can be diagnosed if a careful clinical history of the case is obtained. The symptomatology is comparatively constant and varies little except in intensity.

It is easy to attribute vague pains or symptoms of which we have no practical knowledge to neurasthenia; but we do not believe that there are many cases of neurasthenia, *per se*, without some basic condition producing the symptoms which we attribute to the mind, and not to the real condition which is the causative factor.

The plexus of veins situated in the broad ligament are very frequently abnormally enlarged, tortuous, and engorged; but on physical examination bimanually no abnormality can be palpated. This is true, and there are times when a patient is in the recumbent position that we are unable to palpate varicose veins in the legs. A woman need not necessarily have a palpable condition in the pelvis to produce symptoms in the genital organs.

Symptoms.

The symptoms are: aching pains in back and pelvis, a dragging sensation, worse on standing or walking, especially intense at menstrual periods. The pains become more severe, of a dull, boring, burning character, radiating to region of one or both kidneys. Menses may at times become profuse, prolonged and irregular.

The trouble is found usually in women who have borne children, and of course those conditions are present which are seen in the child-bearing woman, that is, sagging of the pelvic organs, relaxation of the pelvic supporting structures, and uterine displacements; but the conditions need not be present to any marked degree, or they may be absent. Yet the woman may have a marked dilatation of the veins in the broad ligament and suffer to an unusual degree. She may have been examined repeatedly and no abnormality found. The pain is worse on standing or walking, and is relieved by rest and recumbency.

Diagnosis.

The diagnosis must be made by exclusion and after a thorough medical and local course of treatment before resorting to radical methods of cure.

In gynecologic practice only too frequently the clinical symptoms are not carefully noted and a diagnosis is more commonly made by what can be palpated. These cases may drift from one physician to another, receiving the same reply that nothing can be found to account for her pains, and it is easy to see why this error is made; the veins cannot be palpated to any degree of certainty.

Treatment.

The treatment giving permanent result is operative. The plexus of veins should be tied off between two ligatures and the intervening tissue excised. The gap thus produced is then sewed together. If the veins are allowed to remain, an abscess may form or the lumen be re-established.

The base of the broad ligament should always be carefully examined during pelvic operations and if the clinical history agrees with the findings the above technique is advisable.

Pessaries and tampons give temporary relief; but as soon as treatment is discontinued the symptoms return. 1320 Ninth Street.

The Technic of Autotherapy.

By CHARLES H. DUNCAN, M.D.,
233 Lexington Ave.,
NEW YORK CITY.

The main thought to be kept in mind is that the remedy comes from within. The aim is to aid Nature in restoring the tissues. Autotherapy must be said to be a natural process, and the technic is adapted to aiding this process. This is accomplished by placing the unmodified tissue-toxin-complex in healthy tissues, which tends to develop resistance to a sub-lethal dose of any toxic substance placed within them; the resistance so developed, i. e., the antitoxin developed in response to the action of the toxin on the tissues, is the specific resistance to the disease from which the patient suffers.

The "Rule" and the "Corollary" controlling the two methods of administration were given in this journal in the issue for May, to which the reader is referred.

Advantages claimed for autotherapeutic technic over other methods are these: No time is consumed in culturing the microorganisms; therapeutic value is not lost or altered by successive growths on culture media; the enzymes, ferments, etc., which correspond to each bacterial toxin, are not altered by the culture media, sterilization and antiseptics used; we have in autotherapy the parenteral unmodified toxins of *all* the microorganisms in the locus of infection and in the same proportion; no expensive and elaborate laboratory appliances are required, and the whole procedure is under the control of the attending physician.

The discharge used in preparing the autotherapeutic filtrate may be obtained from soiled dress-

ings as well as from the discharge itself, care being taken to avoid all outside contamination.

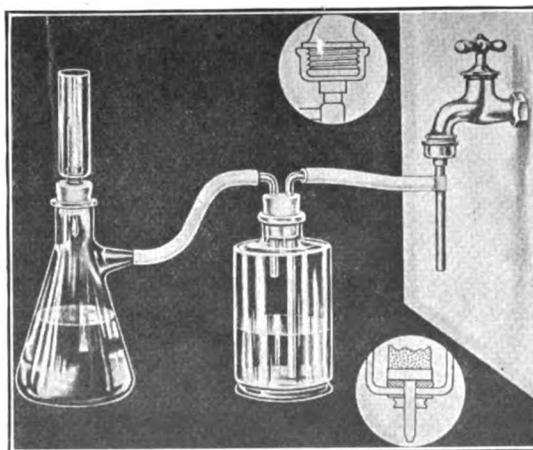
The Method.

The stained portion of the gauze is placed in an ounce bottle of distilled water, this is shaken and allowed to stand for twenty-four hours, after which time it is passed through a Duncan Autotherapeutic Apparatus and twenty minims of the immunizing bacteria-free filtrate injected subcutaneously. If the pus is in the wound when the patient is first seen by the surgeon, the wound will heal in the quickest manner possible by employing the following technic:

1. ℞ Pus, minims 6;
 Tap water, q. s. ad ounce 1.

Sig. Mix in a bottle, shake well, and give in three divided doses an hour apart. Repeat only when needed.

The following preparation will keep if no additional microorganisms creep into the wound dur-



ing the dressings; it may often be used until the case is cured:

2. \mathcal{R} Pus from the wound, minims 10;
Sugar of milk, ounce 1.

Sig. Mix in a mortar and grind thoroughly for ten minutes. Dose: 20 gr. per os. Repeat every fifteen minutes until three doses are given. Repeat only when indicated. In acute conditions it may often be given every day.

Technics Nos. 1 and 2 should be employed only in wounds connected in no way with the alimentary canal or respiratory system.

Wounds of the mouth, nose, esophagus, lungs, larynx, pharynx, etc., or wounds in any way connected with the alimentary canal or respiratory system, should be treated by the following technic, as may all wounds:

3. \mathcal{R} Pus, drachm $\frac{1}{2}$;
Boiled water, ounce 1.

Sig. Mix in a bottle, shake well, filter through a Duncan Autotherapeutic Apparatus, and inject 1 c.c. subcutaneously at once.

At times a half drachm of pus cannot be obtained; when this is so, the following technic may be substituted for No. 3:

4. \mathcal{R} Pus, minims 10;
Boiled water, ounce 1.

Sig. Mix in a bottle, shake well, allow to stand for twenty-four hours. After which time it is filtered through a Duncan Autotherapeutic Apparatus and 20 minims of the immunizing bacteria-free filtrate injected subcutaneously.

Formulæ Nos. 3 and 4 are universal in their application to all infected wounds. Many veterinarians just catch the pus in a spoon or on a flat stick and place it on the animal's tongue.

Children should receive proportionately smaller doses. There is no more danger than in the use of vaccines. Aseptic and careful technic must always be followed except as regards the sepsis of the discharges themselves used in preparing the filtrates. Pus by the mouth while the patient is under the anesthetic is applicable in abdominal operations.

Some Details.

If the best results are to be obtained in giving the autotherapeutic remedy, the patient should be watched carefully for any change in his condition; except in very acute conditions no dose should be given but that indicated in above formulæ until the patient ceases to improve on the preceding dose. In chronic cases this will often be from four to seven days. From six to ten hours after the injection the cutaneous reaction will be about the size of a silver dollar or larger. The constitutional reaction is usually slight; the temperature seldom rises above 100° F. After twenty-four hours the cutaneous and con-

stitutional reactions will begin to subside. In forty-eight hours they usually disappear. Coincident with the discharge becoming less, it becomes thin and sanguinous, and the clinical symptoms will subside. A thin discharge is the indication that the curative reaction is continuing. No further dose is given so long as the discharge is thin. If it becomes thick again another dose, freshly made, is given; watch your patient carefully; let him be the guide as to when another dose is needed. No set rules will fit all cases. The doses given are for a strong, healthy man.

Never use antiseptics on a wound treated autotherapeutically, for many antiseptics destroy the therapeutic value of the toxins, that is, pus containing some antiseptics is useless for autotherapeutic purposes.

In hospitals but one filter and two dozen four-ounce bottles and corks are all that is required for every ten beds.

To hurry the process of filtration, a syphon attached to a water faucet is employed to create a suction on the under side of the filter. Before being used the porcelain part of the filter should be scrubbed lightly with a moderately soft brush under running water, and then boiled for a half hour. Four ounces of distilled water should then be run through the filter to remove from the pores the toxins that may have remained from the last filtration.

Next month the application of autotherapy to purulent infections will be discussed.

Iodine in Tetanus.

MacCankey and Zilva, in *British Med. Jour.*, March 18, 1916, report that their experiments lead to the conclusions that iodine injected subcutaneously has no effect upon tetanus toxin unless it comes into direct contact with the toxin before absorption. Iodine, also, does not appear to have any effect in enhancing the power of serum.

Mayer claims that magnesium hypochlorite is less irritating than the sodium salt, is cheaper, and is just as powerfully disinfectant. He prepares it by dissolving 190 gm. of magnesium sulphate in 2 liters of water; and he mixes this with another 2 liters of water in which has been dissolved 100 gm. of chlorinated lime. This latter solution is not clear and must be agitated. The mixture of the two solutions is allowed to settle completely, when the clear fluid is decanted off ready for use. This preparation is freely tolerated by the tissues, is effective, and is readily made by any physician.

False Doctrines Concerning the Stomach.

By D. W. COLLINS, M.D.,
WILKES-BARRE, PA.

The following statements were made in my presence, with the exception of the second, which was embodied in a paper read at a medical society meeting:

The nestor advanced the slogan: "Let us do things surgically!" The nestor's son said: "There is no medical disease of the stomach." The interne said: "The absence of free hydrochloric acid in the stomach contents means nothing." The booster said: "The man of average intelligence knows what diet agrees with him and what does not."

It is needless to say that the men making these assertions were surgeons, a high-brow cult who dominate medical societies, hospitals and medical literature. Two of them were internes and the others ardent boosters of a prominent Western clinic. I do not think this clinic propounds these ideas, yet these are utterances of attendants and internes of the clinic.

Doing Things Surgically.

The slogan, "Let us do things surgically," is very well carried out, as it is not an uncommon thing to find a patient who has been operated upon five or more times, while those who have had two operations are as numerous as "Fords." Let us follow this slogan, particularly if we wish to increase our revenues, for there is no question that surgery is the business side (financially) of medicine. I know a surgeon who received two thousand five hundred dollars for a prostatectomy. Of course he is a busy and charitable man and operated on seven charity patients the same day he did the above operation, at least that is what the nurse informed his wife. "Nuff sed."

Overdoing Surgery.

"There is no medical disease of the stomach," meaning all diseases of the stomach are surgical diseases; the essayist making this assertion was asked, in the discussion of the paper, why the surgeons turned so many stomach cases over to the medical wards to die therein. Question not answered.

Surgery of the stomach is by no means a cure-all, as fully 20 per cent. of cases that survive the operation are not cured.

The present favorite, gastroenterostomy, is a palliative operation, as it does not remove the ulcer or reduce the acidity.

Gastroduodenostomy promises better results, as it removes the ulcer and the acidity is reduced, yet it cannot be performed in all cases.

Some Cases.

In one case coming under my observation, gastrojejunostomy was performed; the patient did well for a month; then vomiting, pain, etc., returned; at the second operation the gastrojejunostomy wound was undone, the stomach wound closed (enfolded), the jejunum could not be enfolded so an end-to-end anastomosis was made, also a gastroduodenostomy was done; the pylorus, which was much inflamed at first operation, was in much better condition at the second operation, so gastroduodenostomy was comparatively simple—quite an amount of surgery for an ulcer (small), yet the patient made a quick recovery and is at present in good condition. (Operation, August, 1915.)

Another case of duodenal ulcer had gastroenterostomy six months ago; was fairly well for a month, when vomiting, pains, etc., returned; is now under medical treatment, refusing another operation.

Unsuccessful Operations.

Excision of ulcer is not a popular operation on account of the attendant mortality. Gastroenterostomy is a failure in ulcer complicated by ptosis. Gastroplication is not a successful operation in ptosis of the stomach. Resection will not cure cancer because cancer of the stomach cannot be diagnosed early enough. This is an argument sometimes used in favor of exploratory operations. One of the surgeons quoted claims a recovery after resection for cancer of the stomach five years ago. The best statistics for recoveries after operation for cancer of the stomach are 25 per cent. of cures after five years. When I suggested mistaken diagnosis I was called a "nihilist."

The Problem of Cancer.

Cancer spreads in three ways: by contact, through the blood-stream and through the lymphatics. The stomach is so well supplied with lymphatics that systemic infection has occurred by the time we are able to make a diagnosis. Cancer of the stomach is generally a primary disease—with our present knowledge, the diagnosis is not made until the ulcerative stage of cancer is reached—and to attribute this condition found at operations to ulcer undergoing malignant degeneration, is to my mind unfair.

Both ulcer and cancer are part of the price we pay for our so-called civilization and culture, as these were not the diseases of our progenitors. The more cultured and affluent we become, the more we crave for the things which per capita consumption shows tend to maintain a parallel to the increasing number of ulcer and cancer cases, namely, the consumption of alcohol, tobacco, meat, sugar, tea and coffee.

Surgeons and Diagnosis.

Surgeons as a class are poor diagnosticians but good business men, as the following will illustrate: A patient complaining with stomach symptoms consulted a prominent surgeon (a good one—exploratory type—who also practices internal medicine after his fashion); he prescribed his usual pepsin mixture; this failing, an alkaline mixture was tried; this failing, an acid mixture; later, a cholagogue, and still later three proprietary preparations were tried; and, all failing, an exploratory operation was advised. This may be considered good business, but it is a poor method of making a diagnosis. Yet this is not an exceptional case, but one of the many eventually terminating in exploratory operations—of which there are at present too many and which are steadily increasing in numbers.

Exploratory Diagnosis.

How often do we hear the surgeon remark, "What will we find when this abdomen is opened?" There are two classes of surgeons—the same applies to hospitals, as they are dominated by the surgeons—namely, the "scientific," who uses all aids at his command in the endeavor to make an accurate diagnosis before operation, and the "explorer," who makes his diagnosis only after opening the abdomen—the latter the overwhelming majority.

One of the best abdominal diagnosticians, who uses all aids, admitted that he made 8 per cent. of mistakes in abdominal diagnoses, covering a period of four years. What a high percentage of mistakes the rest of us make, I will not venture to guess.

Duodenal ulcer is not difficult to diagnose, yet the majority of cases in this community were discovered by accident—perforations or operations for other diagnoses.

Allopathic Surgery for Homeopathic Pathology.

Exploratory incision is a serious procedure, for the operator intrudes his entire hand, often his forearm as well, into the abdominal cavity in the endeavor to find a pathological condition to account for the patient's symptoms. Failing to find sufficient pathology to account for the symptoms, the trouble is usually blamed upon the appendix, which is generally removed, as a useless organ—

one we are better to be rid of—or having a hardened tip, etc. The surgeon apparently feels that he must do something to ease the minds of the patient and friends—any good excuse will suffice. Indeed, it is often surprising what a minute amount of pathology will satisfy the conscience of the surgeon as to the necessity for the operation.

Many patients complain more after their operations than before. For a month or so after the operation they are fairly comfortable; but afterwards they express themselves as worse off than before the operation and blame the cause of their complaints on the anesthetic, adhesions, gas-pains or hernias, freedom from which no surgeon can guarantee in any abdominal operation, no matter how simple or clean the case may be.

Gastric Analysis.

The assertion that the absence of free hydrochloric acid in the stomach contents means nothing is an attempt to belittle gastric analysis; the same might as well be said of urine analysis, blood count, blood pressure, stool analysis, radiography, etc. Free hydrochloric acid is normally present in the healthy stomach, even in the fasting condition; it is a physiological condition. The absence of free hydrochloric acid from the stomach content after an Ewald test meal denotes intra- or extra-gastric disturbances; the conditions which will satisfactorily account for its absence are cancer of the viscera, chronic catarrhal gastritis, achylia gastrica and marked anemia from any cause. You will find one of these conditions invariably when there is no free hydrochloric acid in the stomach contents.

The Question of Diet.

What does the man of average intelligence know about the ingestion of salt, spices, condiments—he uses them to tickle his palate—all of which are stimulators of gastric secretion, with which the majority of us are overabundantly supplied? I am acquainted with a ball player (a former big leaguer), who uses eight lumps of sugar to a cupful of coffee. The diet of many persons consists mainly of pastry, cereals, jellies, jams, preserves, spreads, syrupy liquids and candy.

My preceptor's favorite dinner was two pounds of tenderloin steak with plenty of spices, condiments, appetizers, etc.; it is unnecessary to say that he died with nephritis. Another colleague, a gormandizer, died of apoplexy in the early forties. The favorite repast of many high-salaried men, of great executive ability and full habit, is a meal (gorge) of which a planked steak is the *piece de resistance*; many of this class gorge on Saturday night or Sunday and eat moderately the rest of the week. The Jewish

people as a class are large eaters of rich food-stuffs, which accounts for so many of them being diabetics.

Nearly all of the people mentioned are above the average in intelligence. As a rule, physicians

diet their patients according to the lines they follow themselves.

When men of as much intelligence as those quoted in this article make such statements, it is a sad reflection on their ability and sincerity.

Autogenous Bone Splints in Fractures and Tuberculous Spines.

By CHARLES M. JACOBS, M.D.,
31 North State Street,
CHICAGO, ILL.

Associate Professor of Clinical Orthopedic Surgery, University of Illinois College of Medicine; Attending Orthopedic Surgeon, Cook County Hospital and Home for Destitute Crippled Children.

A conservative statement of operative treatment in fracture work and spinal disease which does not minimize conservative methods, and which advocates a back-to-nature operative splinting without the undue use of metal plates and wiring.—EDITOR.

This paper is presented not with the design of detracting from older methods and principles founded on long-established and successful usage, but to emphasize that transplantation of living tissue from one part of the human body to another is a simple, practical and efficient procedure with added advantages over other methods when properly used.

The use of autogenous bone splints which become integral parts of the bones in which they are inserted is advocated for the repair of fractures, tuberculous spine disease, defects in bone, etc.

Bone Transplantation.

Bone transplantation for the *Repair of Fractures* should be undertaken to fulfill three fundamental requirements—*reduction, fixation and stimulation*. But fractures which can be brought into fairly good alignment by traction and manipulation and which can be held by suitable splints are best left alone, particularly in children and older adults. It is a well-known fact that an apparently poor result following a fracture in a child is effaced or eradicated by the time adolescence is reached. In the aged, one-third of all fractures are of the anatomical neck. This can be treated by traction and 45 abduction of the limb in a plaster cast and thus apposition of the fragments secured.

Simple Fractures.

In simple fractures union occurs readily in the presence of good alignment because the osteogenetic function is active, but in considerable number of these fractures apposition of the fragments is impossible except through an incision; temporary fixation is then essential. In ununited fractures union has been delayed or interrupted because of the decreased, or of the cessation of, osteogenetic activity in the fractured ends; therefore stimulation of osteogenesis is necessary.

Temporary Fixation.

For a temporary fixation the Lane or metal plate is much in vogue; but being a foreign body it is resented by the tissues. It does not stimulate callus formation, but, on the contrary, it causes osteoporosis of bone, hence delayed or non-union frequently results. On the other hand, the autogenous, intra-medullary bone splint affords effectual fixation and, being intraosseous, induces stimulation of osteogenesis by bone-to-bone contact; it is not resented by the tissues and requires only the usual aseptic technic. I do not hesitate to handle my transplant with gloved hands, and the results are uniformly good. Special drainage is unnecessary, for there is sufficient oozing from the closed skin incision. The limb should be placed in a plaster cast, as the bone fragments are fragily contacted and must be held for a period assuring callus formation.

The Fate of the Bone Splint.

The ultimate fate of the bone splint is a debatable point; yet it matters little from the surgeon's standpoint whether the graft continues as true bone or acts as a scaffold for the production of new bone cells. The splint will remain integral until repair of the fracture has taken place. It is not essential to include periosteum with the intra-medullary splint—merely endosteum and marrow substance.

A Case Record.

The following case will illustrate the application of the intramedullary splint in fractures:

W. A., aged 42 years, stableman. Admitted to Cook County Hospital, October 10, 1915, with the following history:

Two days previously slipped and fell, breaking his left forearm. On examination the left radius was found to be broken at its lower third, which latter was verified by a skiagraph. After three unsuccessful attempts at reduction by manipulation, followed by casts, open operation with insertion of an intra-medullary splint was performed October 27, 1915. The fractured area was exposed by a generous skin incision. The skin and subcutaneous tissues were retracted, the ends of the fragments freed from surrounding tissues, freshened with a chisel and the medullary canals reamed out to receive the splint. The intra-medullary plug, two inches long by five-sixteenth inch in width and thickness without periosteum, was cut from the crest of the tibia by means of an electric saw and fitted into the medullary cavity of the lower fragment. The lower fragment, now containing the bone plug, was manipulated so that the end of the splint entered the medullary canal of the upper fragment. A cast was applied extending from the fingers to the elbow, which was removed at the end of four weeks, when a posterior molded splint was applied and discarded six weeks later. A skiagraph taken December 7 showed perfect apposition and callus formation.

Tuberculous Spines.

Bone transplantation is advocated in Pott's disease for the purpose of ankylosing the diseased and contiguous vertebræ in order to hold the spine in the extended position so that pressure on the diseased area may be removed, thus arresting and controlling the morbid process. The bone splint is implanted into the spinous processes of all the diseased vertebræ as well as healthy contiguous vertebræ above and below. The added fixation afforded by the graft renders the spine at the seat of the lesion more immobile and unquestionably shortens the period of disability, with added presumption of a rapid cure. But the fact that a bone graft can be successfully inserted is not sufficient reason for attempting to relieve all such conditions by this method.

Conservative vs. Operative Treatment.

Surgical procedure should be the treatment of election rather than of routine and the determining factors should be age, environment and existing circumstances. In adults, the wage-earners must regain health in the shortest possible time, therefore bone transplantation into the split spinous processes promises a far more rapid cure than by conservative methods. On the other hand, the leisure class is in a position to choose between operative and conservative treatment. In children, surgical procedure should be reserved for cases when it is impossible to carry out properly conservative treatment or where conservatism has been tried and impossible to

control. Particularly does the latter apply to the upper and middle dorsal region of the spine where deformity most frequently occurs, notwithstanding the efforts of the orthopedist to prevent it.

The Technique.

The technique of Albee, with slight deviation, is followed in separating the halves of each spinous process to form a gutter for the implantation of the graft. The graft is always taken from the tibia, preferably by means of an electric motor saw, because this is rapid and exact. It is considered advisable to include with the graft periosteum, endosteum and attached marrow substance, as it is probably through these media that a more abundant and earlier blood supply to the graft is established.

Post-Operative Treatment.

The post-operative treatment consists of recumbency for eight weeks upon a Bradford frame. During this period the graft has become united to the split spinous processes by a provisional callus, but a firm bony union does not occur until later. Various investigators have pointed out that there is no permanent callus formation between the transplant and the bone into which it is transplanted before the eighty-fifth to the two hundred and fiftieth day.

Clinical observation by the writer of numerous operative cases where there were no protective treatment by casts or braces, has shown that early reliance cannot be placed upon the graft; that in the upper and middle dorsal region of the spine it does not prevent the kyphos from becoming exaggerated; that in the lower dorsal and in the lumbar region the strain on the graft is greatest at its lower end, and not only does not remain firmly anchored but stands out prominently. Therefore, if the desired result is to be accomplished, further protective treatment is necessary for a period of six to twelve months.

Illustrative Case.

M. M., aged 11 years, was admitted to Cook County Hospital suffering from lumbar Pott's disease of two years' duration. Skiagraph showed a destruction of fourth and fifth lumbar vertebræ. Operation advised.

With the patient in the ventral position, a long, curved skin incision was made, starting at the median line of the spine high above and going well below the spinous process of the diseased vertebræ. The skin over the processes was laid back and all bleeding points picked up. With the scalpel the tips of the spinous processes were cut in their center as a guide for the chisel. The supra- and intra-spinous ligaments were also cut, and then with chisel and mallet each spinous process was split longitudinally from one-quarter

to three-eighths inch in depth, taking care that the fractures so produced were all on the same side and that the ligamentous and muscular insertions were not disturbed. The split spinous processes now formed a trough for the implantation of the graft.

With the leg flexed upon the thigh, an incision was made over the crest of the tibia and down to the periosteum; then the tissues were freed from the anterior and inner side of the bone. The splint, accurately measured and outlined on the periosteum, was cut from the tibia with a motor saw and inserted into the gutter prepared for it, extending from the first dorsal down and into the sacrum. It was firmly held in place with No. 16 braided silk interrupted sutures (previously boiled in 1-1,000 bichloride solution and then in paraffin), which passed through muscles, ligaments and the tips of the spinous processes; the fascia pulled over with cat-gut and the skin sewed with paraffin silk sutures.

The post-operative treatment consisted of eight weeks on a Bradford frame. The patient is now without symptoms.

Advantages of Autogenous Bone Splints:—

1. In fractures,
 - a. It affords a means of repairing bones and obtaining functional results where other methods fail;
 - b. Apposition of the fragments is easily maintained;
 - c. Not being a foreign body, it is not resented by the tissues;
 - d. It neither causes osteoporosis of bone nor delays callus formation and ossification;
 - e. It stimulates the bone to which it is contacted, resulting in a firmer and better union;
 - f. The technic is simple and requires only the usual aseptic precautions.
2. In tuberculous spines,
 - a. Affords early relief from discomfort and pain;
 - b. Shortens the period of disability;
 - c. In selected cases it promises a far more rapid cure than by conservative treatment;
 - d. Prevents deformity;
 - e. Prevents existing deformity from becoming exaggerated;
 - f. It shortens the period of protective treatment such as given by casts or braces.

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Convulsions in Children, with Special Reference to Spasmophilia.

By J. ROSENTHAL, B.S., M.D.,
980 Brush St.,
DETROIT, MICH.

The subject of convulsions in children is one of such magnitude that, to cover it in one evening, would be utterly impossible. As you know, it is only a symptom, and to cover the ground one would have to take up in seriatim the many acute and chronic diseases in which it is found. Just for an illustration, I will give you a classification of convulsions by Prof. Phaudler, of the University of Munich, one in which he takes them up from the symptomatology. He divides them into two classes:

- 1, General reflex convulsions;
- 2, General convulsions with loss of consciousness.

General reflex convulsions: rapid jerking and violent inspirations on percussion of the body, and other irritations. Found physiologically in the new-born and young infants, suppurative meningitis, traumatic tetanus, pseudotetanus, and general neuropathy.

General convulsions with loss of consciousness: apoplectiform and epileptiform attacks simulating fainting, tic, and chorea. This may again be subdivided into two classes according to their cause, viz.: those due to organic causes, and those with no organic causes.

A. Organic causes, accompanying cerebrospinal lesions may be:

a. Inflammatory processes with acute onset accompanied by regular and considerable fever, i. e., acute meningitis, acute encephalitis, cerebral abscess, and septic thrombosis following gastroenteritis, sepsis, pneumonia, measles and tuberculosis.

b. Processes with acute onset but usually afebrile or subfebrile, i. e., embolism, cerebral thrombosis, hemorrhages of the brain and meninges, hydrocephaloid, cerebral hyperemia, and internal blood tumors.

c. Afebrile processes with slow onset, or existing from birth, i. e., chronic internal hydrocephalus, microcephaly, porencephalia, cerebral hypertrophy, cerebral and spinal tumors, tuberculosis and syphilis.

B. Among those with no organic causes are:

a. Idiopathic, existing independently or occurring as a sign of habitual over-excitability, always recurring for months or years, taking an afebrile course, i. e., genuine epilepsy, hys-

*Read before the Maomonides Medical Society.

teria, genuine eclampsia, and eclampsia nutans.

b. Secondary, which may again be subdivided into:

1. Those found in acute infectious diseases, especially the beginning and in severe highly febrile course.

2. Found in ectogenous intoxications, i. e., alcohol, phenol, bromoform, iodoform, etc.

3. Found in the endogenous intoxications, i. e., diabetic coma, many acute infectious kinds of gastroenteritis, constipation, uremia, and tetanus.

4. Neuroginous or reflex effect. Violent sensory irritations, starting from certain zones; found most frequently in spasmophilic children, coming from slight and often insignificant causes, such as cold in the head, dentitions, intestinal parasites, colic, constipation, phimosis, etc.

So you can readily see that to go into detail with the symptomatology, differential diagnosis, and treatment of each of these would take up more time than is allotted me, but one can, from the nature of the convulsion, the time, history and physical examination, most always come to a proper diagnosis of the cause and institute proper treatment.

Neuroginous Forms.

One form that I wish especially to dwell on more in detail is the neuroginous, or those found in children with the spasmophile diathesis. This is a subject upon which the pediatricists of Europe, especially Germany and Austria, have spent a great deal of time and study to find the cause, and thereby the treatment.

The Spasmophile Diathesis.

According to Dr. M. Thiemich, of Breslau, "Spasmophile diathesis is a constitutional anomaly which is recognized by a measurable mechanical and electrical over-excitability of the nervous system, and which produces a pathological predisposition to certain partial and general clonic and tonic convulsions. * * * The exaggerated irritability which constitutes the peculiarity of this condition can in marked cases be determined by the presence of increased mechanical irritability in one or several peripheral nerves."

This led to defining several distinctive phenomena, to which have been attached the name of their discoverer, and are quite pathognomonic of this condition.

Distinctive Phenomena.

Trousseau's phenomenon or symptom consists in the fact that pressure on the nerve trunks in

the internal bicipital groove will bring on a convulsion. The constriction must be great enough to produce cyanosis of the distal portion of the extremity, and must be continued for from one to several minutes before a convulsion makes its appearance, and the procedure is attended by some pain.

Chvostek's symptom or the facial phenomenon is, like the preceding, an expression of the increased mechanical irritability of the nerves. When the facial nerve is tapped at about midway between the zygomatic process and the angle of the mouth, lightning-like contractions are produced in the whole region supplied by the branches of the facial nerve which is affected by the blow. If the irritability is very great, the contractions can be produced by simply stroking the cheek (Schultze's phenomenon).

Erb's phenomenon consists in the over-excitability of the nervous system to the galvanic current.

Clinical Manifestations.

The clinical manifestations of the spasmophile diathesis are tetany, laryngospasm, and eclampsia infantum.

The chief symptom of manifest tetany is the tonic convulsion of the extremities, accompanied by increased sensibility in the affected limbs, while consciousness is always preserved. The convulsion always occurs in the upper extremity, occasionally in the lower, and the position in which the hands are held is very characteristic, the so-called obstetrical position, or like the begging position of a dog. When the lower extremities are involved they are usually in flexion. In latent tetany are found the phenomena described above.

Laryngospasm, in its milder form, manifests itself by a strident, protracted, crowing inspiration. In severe cases the spasmodic closure of the glottis is so complete that symptoms of asphyxia are present, and even death may occur. On the other hand, the condition, after becoming quite severe, may pass off with a few long-drawn inspirations, and the breathing again become normal.

Eclampsia Infantum.

Eclampsia infantum, so-called functional convulsions of infancy, so closely resembles epilepsy that until recently it was regarded as a form of epilepsy characterized by the age and favorable clinical course. The attack consists of a primary tonic and, later, a clonic stage. Occasionally a kind of aura is observed, consisting of restlessness, inattention, and anxiousness which lasts but a few minutes and is followed by sudden pallor

of the face, loss of consciousness, and a tonic convulsion of the muscles of the eye, face and extremities. After a few seconds these are replaced by clonic contractions, violent in character, shaking the entire body, audible breathing approaching a cry, cyanosis, and profuse sweating. This gradually subsides, and after a few minutes terminates in relaxation, and return to consciousness. They last at most but a few minutes, and the child returns to normal or is perhaps somewhat peevish. These attacks usually disappear in early infancy unless provoked by some special exciting cause, but the latent symptoms of spasmophilia remain for some time, often into adult life.

Causes.

As to the cause of spasmophile diathesis, many theories have been promulgated, but time will not permit me to take them up individually and give their arguments pro and con. Many able men support one, many another, but the one most universally accepted is that it is due to some unknown metabolic disturbance. In proof of this we know that quality and quantity of food will bring on spasmophilia, and it will also cause it to disappear. Why, we cannot say, nor which part of the food is the factor. It seldom occurs in breast fed babies, but does in the artificially fed. Which portion of the milk is at fault we do not know; but when milk is withdrawn, and cereals and weak tea substituted, the over-excitability disappears, to appear again with the addition of the milk. Finkelstein thinks it is the whey; others do not. I am not in a position to say. It is frequently found in the over-fed, but may occasionally be found in the weak.

Incidence.

The season of the year seems to have some affect on the frequency of the condition. It occurs more often during January, February and March, and very seldom or not at all during the mid-summer months.

The age at which manifest symptoms appear is from the fourth month to the end of the second year; in tetany the third year. The greatest frequency is during the last half of the first year and the first half of the second, the season of the year making a great difference in this, i. e., a child of seven or eight months will have symptoms of tetany, laryngospasm, or eclampsia to a marked degree during January and February, which will gradually disappear during spring and late summer, and return again in the fall and winter, but to a less marked degree.

Treatment.

As for treatment, the acute convulsion requires none, because it is usually over before we arrive.

If it returns frequently, or lasts too long, narcotics are indicated. Of these, chloral hydrate, 8 min. of a 2 per cent. solution by rectum is recommended; it is allowed to remain for some time, and will usually control the convulsions so that chloroform will rarely be necessary. If there is fever, a tepid bath; but if there is none, this would interfere with the rest that is required so much in these cases. If the breathing shows a tendency to stop, artificial respiration should be instituted as soon as the muscles relax.

As soon as the attack is over, measures should be started to combat the over-excitability of the nervous system. The bowels evacuated by two drachms of castor oil; boiled water or weak tea given to infants, or cereals without milk to older children, for a day. Under this diet the spasmophilia usually disappears. If breast milk is obtainable, our troubles are usually over in the infant, but if not, a farinaceous diet must be instituted, which can be used for about a week, when a slow and careful return to milk, preferably without the whey, may be tried. In the older children the restricted diet may be supplemented with the soups, finely divided vegetables and junket.

This treatment will relieve the condition, and if persisted in will control the manifest symptoms. A complete cure is something that we cannot promise. As Dr. Thiemich so well expresses it in the closing of his able article on this subject, "While the over-excitability, after it has once been removed by initial evacuation of the gastro-enteric tract, does not as a rule return if the child is fed on breast milk, there is no form of artificial feeding that will permanently guard the child against over-excitability. It is possible, however, to keep the over-excitability of the nervous system within bounds, and to prevent the occurrence of further manifest symptoms."

On the other hand, in children poorly nourished, and with chronic gastroenteric trouble, the best we can do is to ignore the spasmophilia, and better the general condition, because of its greater importance.

Medicine, by itself, can accomplish little. Phosphorus has been recommended, and also cod-liver oil. These because of the supposed relation between spasmophilia and rickets. That which gives most satisfaction, combined with the dietetic treatment, is a combination of these in the proportion of 1 to 10,000, called Phosphorus cod-liver oil.

Calcium chloride in large doses and subcutaneous injections of from 10 to 20 cc. of a $\frac{1}{8}$ per cent. solution of magnesium sulphate often produce marked improvement.

The Vegetable Dietary in Diabetes Mellitus.

By JOHN AULDE, M.D.,
PHILADELPHIA, PA.

Bantingism was introduced in 1864 as a method of reducing corpulence by abstinence from fat-producing foods, and now, 52 years later, a similar line of treatment is advocated for such a formidable disorder as diabetes. In this latter instance, fasting is alternated with a vegetable dietary, and it is for the purpose of throwing the scientific searchlight upon this special feature of the treatment that I have made the computations in the following tabulation.

The various items comprising the food materials and the amount of each for the day are to be found in the book, "*The Starvation (Allen) Treatment of Diabetes*," by Hill and Eckman. Please note that all vegetables, except cucumbers and celery are cooked—and that the caloric content is low, only 182; also that the patient consumes, all told, but 1.35 pounds of food, while the amount utilized as protein, fat and carbohydrate is remarkably small, .0788 pounds, or 551 grains.

Let me call attention to certain errors which have crept into the data for "Dietary No. 1." The protein content is 8 grams instead of 10 grams, the carbohydrate 20 grams instead of 15 grams, while the calories number 182 instead of 200. The computations for protein, fat and carbohydrate were made from Atwater's tables in "*The Chemical Composition of American Food Materials*," Washington, D. C., 1906.

The caloric value was computed separately, then compared with Atwater's figures and, with the exception of "string beans," they are the same—Atwater's caloric value is 27, a very slight difference. This tabulation has been extended to show the amounts utilized—as protein, fats and carbohydrates—from each of the different foods and from the whole in pounds (decimals), and in grams by actual calculation—for the reader's interest and my own satisfaction. Besides, it insures against errors—so liable to occur when such small fractions are employed. I have also added the data—in grams—for a "Balanced Ration," based upon the amount of protein supplied. This allows four times as much carbohydrate as protein, the fat allowance being one-fifth of the whole—a total of 238 calories instead of 180, as computed, a loss of two calories from the original computation.

Mineral Constituents.

Before making inquiry as to the therapeutic value of this dietary, let us take a glance at the "Appendix" under the head of "Mineral Constituents." The data for this evidence has been compiled from the monograph, "Calcium, Magnesium and Phosphorus in Food and Nutrition," Washington, D. C., 1910. It is by Sherman, Mettler and Sinclair, Columbia University, N. Y., and appears in my book, "The Chemic Problem in Nutrition (Magnesium Infiltration)" Philadelphia, 1912, in the section headed "The Food Problem." According to Atwater: "These results usually give the percentage composition

THE VEGETABLE DIETARY IN DIABETES MELLITUS.
TABULATION SHOWING THE INORGANIC SALTS AS A FACTOR.

	FOOD MATERIALS.						MINERAL CONSTITUENTS.	
	Quantity Grams	Weight Ounces	Protein Lbs.	Fat Lbs.	Carbo- hydrate Lbs.	Calories	Calcium Oxide Grains	Magnesium Oxide Grains
String Beans	120	4.00	.0020	.0027	.0047	25	1.2775	.8750
Asparagus	150	5.00	.0046	.0003	.0087	26	.8312	.3718
Carrots	70	2.33	.0016	.0005	.0135	30	.7847	.3261
Spinach	135	4.50	.0059	.0115	.0073	73	1.2597	1.0432
Cucumbers	75	2.50	.0012	.0003	.0048	11	.3061	.1968
Celery	100	3.33	.0022	.0002	.0068	17	1.3692	.3933
Totals	650	21.66	.0175	.0155	.0458	182	5.8284	3.2062
Food eaten	650	1.35						
Food utilized	35	.0788	.0175	.0155	.0458	183	5.8284	3.2062
Per man per day		Grams	Grams	Grams	Grams			
		35	8	7	20	180		
"Balanced Ration"		48	8	8	32	238		

of the ash as produced by incineration rather than the proportions in which the different mineral ingredients occur in the food material."

It is noticeable that in every instance the percentage of calcium is in excess of magnesium and that the total calcium content is nearly double that of magnesium. According to Langworthy, "Food Customs and Diet in American Homes," Washington, D. C., 1911, the ordinary dietary contains 10.5 to 15 grains of calcium and half as much magnesium, so that these patients receive in the correct proportions about one-half the minimum required. Thus, we get the first ray of light upon this intensely interesting question.

Cell Constituents.

The protoplasmic cell, the unit of both animal and plant life, is made up of molecules, protein, fat and carbohydrate molecules. Again, the functional activity and physical energies of protoplasm depend upon the proper "balance" of the mineral constituents in the protein molecule. The fat and carbohydrate molecules supply fuel and energy, but it is the protein molecule which provides an antiseptic for the blood, the bacteriolytics and opsonins; and it is the protein molecule also which provides the phagocytes with a proteolytic ferment, enabling them to digest the invading bacteria.

Some Deductions.

Applying these scientific facts to the subject in hand, we have the following logical deductions or conclusions:

The preliminary fast of several days lessens decomposition and fermentation in the alimentary canal; reduces microbial action to a minimum; overcomes the acid excess in the body fluids and tissues, including nerve tissue, thus permitting the protoplasmic cells to dissociate the magnesium deposits which interfere with the uninterrupted transmission of nerve impulses.

Vaughan says: "Memorial Volume," Chicago, 1915, p. 127, * * * in all probability the resisting agent is also a living thing, or some product or products of living things." Hence it requires no stretch of the imagination to intimate the possibilities of the protein molecule as the essential barrier against infection.

The chemist problem in nutrition is concerned almost exclusively with selecting the most suitable measures, dietetic and medical, calculated to counteract or neutralize acid excess, as in diabetes, scarlet fever and chronic rheumatism, because the acidity depletes the calcium content of the nuclear proteid. That is to say, the acid condition of the system changes normal nucleoproteids into magnesium nucleoproteids, which

lack the property of imbibition (absorption), a clinical and scientific fact which holds true in all diseases, acute, subacute, and chronic, functional and organic, infectious and non-infectious. When this fundamental fact is employed as a searchlight in studying diabetes, the illuminating rays are diffused in every possible direction, showing calcium deficiency in the protein molecule.

Magnesium Infiltration.

Perhaps it would be well to add a synopsis of the working hypothesis known as "magnesium infiltration," as applied in diabetes, as follows:

All disease is characterized by increased acid production—shown by the reactions of the urine, the mucus and the perspiration. Of course, the normal alkalinity of the blood is diminished, its oxygen-carrying capacity lessened and its nutritive properties impaired. In addition, certain chemical changes take place in the distribution of the inorganic principles. Thus, calcium, or lime, being a stronger base than magnesium, it combines with the acid, magnesium taking its place—and substitution, or infiltration, means impairment and destruction of the tissues in both animal and plant life.

To counteract this abnormal condition, nature has provided a safety valve—nitrogen in the form of ammonia is drawn from the body fluids and tissues, but this is a function with distinct limitations. Hence, the logical deduction—neutralize acid excess and promote magnesium dissociation. The first is accomplished by the administration of alkalies; the second, by employing calcium or lime as an antidote.

In diabetes, for example, a disorder characterized by well-marked acidity, we assume that calcium depletion involves the islands of Langerhans, arresting function, so that oxidation of glucose is prevented (inhibited), elimination taking place through the kidneys.

Calcium is catalytic and reconstructive; and besides, we can employ it for its quantitative effect, so-called "mass-action." In acute cases the small dose is quite sufficient to recoup the deficiency in the nuclear proteid: when disease has advanced, larger doses are required; in diabetes, the long-continued acidity demands still larger doses, not only to replenish the structures of the pancreas, but also the cellular structures of the entire body. That this is not altogether theory we have ample clinical evidence—in the complete recovery of patients after years of suffering from this malady. Briefly stated, there are three lines of treatment to be pursued: (1) Regulate the dietary; (2) neutralize acid excess; (3) promote magnesium dissociation.

1305 Arch Street.

The Treatment of Leg Ulcers.

By A. B. CLOAK, M.D.,
FREEDOM, PA.

This discriminating and practical paper upon an every-day subject should be read most carefully, since it is an admirable presentation.—EDITOR.

Of the many hundred diseases and conditions which the general practitioner is called upon to treat, there perhaps is none so unsatisfactory of treatment and so discouraging to both patient and physician as some cases of leg ulcers. This being so because of the apparent insignificance of the trouble and directedness with which the medication can be applied. In grave and fatal diseases, people as a rule do not expect anything of the physician but temporary relief, but in a condition of so apparent simplicity as a leg ulcer they demand a cure and often style the doctor "no good" because he fails to promptly heal such sore.

Text-book writers dwell on the complicated and difficult condition of the body and describe in detail treatment of cases which the common doctor seldom, if ever, sees, and of which he cares nothing. But of the many, many little things, every-day occurrences to the general practitioner, and which he is expected to thoroughly understand and treat successfully, little is said by medical and surgical authorities. Consequently every man has to observe, study, experiment and find out for himself what is best for these things. And one of these, so regarded by authors, little things, is leg ulcers, and consequently, they say but little concerning diagnosis and treatment of such.

This class of cases opens up a great field for quacks and grafters. And be it to the physician's discredit, some of them actually succeed in healing an ulcer after he has failed.

Classification.

Leg ulcers proper may be classed as acute and chronic. Of the acute we have infective and non-infective. Of the infective, those due to direct bacterial invasion of the tissues, as pimples, boils, erysipelas, etc.; and those following wounds, as cuts, bruises, bites by insects, reptiles and animals. Acute, non-infective ulcers are slow-healing injuries.

Of the chronic ulcers, we likewise have infective and non-infective. Infective: syphilitic

and tubercular. Non-infective: simple, varicose, irritable, necrotic, inflammatory, and escape for diseased bones.

The acute direct variety needs but to be seen and the diagnosis, proper treatment and cure speedily follow.

The Acute Indirect Ulcer.

The acute indirect I will discuss briefly. They result chiefly from infection of wounds at time of infliction or later, usually being produced by dog bites, insect bites and scratches made by nails or wire.

Bites or punctured wounds offer a fertile soil for bacterial growth, which usually occurs when these are not properly treated. The treatment of the fresh wound will not be considered, but that of the resulting ulcer. The ordinary treatment consists of antiseptic washes and dry antiseptic dressings, which is often sufficient. But many cases with this treatment progressively get worse. Perhaps a better treatment consists in just a mild cauterant, as carbolic acid, moist dressing of bichloride, subsequent daily antiseptic irrigation of at least two quarts of antiseptic solution at good pressure and dry dressing. The result is generally rapid recovery. This treatment differs from the former in the use of cauterant and irrigation instead of simple wash, the cauterant and irrigation being of decided advantage in removing and reducing virulence of bacteria, and at the same time stimulating tissue resistance and formation of granulations.

Non-infective Acute Ulcers.

Non-infective acute ulcers, or slow-healing non-infective wounds, are hastened to recovery by daily application of mild solution of silver nitrate and dressing with a stimulating powder, such as bismuth formic iodide.

Chronic Ulcers.

We come now to the important leg ulcers and those which give us trouble, classed as chronic. Here the first difficulty is diagnosis. The diagnosis having been made, the next and to the patient the important thing is means of treatment, that is, satisfactory treatment.

When called upon to treat a leg ulcer our first duty is to endeavor to arrive at a correct diagnosis, and to do this we must first consider carefully the history of the case, of the individual and his ancestors. Having done this carefully, the next step is thorough examination of the ulcer itself, surrounding parts and the whole body of

the patient. Take careful note of the condition of the various systems and especially of the circulatory, digestive and genito-urinary. Having a history and a working knowledge of systemic conditions, and with eyes, fingers and probe make a complete examination of the ulcer itself. Having done this, we have good data to arrive at a correct diagnosis, and we classify it as one of the following varieties of ulcers, providing it be of the chronic class which we are about to consider: tubercular, syphilitic, escape for bone diseases, varicose, irritable, necrotic, inflammatory, simple, or ulcerating tumor.

Tubercular Form.

Tubercular ulcers are not of frequent occurrence on the leg, but when such ulceration does occur it is very important that it be diagnosed correctly and treated properly. This variety of ulcer has no point of preference, but may be found on any part of the leg. Cause is tubercular infection of a primary wound and location depends on situation of wound. It presents to the eye the following characteristics: The base is covered with a thin white slough or with small, pale granulations. The edges are very irregular, undermined and of a bluish color. There is a slight inflammatory areola and no induration. The ulcerative process is progressive and the ulcer increases in size.

The patient himself is usually anæmic and of a run-down appearance. The treatment of this condition depends largely upon the person affected. If in the physician's opinion he is a good subject for anesthesia and of temperament to endure confinement to bed, the proper procedure is anesthesia and with the scalpel and curette remove thoroughly all diseased tissue, with subsequent dry dressings, rest in bed, tonic medication, good nourishment and ventilation. If, on the other hand, the patient is not suitable for operative treatment, then we must endeavor to heal by use of antiseptics, hygiene and tonic medication. The local applications that give the best results are iodoform and balsam of peru. Daily dressings, irrigate ulcer, remove loose dead tissue and apply either iodoform or balsam of peru.

Syphilitic Ulcers.

Syphilitic ulcer results from breaking down of a gumma and is most frequently found on the middle third of the tibia. The appearance is characteristic—a punched-out appearance, abrupt dip from healthy tissue, just as though a punch had taken a piece of flesh out of a healthy area, no indurated edges, though flesh in general may be infiltrated about the sore. There may be several ulcers, either separate or coalesced. The

floor is uneven and greenish red color, bathed with sanguineous pus. Other evidences of syphilitic infection may aid in diagnosis, and sometimes a history of infection may be obtainable; but in absence of history do not make the mistake of not considering such an ulcer, as described, as not being of syphilitic source. Some have infection and not be aware of it, and others will deny any infection.

The treatment here, of course, is principally constitutional, with heavy doses of potassium iodide. Locally, antiseptic irrigation and dressing with iodoform or blue ointment.

Underlying Bone Disease.

Ulcers resulting from underlying bone disease may be situated in any part of the leg and be of no characteristic appearance. Diagnosis is made by careful examination with the probe. The cause being found, the treatment consists of removal of the diseased bone, whatever it may be, and the ulcer will take care of itself.

Varicose Ulcers.

Varicose ulcers are usually located on the middle third of the tibia and varicosity of the veins presents. Caused from slight injuries to the limb, with varicose veins, or as the result of a phlebotic abscess in the small venous channels. Once started, they enlarge by molecular necrosis of the edges or by coalescence of several small abscesses. The edges are irregular, thickened and infiltrated; the surrounding skin is markedly pigmented and of an eczematous character. Granulations are bluish and a serous discharge is present. Surrounding skin is pigmented, due to passive hyperemia. Treatment: put patient to bed and keep him there, with leg elevated on a pillow. Crucial incisions down to underlying bone, are made in the indurated edges. Render surface as near aseptic as possible. Supply liberal nutrition and remove cause, the dilated vein. Tie saphenous vein in groin, and above knee, removing part lying between ligatures. Aseptic dry dressing.

Irritable Ulcers.

Irritable ulcer, usually located at middle of tibia, and peculiar to the female sex; generally associated with some menstrual trouble. It is small in size, about the size of a dime. Clean healthy appearing skin, not pigmented or indurated, is extremely sensitive to touch and very painful, due to exposure of nerves, and no tendency to heal. Treatment consists in attention to the menstrual trouble, and locally to cocainize the ulcer and then thoroughly cauterize it with pure silver nitrate; subsequent dressing with a mild antiseptic powder. Healing is prompt and rapid.

Simple Ulcer.

Simple ulcer: There is no specific germ and no varicosity. Usual location middle third of tibia, and generally is the result of an improperly treated or neglected injury to a limb in which the nutrition is below par. It is shallow, nearly level with the surrounding skin; base is covered with small pale granulations or no granulation at all, and a covering of thin white necrotic substance, removal of which discloses a white or pale pink surface as smooth as mucous membrane. The edges are regular and circular or oval in outline, indurated, and the surrounding tissue is without inflammatory involvement. The discharge is serous, and the whole picture is one of lack of vitality. Treatment: put patient to bed and keep leg at rest; build up general health. If edges are indurated, as they usually are, incision carried down to the bone. Daily irrigations with bichloride solution and a dressing of bismuth formic iodide, which is antiseptic and a stimulant of granulations.

Necrotic Ulcers.

Necrotic ulcers, usually found in oldish people and generally multiple, being distributed over middle and lower third of the leg; vary in size from that of a pea to a silver dollar, depending on treatment. This class of ulcers is due to a defect in the circulation of blood in the subcutaneous venuli and deep cutaneous capillaries. There is no varicosity, but a degeneration in the venuli of small thrombi which dams backs the venous blood, with distention and pressure of the tissues about the capillaries. This cuts off the supply of proper nourishment, and the result is that at various points over this edematous, discolored leg there appears a swelling, redness and tenderness. After a few days the skin overlying these areas ruptures, with an escape of pus, and an ulcer is the result. These, if untreated, increase in size, while the same process of formation goes on in other locations, and if unchecked soon has the leg pretty well covered with ulcerations. There is a marked seropurulent discharge. Treatment consists in keeping patient off his feet as much as possible, antiseptic washes and a dressing consisting of witch hazel, glycerine and hydrastis, which is a soothing, astringent depletent and promotes healing. Powders of all kinds are useless, so also are elastic bandages and stockings. The latter irritate and make conditions worse.

Inflammatory Ulcers.

Inflammatory ulcers have a preference for the female of neurotic type. Usually located on lower third of leg or over ankle; a shallow ulcer with pale granulations; edges are regular in outline and not

indurated; size varies; tenderness and pain very marked; tissues surrounding edematous and tender; skin for one or two inches about ulcer is of a fiery red color and at times covered with a vesicular eruption; slight serous discharge. A woman suffering from one of these ulcers will likely go from one doctor to another seeking relief and in all probability will be made worse by each one in turn, for almost all powders, ointments and dressings in general use will act as irritants to the ulcer, increasing pain and setting up a dermatitis of skin surrounding.

Mercurial ointment, if applied to the skin for any length of time, is ordinarily irritating; but if applied here, where milder applications irritate, it will not do so, but will promote rapid granulations, hence it is the treatment until granulations are level with the skin; then a powder is indicated, and here again there is difficulty in selecting the proper one. What is needed is a simple non-irritant astringent, and this we have in bismuth subnitrate, which if used persistently will invariably heal the ulcer.

With regard to treatment of chronic leg ulcers with the X-ray. It is very beneficial in tubercular, simple and varicose ulcers, but of no use or benefit in the others, and especially is it harmful in the inflammatory variety.

Changes of Countenance and Gesture in Infantile Diseases.

By ERNST H. C. HEUSLER, M.D.,
HOWELL STATION, IND.

Whooping cough: Cries violently, the mouth wide open.

Colic: Legs flexed to the abdomen and extended again; reddened face; cries. Very seriously sick infants do not cry. Face has troubled expression, as if about to scream with pain.

Pneumonia: Lies quietly on back, legs drawn together and face troubled.

Croup: Agonized expression of face; respiratory muscles tense.

Cardiac disease: Fixed and rigid expression of anguish; eyes wide open in a helpless stare; muscles flaccid, producing a "long face."

Cerebral disease: Many unusual facial expressions. Face often rigid or showing a "fatal peace;" eyes fixed; head retracted; supraorbital wrinkling; lips pressed together.

Chronic indigestion: An expression of nausea and reluctance; in acute cases, expression of pain.

Spinal-cord diseases: Voltairian expression; senile features; wasted muscles.

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Feeding the Typhoid and Arthritic Cases.

After a long, trying experience we have learned that the treatment of typhoid fever does not consist in primarily starving the patient. On my services at the King's County Hospital, associate of Dr. J. M. Van Cott, last summer we had eighteen consecutive cases of typhoid, all fed on a diet of such a high caloric value that a few years ago it would have been considered, to say the least, astonishing. Every one of them recovered.

When Starvation Diet Injures.

There is another disease that seems to me to be seriously handicapped if not injured by a starvation diet, our chronic arthritic cases. Granted that during acute exacerbations associated with fever, a restricted diet is in order, I feel that to continue this week in and out for months not alone has no beneficial influence on the course of the disease, but many times so weakens the patients, that they are unable to cope with the process of disease and repair. While these patients are slow to recover, hard to control, and each case has to be absolutely individualized both as to medication and diet, yet I firmly believe the greatest secret in helping towards recovery is by careful overfeeding rather than underfeeding; and that while some cases at present seem never to recover completely, still with proper care the majority are prevented from reaching the absolutely helpless state we have so often seen in the past.

Treat the Cause.

Treat the cause, if possible—tonsillitis, vaginitis, bad teeth, pyorrhea, Lane's kink, urethritis, prostatitis, deficient internal secretion, etc.—remembering that a secondary process has probably supplanted the primary trouble; but at the same time supply food for resistance and repair. When supplying this, individualize. One man's meat is another man's poison. Do not just take a leaf from some advertising medium that is labeled, "Diet for Rheumatism," and give this as a guide. Think. Question each patient for any idiosyncrasy, and give each patient's ideas as to

his peculiarity, just consideration and due weight. Ascertain the conditions of the digestive tract, or before you can use it to help bring about the recovery of the patient, this tract may need to be treated itself. It may not be performing its function. Maybe it never can perform it. Its faulty action may be causing or helping to cause the trouble. Eliminate these possibilities. Then don't fail to see that the whole intestinal tract eliminates and does its whole duty. Don't hesitate to starve a case a few days at first, if that is required, but as soon as possible give a full diet.

Diet Suggestions.

To generalize I suggest the following, though you will find many exceptions: Water, scientifically soured milk, or plain milk diluted with a cereal water, green vegetables, spinach, lettuce, watercresses (if the thyroid needs stimulation), parsley, string beans, well-cooked cereals, boiled fish, lamb, chicken; red meats broiled or roasted once a week; sweet-breads, if indicated; oranges, grapes, grape juice, all in the quantity indicated by the appetite unless this is diseased and needs a guide. Many times you will have to limit or even stop salt for a time. No soups or broths, unless needed occasionally as a stimulant to appetite. It is surprising the marked increase in appetite usually seen by stopping starch and sugar for a time.

CORNELIUS R. LOVE, M.D.

167 Clinton St., Brooklyn, N. Y.

Questioning Autotherapy.

In MEDICAL COUNCIL for February, 1916, on page 43, you published an article on Autotherapy, by Dr. Chas. H. Duncan, in which the Doctor gives directions how to treat infection following abortion or delivery, I presume septicemia, by administering to the patient some of her own vaginal discharge diluted in water.

I am frank to admit that I fail to grasp the idea how the vaginal discharge, which is supposed to be loaded with pathogenic bacteria and their toxins, discharged from the patient already filled and saturated with the same kind of bacteria and toxins (thrown off by nature as an effete matter), can benefit the patient or cure her of her infection, whether administered by the mouth or given hypodermatically.

Are We Drifting Back.

Step by step we seem to be drifting back to the times when certain parts of animals, their excretions, waste products, were used in medicine; the old times when primitives used urine, feces and other discharges from live and dead animals to prepare potions and medicaments for the sick. Preparations in the form of extracts, powders, etc., from certain parts of anatomy of various animals were held to possess specific power to heal the sick and wounded. For are

we not using the glandular extracts, vaccines and antitoxins, of course in modified form, today?

The treatment by Autogalactotherapy and unmodified antitoxin treatment for bronchitis, pneumonia and ivy poisoning, as described by the Doctor, is certainly a novel one.

I would like to know to what extent Dr. Duncan's form of treatment is practiced, especially as described in first part of his article.

If it really produces, as claimed by Dr. Duncan, such wonderful results and marvelous cures, and is, according to the Doctor, a God-send to the country practitioner, then it ought to be a God-send treatment in the hands of every practitioner, and therefore needs be presented to the medical profession more fully and in detail.

I am very much interested in this subject, and would like to have the editor express his views.

Have any members of the COUNCIL family had any experience in treating their patients by Dr. Duncan's method? If so, let us also hear from them.

AUG. J. KORHNAK, M.D.

Braddock, Pa.

We have had no experience with this method of treatment, see plenty of theoretical objections to it, but are open to conviction.—EDITOR.

Surgical Brainstorm.

I have just finished reading for the second time your excellent editorial, "Surgical Brainstorm and Railroad Patients." It is right to the point and so true; those big, "brain-storm" surgeons must be exposed and then sat upon, or woe to the common herd.

The big surgeon who operates against time certainly endangers the life of his patient and is a discredit to the nobility of the profession; that man has dropped to the level of a surgical carpenter whose brains have become water-logged.

Doctor, you are on the right track.

ANTHONY F. MYERS, M. D.

Bloomington, Pa.

A Treatment for a Varicose Vein.

This has application especially to the external (short) saphenous vein in its run along the calf of the leg. It might be applied with equal efficiency to any other superficial vein. Take a strip of inch-wide adhesive plaster long enough (about 16 inches) and press its central part down firmly, very firmly, over the tortuous varicose vein and anchor the lower end of the plaster over the shin bone (anterior border, lower third of tibia) and the upper end of the plaster over the head of the fibula. Thus a firm spiral splint is made, running over the course of the vein and supporting it. This relieves the vein of its phlebitis, and pain, and restores its function.

Quincy, Ill. H. L. GREEN, M.D.

No Vacation in August.

Doctor, have you ever noted how light and skimpy some journals become during the heated term? Look over this July issue and this column of announcements and you will see we take no hot-weather vacations, so far as our journal is involved.

ORIGINAL ARTICLES

"Radium as an Aid to Surgery" is an illustrated paper by Dr. Dewell Gann, who has made a practical clinical study of the subject and writes from the general practitioner point of view. It will interest you.

"Oral Infection in Relation to Systemic Infections," by Dr. Harry E. Myers, is a paper of real importance as a guide in our everyday problems. Prof. Myers writes in a most enlightening manner, and his paper includes some dental data of supreme importance to the medical man.

"Appendicitis in Children," by Dr. Thomas H. Kelly, shows that this disease is *not* rare in children, gives some striking clinical facts, and should aid the general practitioner very much in the admittedly difficult diagnosis. The terrible mortality (50 per cent.) of appendicitis in children makes this paper timely. It should be read with care.

"The Vaginal Douche," by Dr. Frances A. Harper, is another of her well-thought-out papers, which always interest COUNCIL readers. Dr. Harper has a way of stating things with positiveness and conviction. Doctor, you will learn much from this paper.

"The Acute Abdomen," by Dr. John J. Gilbride, is a surgical paper directed to the general practitioner. Prof. Gilbride is a great advocate of careful diagnosis, and in this paper he tells many things you will want to read and think about.

THE BUSINESS SIDE

"The Present Social Standing of the Medical Profession of the United States and Canada, and Its Future Possibilities," by Adrian Scholten, will interest all physicians in this day of proposals to "socialize medicine." This was the prize essay in a contest conducted by McGill University.

There will be other interesting and instructive features in August COUNCIL.

Medical Council is the dependable journal for the capable and discriminating general practitioner.

The "Pull-back" and the "Grouch" don't like us; you do.

CONSTRUCTIVE REFORM

For the Practical Benefit of the General Practitioner

The Detail Man and the Truth about Medicines.

IT IS STRANGE, yet true, that were a firm of manufacturers to get up a new proprietary mixture of *Asphodelus bulbosus*, *Xanthorrhœa hastilis*, *Crescentia cujete* and *Nabalus albus*, and advertise and detail it, it would sell in large quantities, first to some doctors, and then to the public. Yet the product would be worthless, as the first drug is useful only in the making of mucilage, the second is a resin which would have to be carried in concentrated alcohol, the third is allied to indigo, and the last is inert except for a little tannin. On the other hand, the ancient history of the first is identified with the "Tsinisse" of the poetic Orient, the second was an ancient source of benzoic acid when chemically treated, the third has an ancient literature crediting it with virtue, and the fourth is "rattlesnake root," which name sounds formidable. And, be it said, there are plenty of old references to these substances. Full of alcohol as the preparation would have to be, the first ingredient would "cut" the alcohol, make it smooth and agreeable to the fauces, the second ingredient would give a pleasant balsamic flavor, the third would give a distinctive color, and the last would add mystery. The alcohol would do the rest in making sales. Naturally, the doctors would soon find it valueless, and the manufacturers would then go over to the public with it.

Proprietaries Must Give Results.

Not so many years ago there were plenty of proprietaries nearly as inert and unscientific as this advertised and detailed to doctors; but they are now nearly all dead, since mystery no longer appeals and the physician wants results. The manufacturers now are inclined to use drugs of known activity and produce proprietaries that have a reasonable hope of continued professional favor.

And yet, within the last few years, detail men have been in our office exploiting products which contained, among other things, sunflower seed, alfalfa hay, cottonroot, prussian blue, tonga, figwort, Winter's bark, and other played-out or inert drugs; but the list of such things is becoming shorter and shorter. So, then, whatever big

tales the detail-man used to tell, today he deals with more scientific products.

The Present Appeal Insidious.

Graphic formulæ look formidable, and unless one has taught chemistry he forgets all about them. Yet the acetanilid-plus proprietaries have, some of them, foolish formulæ, as have some alleged urinary antiseptics. Many so-called German synthetics are mere by-products, although they have formidable formulæ which look scientific. The modern biologicals, to be understood, involve accurate knowledge of immunology and bacteriology. Much unscientific talk about certain ones of the class passes muster in the physician's office. Radium has a definite place, yet many erroneous and unscientific statements are made concerning certain radium products. It is becoming increasingly difficult to check up the statements of detail men upon these modern products. A higher class of detail men are being brought to the fore to meet these new conditions; but these new products are so potent it is highly necessary that the detail-man be required to confine his claims to well-ascertained data and, as well, guard the physician against undue and unscientific use of these products. Much harm results, for instance, from indiscriminate use of the tuberculins by physicians unacquainted with them. Intravenous medication is fully justified; yet it requires an accurate knowledge of technic to use it without harm resulting in many cases.

Modern Obligations.

The physician cannot give his patient the best service if he acts upon false or unfounded information upon the therapeutic products that he uses or may use in the treatment of his cases, and many of these products are so new and complex that he is dependent upon the representations of the makers and their agents or representatives. The manufacturers should censor the "stories" of their detail men, and assure themselves that something more than a mere line of selling talk is presented by their detail men. Indeed, a detail-man handling some products should be a capable clinical demonstrator, which necessitates his being a capable physician.

A Suggestion to the Manufacturers.

We know that some detail men are incompetent to present their products adequately. They are accustomed to the old line of detail work, and they fail to rise to the necessities of modern conditions. It is a pleasure to meet a detail-man who can give a physician accurate clinical information and show technic; we use the product that man shows us exactly how to use.

It is to the best interest of manufacturers to tell physicians plainly in their medical journal advertising space the main points about their products and their business policies, and to say prominently in their advertising that they will not make any greater or different claims in private letters or circulars, nor allow their detail men to do so, and that they will be grateful to any physician who will notify them when any detail-man makes misleading or exaggerated claims. Such a policy would develop the implicit confidence of the profession in the scientific honesty and integrity of these firms, and this would definitely promote sales.

Will We Prescribe That Product.

Confidence is the basis of good business. The manufacturer who refuses to take the individual doctor into his confidence, telling him accurately and scientifically what his products will and will not do, fails to establish that confidence between buyer and seller upon which all continued profitable business relations depends. A detail-man was in our office recently who did not know *how much* of a certain active drug was in his product. He said the firm was afraid their product would be pirated if they gave a quantitative formula. Fudge! Will we prescribe that product? Not on your life! Neither should *any* doctor prescribe it. This firm is wasting their advertising appropriation, and the doctor is wasting his time who listens to a detail-man who won't tell exactly what his product is.

Every-day Practice.

Practice with the doctor is an every-day affair; by it he makes his living. The manufacturer who fits his products into this every-day need of the working doctor hits the king-pin. Scientific products, properly represented and used, fit into this every-day routine, and it is an actual service to the doctor to help him be of service to his patients. Show the doctor that *your* product, Mr. Manufacturer, fits into his every-day work, and you serve the doctor, his patient and yourself. It takes a detail-man who knows his job to show him; and it takes *honest* and *informing* advertising in medical journals, not a mere line of general talk that tells nothing definite.

Plenty of detail work and medical journal advertising is worthless because of lack of point. Make your journal advertising a *service*, like the reading pages are, and the doctor will read your copy. If the detail-man gives this service to buyer and seller, he is a useful detail-man; and if a medical journal does so, it is a useful journal. It is time the manufacturers and the doctors understood these things. And it is also time to drop all subterfuge and make advertising and selling talk A SERVICE OF TRUTH AND TRUTH ONLY.

Hyoscyamus:

Why Not the Segregated Principles?

By GEORGE L. SERVOSS, M.D.,

RENO, NEVADA.

Editor "Western Medical Times."

In his therapeutic notes in the March number of MEDICAL COUNCIL, the editor says: "Hyoscyamus acts more like belladonna than like opium; it contains hyoscyamin, scopolamin and atropin, the hypnotic action being due to the scopolamin."

All of this assertion is true; but it happens that whole-plant products of the drug are standardized according to the percentage of the combined mydriatic alkaloids, rather than one of the three. Consequently, as there is no absolute stability of either of these principles in the crude drug, it is very reasonable to believe that in one lot of a whole-plant product scopolamin (hyoscine) may be in excess of the other two, while in another it may be exceeded by the other. The others may likewise be subject to the same conditions. Because of this, there is every reason why the segregated principles of the parent drug, rather than the whole drug itself, should be employed.

The Different Proximates.

Scopolamin (hyoscine) is, to all intents and purposes, purely a hypnotic agent. It has very weak antispasmodic effect, and is rarely employed to obtain such effect. Both atropin and hyoscyamin are more antispasmodic in action, and the whole drug is very frequently employed in the case of spasm and with no great desire to produce hypnosis. Consequently, in my mind, it is far better, when employing hyoscyamus, to use that active principle which is indicated, and that one alone, than to exhibit the entire drug. Primarily, when using the segregated principle, with its known effect, we look for nothing else.

In the whole-drug product, standardized as above noted, we are not sure which action will predominate, and so we are frequently disappointed in the outcome. Hypnosis may be desired, but owing to the low percentage of strength of the scopolamin in the lot of drug from which the product was made, such effect does not obtain as had been anticipated. Again, we may desire the antispasmodic action of the drug and employ a whole-plant product in which the percentage of atropin and hyoscyamin are low, as compared with that of scopolamin, and here, instead of getting the more pronounced antispasmodic action, we gain that of hypnosis.

Physiologic Antagonisms.

It is to be admitted that there is not the same physiologic antagonism shown between the active principles of hyoscyamus as may be found in gelsemium, opium and some of the other plants; but still, at the same time, a whole-plant product of this particular drug, in so far as I have observed, does not give the same relative good action as do the segregated principles thereof. There is not the assurance of success following the use of the whole plant that is manifested following the exhibition of the principles thereof.

Replacing Opium.

The editor has said that the action of this drug is more like belladonna than opium, and with this we again agree. Regardless of this fact, hyoscyamus may be employed to replace opium in numerous instances, and with much better ultimate results. I can say from personal experience that it is not a habit-forming drug. Hyoscyamin will relieve pain due to spasm as promptly as will morphine, and with no untoward effect. There is no locking up of the secretions and incident toxin formation. In fact, like its similar sister, atropin, it rather favors elimination. Hyoscyamin may be given over an extended period without the least tendency to habit formation and may be dropped on the instant and without the least subsequent desire for the drug. The same is true of scopolamin (hyoscine). The reason for this lies in the fact that both drugs favor excretion and are eliminated rapidly themselves.

Not Habit-Inducing.

In my own case, during five years that I suffered from the effects of a duodenal ulcer, I took thousands of doses of hyoscyamin. When not suffering pain, none of the drug was taken. Subsequent to an operation for relief of the condition, the drug was dropped immediately and not another dose was either taken or desired. I have noticed like effect in many patients, suffer-

ing from one spasmodic painful condition or another. Although given over a considerable time, immediately upon complete recovery the drug was dropped completely and without the least desire therefor. In treating insomnia, incident to other conditions, I have also employed scopolamin over considerable periods and without the least tendency to habit-formation in the patients.

I have said that hyoscyamin replaces opium and I believe this very firmly. During the past ten years I have exhibited thousands of doses of hyoscyamin, as compared with but a few hundred of the opium derivatives, and with as good, if not better results than when using the latter. Never, in the treatment of painful spasmodic conditions, does morphine enter my mind. Small and frequently repeated doses of hyoscyamin, either alone or with glonoin and strychnine, suffice to relieve the pain, as well as to overcome a congested condition, if the latter be present. In congestions, hyoscyamin acts much as does atropin, by dilating the capillaries and thus equalizing the circulation. Through the addition of glonoin we get an almost instantaneous dilating of the capillaries, which is more slowly reinforced by the hyoscyamin. The strychnine increases the tone and acts as a synergist to the other drugs in the combination. Just a few minimum doses of this combination will almost invariably show good results in the spasmodic conditions mentioned. The facts of the matter are that I cannot recall an instance in which this combination, given according to exact indications, has failed me, and this experience covers almost a decade.

A Valuable Drug

In my mind, hyoscyamin is one of our most valuable drugs and one which is not given sufficient attention. Were it studied to a greater extent, it is my belief that it would very largely replace opium, and more especially morphine, in the treatment of conditions such as are mentioned above. It is true that a hypodermic dose of morphine will give relief in practically all of the painful conditions encountered, but hyoscyamin will prove equally effective in almost as many instances and without the untoward effects of the first-mentioned agent. Hyoscyamin will not destroy the function of any of the body organs. It will not lock up the bowels. It will not decrease kidney function; in fact, will tend to increase this. Morphine will do all these untoward things, and if given over any considerable time, will produce habit. Exhibited by the mouth, hyoscyamin will act quickly, and more especially if in combination with glonoin and strychnine—

almost as quickly as will morphine hypodermically.

When the alkaloids of hyoscyamus are segregated and employed in their very simplest forms, we are employing the rifle and have agents of precision with which to work. When we exhibit hyoscyamus we desire one of two effects, either the hypnotic or antispasmodic. Consequently, why employ the whole drug when we have at hand the segregated principles, each with a very pronounced effect, all its own?

What Does Medical Freedom Mean?

By JOSEPH LEBENSTEIN, M.D.,
122 Lexington Ave.,
NEW YORK CITY.

We are living in an age of enlightenment; we all long for education, for mental advancement; and even though in a large measure our anxiety to be successful has selfish motives, it means that we are giving to the world and our fellow-men the benefits of our labors, who in turn are better able to help others by what they have learned. This is especially true of the physician, for perhaps in no other walk of life has an individual so much opportunity of helping others as has the physician, and I know of no better, more thorough and surer way of helping others than by giving them knowledge.

Ethical Restrictions.

I do not refer particularly to the patients that physicians daily come in contact with, for naturally that is only a part of their vocation; but oftentimes the opportunity is afforded a physician to enlighten others, when for some reason so far absolutely opaque to me ethical restrictions suddenly arise which forbid such activities among the laity. I do not refer to restrictions by medical associations particularly, but other factors are often at work, which are a serious menace to the well-meant activities of those medical men who are anxious to guide others in the proper path.

True it is, that of late we are less sensitive about using the words gonorrhoea and syphilis; but the time has not yet arrived when our press is willing to use with the same liberty these words to designate these diseases. It is nasty, yes, perhaps; but ignorance of the existence of these diseases, their mode of contraction and dissemination, with the resulting terrible effects on future generations, is *not* nasty, no, *it is criminal*; and why foster such crime, when dis-

semination of truths will easily enlighten and often check recklessness, which always ends so disastrously for generations to come?

The Freedom of Social Knowledge.

Are you not willing that your sons and daughters should know how gonorrhoea and syphilis are contracted? Of course you are, Doctor, because you as an educated man know its awful results. Has not your less fortunate and perhaps ignorant neighbor the same privilege to this knowledge, or is it more to your pecuniary advantage that he and his remain in ignorance? How are you going to tell him and his children? How are you going to warn them? How are you going to make clear to them how these diseases are contracted? By telling them, both by word and by print; and any man who stands in your way is a supporter of all that stands for ignorance, disease, crime and domestic unhappiness, always the principals in causing disintegration and downfall of a nation.

In no land is there greater need for such knowledge than right here in America, and yet in no land is the dissemination of such knowledge more tabooed.

Necessary Caution.

We caution against the universal drinking cup, and rightly so; we caution against expectation in conveyances and upon highways, and rightly so; we instruct our youth in proper ventilation, clothing, exercise and cleanliness, and rightly so; and yet we fear to say a word about gonorrhoea or syphilis, because it's *nasty*. Those are things we must not talk about, and yet my personal experience shows that not 10 per cent. of all laymen—and that is perhaps a very broad statement—know the *difference between the two diseases, gonorrhoea and syphilis*. He may know something about "bad blood"; but how it became bad, or how he can avoid contracting a disease which made it so bad, he knows absolutely nothing about.

Freedom for Medical Instruction.

What does medical freedom mean? It means freedom for physicians to disseminate knowledge as to the prevention of the two diseases which have ravaged the whole civilized world; freedom to give that information, which to me is every bit as important to each and every living soul as the information how to prevent tuberculosis, the susceptibility to which is in itself often produced by syphilitic infection; freedom to print in our press, so that every one may see and learn thereby, and know how to protect him or herself against such infections; that is "Medical Freedom" to me. Freedom to enlighten, to show others the way, without any restrictions by any one, either in or out of the medical fraternity.

<p><i>While we, as physicians, desire to be scientific students and practitioners of medicine, and that is the primary purpose for which this journal is published;</i></p>	<h2 style="margin: 0;"><u>THE BUSINESS SIDE</u></h2> <p style="margin: 0;"><i>of Medical Practice</i></p> <p style="margin: 0;">"The laborer is worthy of his hire."</p>	<p><i>yet, for the welfare of our dependent ones and our standing in the community, we must secure a fair compensation for the services we render our fellowmen.</i></p>
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The Psychology of Failing Patronage.

SOME MEN GET AWAKE naturally, while others have to be well shaken before waking. In general business, with its small margin of profit on a large turn-over, slight variations in the business barometer are noted, and reported at once; then the effort is made to profit by them. The man who is wide-awake enough to throw the trick stays put, while the one who is not is shaken down into a clerkship, probably losing his capital at the same time.

In a lesser degree these things are true in medicine; but there are no narrow margins and large turn-overs to act as professional barometers. Medicine, with most men, is a one-man business, and the doctor stands or falls by himself. In a business sense, there is no organization in medicine, as there is in the professional sense; but there ought to be, and if there were there would be more even distribution of practice.

Now such organization is coming; but the trouble is *we are allowing the laymen to do the organizing*. Lay legislatures pass the medical laws; lay boards manage the hospitals; lay politicians manage the boards of health; lay lodges promote contract practice; lay officials supervise workmen's compensation acts; lay millionaires are getting to dominate our medical colleges, for where their dollars are there do their wills dominate also—the ones in their heads while alive and the ones in their safe deposit boxes after they are dead. The layman is bossing the medical profession more and more. He is getting efficiency in service by doing this; but what are we getting?

The Remedy.

The remedy consists in the profession organizing its own business as well as its professional affairs, and we won't lose colleges and their proper support in doing so. Possibly the present professional medical organizations could handle a business organization, but it might even pay the profession to hire skilled lay organizers to do this business work of organizing for them.

THE MEDICAL COUNCIL has received many, and printed some, articles dealing with failing patronage, and the writers nearly all blame it on "the

other doctor." Now let's think straight on this. The "other doctor" is usually actually, though not in name, an employee, and he has just about as much say in what shall and shall not be done as have other employees in non-unionized trades and professions. So don't blame the "other doctor," be he hospital doctor, professor, health officer, contract physician, or what not; but blame his employers, who would give you his job if you bid a little lower than the "other doctor."

The Doctor Himself.

Now we stand for high standards for doctors; but we can't be blind to the fact that the present system is becoming a "SYSTEM" that makes each specialist, each professor, each laboratory man, each health officer, each hospital man, a cog in a piece of lay-managed machinery—if you please, an employee. Do you get that? Soon these employees will be wearing uniforms; then you *will* "get" it. Another thing: The more highly advanced and specialized the profession becomes, the easier will it be to crowd the doctor into the ranks of employees, and the less spirit will he have to ask for decent wages. That is, these things will happen unless we wake up—become unionized, as it were, and decide we will have some say in matters medical. The same thing is happening in law, engineering and other efficiency services.

Things Are Changing.

The world moves on whether we want it to or not, and changes will come. We must meet them. Socialized medicine may suit England or Germany but it won't suit the United States, though it *will* suit our politicians. Can you blame the politician or any other layman if he sees the average doctor wants to be the hard-working end of a system with all the selling in the hands of laymen and a poor hand-to-mouth living for the producers? You can't blame the layman for his cream-skimming tactics so long as you refuse to run your own separator and sell direct.

Some Follies.

Los Angeles, citing it as but one instance, has one doctor to about 260 people; and a lot of non-

medical healers makes the average per man in the healing and doctoring business *much below* 260, and yet physicians are still piling in there, where there is need to ship out about 600 doctors and 200 near-doctors. Do grocerymen, hardware merchants and bankers select locations with as little judgment? If they did they would starve, just like a lot of doctors do. There are plenty of country locations where these same men are needed.

Let's Stop Dreaming.

It we forget the psychology of patronage and remember the sound business sense of it, we will get somewhere; otherwise we will not. Let's stop dreaming and blaming the "other doctor," who is probably up against it himself; and let us blame ourselves for not having discrimination enough to organize our own affairs instead of letting the layman organize them in the way he is now doing. Psychology, Patronage and *Patronizing* are the Faith, Hope and Charity of medicine, but Coöperative Organization profiteth much and is kind.

Workmen's Compensation Health Insurance.

In our March issue appeared an article, on page 55, giving a County Society view of the Pennsylvania Compensation Act, and on page 56 we gave our own view. This latter has been given wide distribution in another and official publication. Since then several medical journals have expressed criticism, much of which has a large element of justification. Several physicians have expressed dissatisfaction and we have been present at certain conferences in which both sides were heard.

Very unfortunately, indeed, in several States the profession could not be awakened to the importance of the physician's interest being aggressively represented in legislature committees having in charge such legislation and another class such as the Mills bill for health insurance, which even more intimately touches the physician.

It has so happened that we are in position to know somewhat of the inside of this matter; and we beg to assure our readers that the commissioners and other officers, or many of them, in charge of the practical operation of these new measures, are taking active and sympathetic steps to ascertain what changes are necessary to give substantial justice to the medical profession.

We wish to repeat what was said in March: "Wherein and wherever the laws in force discriminate unfairly against physicians, we have

proper occasion to enter protests; and there is every reason to believe these protests will receive due attention if they are made in proper form and spirit." This is the way the matter is eventuating.

Various State and local societies have committees on legislation, and they have these matters well in hand. From personal association with such work at a State capitol, we beg to urge the physicians to support these committees instead of rushing into print with protests that often do more harm than good and may be quoted against the profession. No medical journal propagandas will solve the trouble, which requires much study upon the part of hard-working committees actually in touch with legislative affairs at the fountains of legislation. Personal work alone counts. Doctor, if you have grievances over these laws, take the matter up with your County Society. If it has no legislative committee, see that it appoints one. However, the County Society resident at a State capitol is, of all others in a State, *the one* to do effective work, as aided by the State Society. Don't worry, gentlemen; these matters are being very actively looked after by men in position to know the real situation. But you should support these men.

Co-operation.

By JOHN U. FAUSTER, M.D.,
PAULDING, OHIO.

Coöperation is defined "to operate jointly, to concur." I wish to present to the readers of THE MEDICAL COUNCIL some of the reasons why this matter of coöperation is of vital interest to us as general practitioners, to offer some suggestions concerning its requirements and method of adoption and application.

We recognize the fact, of course, that physicians generally coöperate to a degree; and who among us but has observed and experienced the benefits derived from this mutual aid? Then why not use it in a larger measure?

There are three fundamental features in this matter that should be considered, which are as follows:

1. Would fuller coöperation be advantageous to the physician?
2. Would it be beneficial to his clientèle?
3. How could it be accomplished?

The first two questions can be answered in the affirmative decidedly and will be considered in this paper. The last will be treated in an article to follow in a later issue.

The Advantage to the Physician.

Let us consider the first proposition—the advantage to the physician. The paramount advantage would be that of increased efficiency. To make one's services especially valuable in any particular branch of the profession would necessitate special preparation or qualification in this particular line. If Dr. Doe chooses to pay particular attention to the diseases of children he must necessarily be more than ordinarily capable in this particular line; he must qualify himself, and just to that extent he has increased his efficiency.

Special Qualifications.

Special qualification would raise the standard of the medical profession in the community. This statement needs no comment. A community in which there were general practitioners qualified to render special advice and service would certainly have a high medical standard; the public would appreciate this fact at once. With a deserved and recognized high standing of the medical profession in any community increased earnings are certain to follow.

Efficiency.

It is not to be presumed nor expected that all cases requiring consultation or expert service could be cared for by the local physicians. Indeed, it might be found entirely undesirable in some cases; however, a very large part of the fees going to specialists in neighboring cities could be kept at home and the services thus rendered be equally as efficient as could be obtained anywhere.

Home Interest.

The dollar that goes to some distant city in no way benefits you and makes your community just that much poorer. The fee that stays at home is still in your community; and, while it may this time go to your fellow practitioner, the next time it might come to you.

Advantage to the Patient.

The first and foremost reason why coöperation would be beneficial to our clientèle is because they would receive better service. The service we give our patients depends entirely upon our efficiency. The physician who fits himself to participate in coöperation has increased his efficiency by his special preparation. Should my patient require special service and a brother practitioner with whom I coöperate can render that service, this patient will receive the needed attention, even though I am not competent to render it. If two or more coöperating practitioners are required, they are easily available. It is true that my patient, if he is physically able,

may go to a specialist in the city, or that the specialist may be brought to him, yet in either case this is accomplished only with a considerable expenditure of time and money; both items sometimes figure quite prominently and many times cannot be had.

Consultations.

Coöperation would induce more frequent consultations, a procedure that our patients always approve and in many instances are forced to demand. Helpful consultation from a qualified colleague would be appreciated by the patient and a welcomed aid to the attending physician. With better service and more frequent consultations, better results would most certainly follow than are now being obtained, which of itself is quite sufficient reason to give this matter some thought, if not serious consideration.

The success of the project would depend upon the qualifications of those interested and an integrity of purpose to render good and efficient service. The motives of the participants must be entirely unselfish, with a willingness of spirit to do that which would bring success to the scheme rather than any personal favor or gain. I am confident that with a proper observance of the required qualifications, and with a strict adherence to the principles involved in the successful accomplishment of a coöperative measure, much good could be realized.

Getting Results.

By A. D. HARD, M.D.,
MARSHALL, MINN.

The day is past in which the physician could prescribe a placebo and continue to retain patronage. Merely occupying the position of physician without actually accomplishing something will not now satisfy the people who employ an expert to assist Nature in restoring them to good health. They call loudly for results, and we *must* give them something worth while.

The New Things.

If pneumonia bacterins will abort or limit the progress of pneumonia, we must use them; if phenol injections will do away with hemorrhoids without a serious surgical operation, we must give our patients the advantages offered; if acetanilid with citrated caffeine to relieve migraine will safely do the work, we must put aside our prejudice against acetanilid and give relief; if pituitrin puts the energy into lagging labor pains, we must use it in its proper place; if

morphin-hyoscin soothes agony better than morphin or other preparations of opium, we must use it; if anything possible to obtain will antagonize toxins in the body, we must give antitoxins; if any effective idea is brought out by some other school of healing, we must use it ourselves. We *must* get results.

The Acid Test.

Personal style and professional dignity go a long ways in attracting business, but the man without them who gets results will rivet a patronage that cannot be pried off by smirking smiles and soft words.

We must remember that selfishness directs customers to our doors; and the keen, acid test of what you CAN DO, irrespective of what you can say, is fast becoming the keynote of success. We must remember that others are doing things that physicians of ten years ago declared impossible. We need not be such rank hypocrites as to claim that we are practicing the art of medicine wholly from disinterested philanthropic motives, when we honestly chase the dollar just like other mortals do.

Should We Accept All Calls?

I am now reading THE MEDICAL COUNCIL for the second year. It is worth ten times what one pays for it, and is really the most interesting journal I take.

May I be permitted to make a few remarks about Dr. Ely's article on page 60 of the April COUNCIL?

His idea of a doctor's accepting every call that comes along—dead beats, charity, or good pay—nowadays would necessarily compel him to have an income other than from his medical work.

The lax business methods of doctors in the past have educated certain classes to be very neglectful of the doctors. A great many otherwise good people will pay every other debt and let the doctor wait indefinitely for his money. The doctors are to blame for this condition, and no one but the doctors can remedy it.

A great many of these so-called charity cases are only dead beats. I am as willing as anyone to do real charity; but out here in "Sunny Kansas," where we have no large cities, no slums, and no tenements; where we have plenty of fresh air and sunshine, we have as many unpaid doctor bills as anywhere on earth.

Increasing Expense.

I can remember when my father's office equipments, including medicine, would not invoice \$200. I invoiced mine the other day, and it reached \$3,500, and I haven't very much in my office, either. How can I keep up with the pro-

fession without informing myself regarding bacterins, X-ray, radium, intestinal stasis, etc., and see a few operations in some neighboring city occasionally, and then wait from six months to sixty years for my patients to pay their bills? My patients nowadays demand Wassermann tests be made, stomach contents be analyzed, and autogenous vaccines used, and still Dr. Ely thinks that a man should answer every call, whether dead-beat or what-not. In fact, I don't purpose to do it.

Too Much Charity on the Doctor.

I am willing to do my share of charity work, but why should the doctors do any more charity work than our leading merchants or our bankers? Should not the public provide for those who are unable to pay? Why should all of the expenses providing medical attention for paupers and those in necessitous circumstances fall upon the doctors who, as a rule, die poor themselves? Why shouldn't the general public stand this expense?

I have seen the statement made that some good old doctor died at a good old age, and left his family destitute, and that he never sent a bill in his life. That may have been all right in times gone by, but in these progressive days a physician simply cannot do that kind of business. How can he be competent to doctor people if he doesn't spend \$600 to \$800 yearly for books, medicine, journals and new working tools of his profession, etc.?

It Costs Money to be Efficient.

If I were a stranger in a strange land and needed the services of a physician, I would want to consult one who I knew sent out his bills regularly the first of each month, because I would feel, by so doing, that he had the money to buy medical journals, new books, new instruments and would be able to take a post-graduate course occasionally. All this maudlin sentiment about answering every call, whether they have the money or not, will not work out today, if you are going to keep abreast of the times.

If a head of a family is making \$60 per month, he usually pays his grocery, clothing, gas and water bills; but he hasn't anything left for the doctor. I am not grasping, but it is just as necessary that I be paid as the others. I'll bet there isn't a merchant in Kansas that hands out \$50 monthly in pure unadulterated charity, and there isn't a doctor anywhere making \$5,000 yearly but what does just that thing.

E. C. DUNCAN, M.D.

Fredonia, Kan.

American Medical Editors' Association.

The annual meeting of this Association will convene at the McAlpin Hotel, New York City, October 25th and 26th. An active committee is preparing a program both interesting and instructive.

Best CURRENT MEDICAL THOUGHT

A Practical Service

Instead of the ordinary disconnected abstract matter, this is a department of current medical thought that is painstakingly planned out and worked over each month, to have the greatest practical value in your everyday problems.

Not nearly so easy to do, but it gives the reader a service of real value. In a nutshell, the kernel of current medicine, concise and usable.

Practical points gathered from many and varied sources, grouped under the three important heads: Surgical Scissors, Practical Therapeutics and Clinical Diagnosis.

Surgical Scissors

As wielded by Douglas H. Stewart, M.D.,
F.A.O.S.

The scissors of an editorial office are bright, keen, polished and practical. May this space imitate them and its quality be helpful.

Cancer of the Bile-duct: Its Difficult Diagnosis.

Berliner Klinische Wochenschrift, Hans Kehr.
—This article states that there is but one reliable method of differentiating the condition upon which it treats, and that method is to make an examination of excised tissue. Symptoms are misleading and not different from common conditions. The surgeon should simply answer the question, "Does or does not a given patient require a gall-bladder operation?" If he does need such a proceeding, any indication tending to prove the presence or absence of cancer should be ignored and the necessary operation should be performed. On the other hand, if said patient does not require an operation, then it should be omitted, all without regard to cancer *per se*; or, rather, without regard to a perfect diagnosis of cancer.

Indirect Pulmonary Traumatism.

Presse Médicale, Leon Binet.—A shell exploding two meters away from a man may damage his lung tissue, may rupture its substance, and may cause a fatal hemoptysis, without leaving a visible mark upon his body. The poisonous and corrosive gases which are generated by the explosive may be a feature of the case, but either sudden increase or violent diminution of the normal atmospheric pressure is the direct cause of the pulmonary traumatism. In other words, the pneumatic thrust of a high explosive acting upon

the elastic lungs may be quite as fatal as the blow from a shell fragment acting upon or against the resistance of a solid bodily organ. One acts from within outward, producing an expansion-rupture and leaving no apparent external wound. The other force acts from without inward and shows the marks manifested by a perforating wedge.

Anorectal Fistula.

Arthur A. Landsman, M.D., New York City, in *N. Y. Med. Journal*, April 29, 1916.—When we come to examine the problem, why fistula is so frequently uncured, we must go back to the principles of surgery and pathology for our answer. If we would have favorable surgical results we must provide favorable surgical conditions and not expect an ulcer in any part of the body to heal if its walls are infiltrated with thickened fibrous connective tissue which either prevented or choked off the growth of granulations. Waste no time on bismuth paste, the injection of irritating substances or any other half-way measures. They will not cure fistula despite anything written or said to the contrary. Right-angled division of the sphincter, free incision of the tract and of all its branches, thorough excision of the objectionable scar tissue, with proper post-operative care, constitute the most important elements in the successful treatment of fistula. Lastly, it must not be forgotten that every case has a patient behind it, and that the man needs treatment as well as his fistula.

Value of Sod. Citrate Solutions in Preventing Peritoneal Adhesions.

David C. Straus, M.D., Chicago, in *Surg. Gyn. and Obstets.*, May, 1916.—This treats of experiments upon over thirty dogs, and as a result states plainly: "Sod. citrate solution is of no value at all in preventing re-formation of adhesions which have been separated. Sodium citrate solution is of little value, if of any at all, in preventing the primary formation of adhesions, and may interfere with wound healing."

The last six words contain an admission which may arrest attention, if only for the reason that its opposite has been asserted from England westward. Scissors has used gallons of Wright's solution of sodium citrate; but, while he has abandoned it for something better, he has never found, or thought, that it might "interfere" with wound healing. If it does so, there are many men, in our country and abroad, who may truthfully be charged with a lack of ordinary attention. This would be a strange reading of the scripture: "For the kingdom of God cometh

not with observation." What does come with lack of observation? Dr. Straus' article is able and well worth reading. Perhaps a shock is good for us; it quickens the circulation.

Practical Points About the Negro Race: From Scissors' Clinic.

The man is prone to prostatic troubles and urethral strictures. He is almost immune to calculi.

The woman is prone to uterine fibroids and to small pelvis (so-called rachitic).

The baby is smaller than the white child. When new-born, its color varies from red to bluish-red; afterwards it becomes black. But if there is an admixture of white blood it may be cream color or quite white, save for a pigmentation about the genitals. This may take the form of the nipple areola, as seen on the breast of a pregnant brunette. In any event, it is usually easily discerned.

The eruption of measles is ash-gray in color and in an adult is usually mistaken for the papules of syphilis with syphilitic fever, and *vice versa*. If the patient is a full-blooded negro, be on the watch for lobar pneumonia; but in the mulatto measles is often followed by a bronchitis which continues until tuberculosis appears.

As a surgical risk, in planning a major operation, consider his abuse of alcohol, his lack of weight (underweight) and his lack of pigment. If he does not use alcohol, is up to normal weight and is black as possible, he is usually a splendid risk; otherwise not.

Are Cocaine Solutions Injured by Boiling?

John E. Virden, New York City, in *Journal of Surgery*, August, 1915, page 288.—That solutions of cocaine salts have their anesthetic properties injured by boiling seems a belief rather generally accepted and taught. But Dr. Virden is convinced that frequent or even prolonged boilings of solutions, of cocaine muriate, do not injure their anesthetic value nor make them more dangerous to the tissues to which they must be applied in ophthalmic surgery.

While Scissors believes the aforesaid to be true and is using boiled solutions of cocaine in the clinic with which he is connected, yet in his office and private work he finds that novocain is most satisfactory, its aqueous solutions are permanent, its deleterious effects negligible and it is most applicable to general surgical work. Some dentists and oral surgeons maintain that it is ideal for nerve-blocking and that almost everybody will stand it well; but bad symptoms that have appeared on rare occasions were absent when adrenin was not combined with it. For

general use, however, the addition of the adrenin is distinctly advantageous, Novocain, adrenin, quinine urate solutions keep badly. Put one aside for a month and see why.

The Effect of Foreign Substances in the Peritoneal Cavity.

William R. Cubbins, M.D., F.A.C.S., and Joseph A. Abt, Chicago, *Surg. Gyn. and Obstets.*, May, 1916.—Iodine and vaseline are perhaps the most interesting in this connection, though other articles were tried. Of iodine, the official tincture was taken and diluted to half strength with 70 per cent. alcohol. The facts, in each case, to be determined, were: First, did it traumatize the peritoneum? It did (dogs). Second, did it inhibit the action of pathogenic bacteria in the peritoneal cavity? It favors rather than inhibits bacterial action, is the answer for iodine. The authors found ordinary yellow vaseline deadly enough without mixing germs with it. Third, would adhesions be caused by its use? Yes, firm fibrous ones, with or without any manipulation of the peritoneum. Vaseline was an intense irritant to the peritoneum and was walled off in the belly of two humans as firmly as if it had been an abscess. The illustrations in the article render the pathology clear.

In this connection also, it is not uninteresting to consider that Roussel, in *La Médecine Hypodermique* more than twenty-five years ago, maintained that vaseline should not be used for hypodermic injections because it might be converted into nascent hydrocyanic acid and enter the circulation as such.

Concerning Diet.

A patient writes: "Doctors know how to do big things but fall down on trifles. There never was a doctor who could disinfect a patient's onion-scented breath, yet the onion is an important, if not indispensable, item in any diet scheme, whether hospital or other." The letter adds that "the surgeon who has no knowledge of or interest in gastronomy is only capable of carpenter work."

In Scissors' scrap book is an article by George Covert, *Chicago Med. Times*, January, 1890; also there is an abstract in Sajous' Annual, Vol. V, page A-11. Therein appears this sentence: "Sweet milk taken afterward will remove the objectionable odor from the breath."

The onion in food, the clove in chloroform and the orange in ether will repay study (Nüssbaum, Covert, Gwathmey).

Furthermore, a package of pickling spices may be purchased for a dime at any delicatessen store. This corresponds closely to the well-known

Bouquet des Herbes of the French chef. A teaspoonful of this will change the flavor and quality of the cooking for the better when "We have offered him everything and he won't eat" in convalescence from or after operation. The suggestion is, try it yourself and you will appreciate the invalid's point of view on "tasting good."

Helio-therapy.

The extent of both recent and archaic literature is so great that Scissors simply folds its weary blades.

The editor of the *Boston Medical and Surgical Journal* says, on page 615: "It is a method of treatment which we must employ." Three things militate against this mode of treating bone diseases: First—In many latitudes one cannot obtain sufficient sunlight hours. Second—The necessity of an open window because glass is opaque to many desirable rays. Third—The application is too easy and like most too easy things too much trouble to perform properly.

Sublamine-Glycerine (1 to 3000).

The late Dr. Dawbaru was much interested in some work that Scissors was doing in the treatment of contaminated wounds with the aforesaid solution, and introduced it into the City Hospital, where I am informed that it was as near unailing as anything human could be. He took some safety pins and put them in a test tube which was then tightly corked. The idea was to see if the solution would attack metal. The date was May 12, 1906. On May 12, 1916, there is a little deposit (blue) in the tube, but the safety pins are untarnished.

What Are the First Three Steps to be Taken in the Care of a Wounded Man?

The words may vary but the idea embodies a catch question which is readily answered by a military surgeon, but which puzzles the civilian who has not formulated his knowledge.

The answer is: First—Make the patient comfortable. Second—Make yourself comfortable. Third—Make an examination.

First—A patient cannot be comfortable with disarranged anatomical relations. If he were crushed between two cars or blown up by an explosion, then steps should be initiated which would terminate in putting limbs and body into as nearly normal position as possible. Removal, recumbency, splints, morphine and many other expedients are details; but the object sought is the replacement of displaced, distorted or damaged anatomical relations and the sequent comfort to the patient.

Second—Legally, any workman's comfort depends upon his unhampered enjoyment of "light, air and access." Therefore the surgical workman's comfort demands that he have light to see, air to breath and free access to his work.

Third—Making an examination may include cutting away clothing, a search for evidence as to the patient's identity and other matters which need not be repeated here.

Practical Points About Chloroform.

Almost any bleeding may be arrested by the pressure of gauze soaked in a saturated aqueous solution of chloroform. Pour too much chloroform into half a tumblerful of water and it will settle to the bottom and become an indicator of saturation. The supernatant liquid employed to soak gauze may be introduced into the uterus in case of post-partum hemorrhage, only it requires considerable agility to get it out before the uterus closes upon it. If you wish to see every step of the usual fistula or hernia operation, a little practice with the aforesaid solution will enable one to do so. Pressure but not wiping or smearing is the essential maneuver. Press the gauze into the wound or incision and hold it down for a couple of minutes.

Many fistula operations are failures, but would be successes if the opening into the bowel had been found and closed with a double purse-string. Article XXXIV of the Hyderabad Commission says: "The truth about fatty heart appears to be that chloroform in no way endangers such a heart, but * * * is a positive advantage. Such patients must inevitably die occasionally, * * * and would do so even if attar of roses or any other harmless vapor were substituted for chloroform." Chloroform may be used to preserve hypo. solutions. A little warmth drives it off.

Chlorinated Lime.

It might not be amiss to call attention to the care with which surgeons cover chlorinated lime to preserve its strength. A month of exposure does not affect it so very much. It loses at the rate of 0.63 per cent. a month. At all events, exposures longer than five or ten years are not to be recommended. Keeping it covered to protect it from dust and dirt is quite another matter.

A Suggestion From the Accident Ward.

If a man is kicked in the abdomen have him report for examination four weeks after he has recovered, and then a careful search should be made for gastric or intestinal ulcer.

Clinical Diagnosis

*Gleanings on diagnosis from current medicine.
Points you can use in your practice tomorrow.*

Wassermann Reaction in Milk.

K. K. Mordwinow has recently reported the results of a series of examinations of human milk for the Wassermann reaction. He states that his results are in agreement with those of Tomsen, Bate, and others, and show that the reaction with human milk gives quite satisfactory results. The specific antibodies reach the milk from the blood at a very early stage. Mordwinow has succeeded in getting a positive Wassermann reaction on the second day after delivery. The action persists during lactation; he obtained a positive reaction as late as fifteen months after delivery. Cases in which the milk give a negative reaction and the blood a positive were rare; this condition was observed in one case only out of twenty. In three cases he had a stronger positive reaction with milk than with blood, and the infant also gave a positive reaction. He points out that the milk reaction may be of particular value in cases in which a wet-nurse refuses a blood examination. —*British Medical Journal.*

A Urinary Test For Pulmonary Tuberculosis.

Metzger and Watson, Tucson, Ariz., in *J. A. M. A.*, report favorably on Weisz's urochromogen reaction, which is as follows:

Into each of two small test tubes is put 1 cc. of urine, and 2 cc. of distilled water are added; now, to one tube which is to be tested for urochromogen, 3 drops of 1:1000 solution of potassium permanganate are added, the tube is shaken thoroughly and compared with the control tube. The appearance of the faintest yellow color shows the presence of urochromogen and is easily detected by comparing with the control tube, to which no potassium permanganate is added. The test is read positive, however, only when the solution stays clear.

The writers report using this test in 113 cases and conclude.

In the light of our experience with the urochromogen reaction, in these patients, it appears to us that the following statements seem at the present time permissible:

1. The presence of a urochromogen reaction in the urine of a patient sick with pulmonary tuberculosis is for the time being of unfavorable prognostic import.
2. The persistent presence of a urochromogen

reaction in the urine, in spite of proper treatment, probably means a hopeless prognosis.

3. Its absence is generally, though not invariably (regardless of how sick the patient seems), of good prognostic import.

4. Its prompt and continued disappearance soon after treatment is instituted, in a patient who showed it before treatment, so far as our experience goes, is a favorable prognostic sign; but it will take several years' observation of these particular patients to determine this point conclusively.

5. Finally, it is not an invariable guide to prognosis, but in the majority of cases is of much value, and as all prognoses must be good, bad or doubtful, it will, if judiciously used, help materially to reduce the number in the doubtful class.

The Bacillus of Scarlet Fever.

Mallory and Medlar reported in the *Jour. of Med. Research*, March, 1916, the isolation of the *B. scarlatinae*, and the editor of *Boston M. and S. Jour.*, April 13, 1916, comments thereon, states it is a strongly gram-positive bacillus growing between the epithelial cells and slightly smaller than the diphtheria bacillus. It is a facultative aërobe. The editor believes the discoverers make out a good case.

Wassermann's Reaction in Chronic Diseases of the Liver.

It has long been recognized that a positive Wassermann's reaction may be yielded by the serum of a patient who has not had syphilis, but is suffering from such diseases as scarlet fever, leprosy, pellagra, yaws, and a few others. Drs. C. Verdozzi and L. Urbani extend this list by the inclusion of certain chronic disorders of the liver. After giving a full account of their technique, which is precisely that described by Wassermann himself, they give a tabular and also a detailed account of twenty-six patients with chronic hepatic affections in whom no history or signs of syphilitic infection could be obtained. An account is also given of twenty-seven control cases, patients with either some acute disease of the liver or bile ducts, or with acute or chronic disease of some other organ, but free from any suspicion of syphilis. Not one of the twenty-seven controls gave a positive Wassermann reaction. But a positive reaction was obtained in no fewer than twenty of the twenty-six patients with chronic hepatic disease. Nine of the twenty-six were suffering from primary or secondary new growths of the liver, and eight of these gave a positive reaction; in seven the reaction was complete. The remaining seventeen had one or

another form of cirrhosis of the liver, and Wassermann's reaction gave a positive result in nine of these, while in three more there was fixation of the complement even in the absence of antigen. The authors remark that Boas failed to find a single positive reaction in fifty-nine cachectic patients with malignant disease; possibly, they suppose, because the liver was little involved in these cases. The authors state that jaundice is not in itself a cause of a positive Wassermann reaction; jaundice was present in thirteen of their twenty-six patients, and six of the thirteen gave a negative reaction, as was also the case with all the six patients in the control series who were jaundiced. They note that the reaction was more often incomplete in hepatic cirrhosis than in the cases of hepatic neoplasm.—*British Medical Journal*.

Practical Therapeutics

Giving in concise usable form the therapeutic points from current medicine that are really of value to the busy practitioner.

The Treatment of Epilepsy.

Dr. G. Grover Burnett, Kansas City, Mo., in the *Medical Herald*, April, 1916, contends that a single, not a mixed, bromide is the one drug to subdue epilepsy; but it is abused, and it should be administered according to Laudenheim's theory of bromine metabolism, which is:

"First—That the drug is not excreted in the same amount as taken in; that it accumulates in considerable quantity before the ingestion and elimination are equal.

"Second—That the lymph fluids are largely the bromine keepers.

"Third—That cardiac and renal functions are crippled by the bromide salts and give rise to early symptoms of poisoning; that bromine is retained in urinary retention.

"Fourth—That poisoning comes on early in cachectic and anemic persons whose fluids are short of chlorine; that chlorine is eliminated and bromine retained.

"Fifth—That the administration of chlorine eliminates bromine and decreases or prevents bromine accumulations."

Therefore Dr. Burnett places the patient upon one-half the usual amount of common salt, giving 10 to 15 grains daily instead of the usual 20 to 30 grains. Then maintain a balance, lessening or increasing either the salt or the bromide, as indicated.

Fowler's solution and tonics, with proper alkaline laxatives, are also given.

Acidosis in Children.

Last winter there was a serious incidence of acidosis in Boston, a number of children dying therefrom. Dr. John Lovett Morse, Boston, gives an interesting presentation of the subject in *Boston M. and S. Jour.*, April 20, 1916. Here is his treatment in full:

The cause of the symptoms in acid intoxication being the withdrawal of bases from the organism as the result of an excess of acids in the system, it is evident that the treatment indicated is the introduction of alkalis into the system to neutralize the acids in the body and in this way to prevent the further withdrawal of bases from the body and to allow the reaccumulation of the bases which have been abstracted from the body. The best alkali to use is the bicarbonate of soda. This may be given by the mouth, by the rectum, subcutaneously or intravenously. It is preferable to give it by the mouth if it can be retained. It is best given in water, but, if desired, the taste may be disguised by orange juice or grape juice. It is seldom wise to make the concentration of the solution stronger than 1:20. It is usually better to make it 1:30 or 1:60. Stronger solutions are almost certain of themselves to cause vomiting. The general feeling is that as much soda should be given as possible. It is very probable, however, that excessive amounts of soda may of themselves cause vomiting and diarrhea, and perhaps poisoning. I am very confident that in a considerable number of instances in which I have been called in consultation to see cases of supposed "acidosis," the vomiting and diarrhea were the result of excessive doses of bicarbonate of soda and not symptoms of acid intoxication. In one instance of which I know, in which a baby of 14 months received 3 ounces of dry bicarbonate of soda in twelve hours, the baby was collapsed and almost moribund, apparently as the result of the large amount of soda. Other alkalis may be used, but are, as a rule, not as satisfactory as bicarbonate of soda.

Bicarbonate of soda should also be given by the rectum. The solution may be stronger when it is given in this way. The solution is more often retained when it is given by seepage than by enema. Seepage is, in my experience, the more satisfactory method. The solution used for seepage should ordinarily not be stronger than 1:10. It is, of course, useless to attempt to give soda by rectum when there is diarrhea.

When bicarbonate of soda is given subcutaneously, a 2 per cent. solution should be used. When given intravenously, a 4 per cent. solution is strong enough. The amount to be given must

depend, of course, on the age and size of the patient.

The acetone bodies being formed chiefly from fat in the absence of carbohydrates or when there is a disturbance of the carbohydrate metabolism, another indication is to administer an easily absorbable and utilizable carbohydrate. Such a carbohydrate is glucose or dextrose. This may be given by mouth or by rectum. It is usually advisable to give the soda, both by mouth and by rectum, in a 10 per cent. solution of dextrose. In urgent cases dextrose may be given intravenously in the strength of 2½ per cent. of dextrose in normal saline solution. Kahlbaum's is the only readily available pure dextrose. When the vomiting stops and the patients begin to improve, the carbohydrates may be added in the form of the cereal waters or jellies, to which one of the various maltose-dextrin mixtures or lactose may be added.

Practically, the usual treatment is the administration of a 5 per cent. or 10 per cent. solution of bicarbonate of soda in a 10 per cent. solution of dextrose freely, both by mouth and rectum. In my experience the immediate and thorough cleaning out of the intestinal tract has seemed to have more effect on the outcome in those cases of acid intoxication secondary to infections or to diseases of the intestinal tract than any other single procedure.

It must be remembered that this treatment is simply for the condition of acid intoxication, and that this condition is not a primary but a secondary one. Therefore, even if the condition of acid intoxication is relieved, the original causative disease remains. The patient may die, therefore, even after the acid intoxication is cured.

Thyroid in Nephritis.

Dr. Cadis Phipps, Boston, in *Boston Med. and Surg. Jour.*, January 20, 1916, reports the use of thyroid in numerous cases of nephritis and with, on the whole, beneficial results. One patient could not tolerate the drug, and in one case it had to be omitted from time to time on account of its apparent toxic effect on his heart. The other cases showed rapid improvement of the edema and relief from uremic intoxication (when present). None of the cases has died.

Quinine and Urea Injections in Hyperthyroidism.

In *N. Y. Med. Jour.*, April 22, 1916, Dr. Leigh F. Watson, Oklahoma City, Okla., contends that toxic goitre is not always a pure thyroid disease, but may involve other glands of internal secretion thus agreeing with Sajous.

The patient *must rest*, live an hygienic life, have a simple diet largely carbohydrate, have

proper medication in some cases requiring it, and may be given quinine and urea injections. These latter are dangerous if not given properly by men accustomed to the technic of such injections. Concentrated solutions are used, injecting into the thyroid, and the following definite points are made:

The method is recommended only to relieve hyperthyroidism and not to remove the goitre. It is sometimes true that in small toxic and atoxic goitre the inflammatory reaction following the injection is sufficient to cause the disappearance of the tumor; but the process is slow, and when the injection is used for this purpose alone, the results are liable to be disappointing.

The procedure is one that is surrounded by certain dangers, immediate and remote. One inexperienced is liable to puncture the trachea or one of the large blood-vessels, or to make the injection into the soft tissues of the neck. Injections that are too extensive will produce the same symptoms of myxedema that follow the removal of too much thyroid by operation. For this reason it is necessary to discontinue injections before symptomatic relief is secured.

The necessity of minimizing the slight pain from any injection by the use of local anesthesia cannot be too strongly emphasized.

Preliminary injections into the thyroid gland of a few minims of a sterile salt solution, followed by injections of sterile water, are necessary to raise the patient's threshold to stimuli, thereby preventing an acute attack of hyperthyroidism which might otherwise follow the slight pain of the first quinine and urea infiltration. As soon as no hyperthyroid reaction follows the water injections, their usefulness is at an end. The use of quinine and urea injections without this preliminary precaution is likely to be disappointing if it is not disastrous.

The Internal Secretions Palliative.

A homeopathic professor, Dr. Daniel E. S. Coleman, New York City, in *The Medical Times*, April, 1916, says:

"The use of internal secretions belongs to the field of palliative medicine. The use of remedies affecting the secretions of the ductless glands, as recommended by Sajous, needs further clinical verification." [Rather pessimistic, and yet there is an element of truth therein.—Ed.]

Dilated Heart and Pulmonary Tuberculosis.

Dr. Max Grossman, Brooklyn, N. Y., in *Med. Record*, April 15, 1916, contends that pulmonary tuberculosis shows its effect on the heart before pulmonary physical signs appear, the heart dilating, with precordial pain.

The COUNTY MEDICAL MAP

A Forum for the Problems of the County Medical Societies

The County Map aims to co-operate with the National and State Societies in promoting a wider interest in the County Societies, in increasing their effectiveness and in the interchange of plans successfully employed to effect these ends.

Members of County Medical Societies are invited to contribute to this department such matters as are of general and widespread interest.

County Societies publishing Bulletins will confer a favor by placing - The Medical Council - on their mailing lists.

Medical Reciprocity and the Old Doctor.

At the annual meeting of the Southern Illinois Medical Society, held in November, Dr. C. St. Clair Drake, Secretary of the State Board of Health, read a paper, an extract of which is hereby given:

"Under the prevailing provisions of the law the young man fresh from medical school and utterly void of the practical experience which makes the big, well-rounded physician, may be licensed in other States through reciprocity, while the older physician, perhaps this young man's preceptor or teacher, is accorded no such privilege. There is a disposition in this day of rapid progress to attribute all virtue and knowledge to the younger generation and the tendency to relegate the older men to the side lines before their time. I cannot feel that the man who is licensed prior to 1899 is less competent, less qualified or less worthy of reciprocity with other States than the graduates of more recent years. Under the existing state of affairs reciprocity is denied approximately to 75 per cent. of the medical profession of Illinois and accorded to but 25 per cent. made up of the younger generation.

"After giving this subject serious consideration the Illinois State Board of Health has drafted an amendment to the Medical Practice Act, which if adopted, will extend to all legally qualified, reputable practitioners in the State the right to license by reciprocity in those States with which Illinois may establish such an agreement."

The above action will be hailed with delight by a large majority of the profession in the State who have seen their rights under their old diplomas curtailed from time to time, until now they are reduced to the minimum. This subject has been agitated all over the State for many

years and we in this county have spoken in no uncertain tones. Our fellow member, Dr. S. T. Robinson, of Edwardsville, many years ago read a paper before the State Society, entitled, "Our Degraded Diploma," which abounded in logical arguments against existing conditions. When the older men received their diplomas they were good in every State in the Union, but little by little their rights have been taken away until now these diplomas are good only in Illinois. If you are qualified to practice medicine in Illinois are you not qualified to practice in Missouri? Have you become dangerous to the public health because you have crossed the river?

Dr. F. W. Braner, of Troy, writes: "This is surely fine news and will give the older members a chance to break away from the monotony of thinking that once located you stay until the cemetery receives you."—*The Madison Co. (Ill.) Doctor.*

How They Tell Us.

Wifey greeted us with the statement that a doctor had called us on the 'phone during our absence; said he didn't give his name or leave a message, but that he would call again. With a man's density and with a husband's matter-of-factness, we remarked, "How did you know he was a doctor?"

The reply was illuminating. "Because his manner was gracious and well-bred. His voice was low-pitched and mellow, with a firmness in it that showed he was used to being obeyed. He had a business-like finality which comes from making prompt decisions and carrying them out, yet there was nothing churlish or boorish about him; he was simply strong and courteous." The 'phone rang again. It was the same voice, she said. And it was a doctor!—*Blair Co. Med. Bulletin.*

The Country Doctor.

The words "country doctor" are used as a term of disparagement by many people, even by city physicians. The great physician and surgeon of the city, of course, never uses the term in that way, because the chances are that at one time, in the incubation period of his greatness, he himself was a country doctor.

It is a well-known fact that many of the deservedly successful city doctors laid the foundation for their city success during their years of country practice.

The practice of medicine in the rural districts makes for self-reliance. There is no professor of laryngology to call in when an edema of the glottis threatens to suffocate the patient. The

country doctor takes the responsibility upon himself and does the work of the emergency himself, and does it successfully too. Take the city and country doctors, man for man, which are the best students? Visit the clinics. Who is attending them? It's the country doctor who spends his time and money, away from home, at the seats of medical learning, while the city physician is waiting in his office chair for the patients who sometimes come but seldom pay. No, the country doctor does not need your pity, neither does he merit your vituperation. He is able to do his work and do it well. And when an occasion arises where he needs the city physician, he exercises good judgment when he calls the city doctor who was once a country doctor himself.—*Bulletin, Calumet Co., Wis.*

The Profession and the Public.

Medical men the world over are beginning to realize that the conditions governing the practice of medicine and surgery are undergoing a change and that this change demands some readjustment. The prevention and cure of disease is rapidly assuming a public or quasi public character, and no longer can be considered an affair of the individual physician or the particular family involved. With the improvement and advancement of sanitary science: the business-like methods of large corporations with their staffs of physicians and their own hospital facilities; the insurance and indemnity legislation; the growth of contract practice between the doctor and the fraternal societies, trades unions, etc., it is becoming more and more apparent that a large group of physicians must eke out a meagre existence or even abandon medicine altogether. In the presence of these it would seem the part of wisdom for medical men to organize for collective action in order to save themselves as individuals. The day is not far distant when the physicians of this country will be called to face a condition similar to that existing in Germany, England and other European countries, where organized medicine has become a contracting party as it were, with the State to take care of the medical needs of the general public.

The relationship that formerly existed between the church and the State, and which now is maintained between the educational worker and the State under the public school system, gives us an idea of the possibilities of an arrangement between the medical forces and the State. It is true that we have private teachers and private educational institutions and it is quite possible that we may always have the private physicians, but the great mass of physicians, it appears, must occupy a position similar to the great majority of teachers. The personality or peculiarities of the individual physician will no more save the situation or stop the evolutionary process of society than the personality of the small retailer

could prevent the development of the department store or mail order house. We offer this little contribution to medical economics in order to stimulate thought and controversy. We can not much longer assume the attitude of indifference or take the position of Louis XIV of France prior to the revolution and say "After me the deluge." The deluge is almost upon us.—*The Recorder, Stock Yards Branch Chicago Medical Society.*

Material Aid to Our Members.

The economic problems suggested in Dr. Vaux's letter in last week's *Bulletin* are in line with a scheme which I expect to have ready to present to the Board of Directors early in the year, whereby our members will have the benefit of a plan to promptly get a line on the financial standing of patients. For instance, Dr. Smith is called to see Mrs. Blank, who has recently removed to Strawberry street. He learns upon inquiry from her that she has lived one year at 46 Belva street. He would immediately call up the clerk in charge of the Medical Society's office, who in turn calls Dr. Brown, living near Belva street, who does not know Mrs. Blank, but who immediately inquires of some of his medical neighbors and reports to our clerk that Mrs. Blank left Belva street owing Dr. Black, the grocer and the druggist in the same neighborhood. Dr. Smith immediately knows what to do, and nobody but the clerk has any knowledge of who made the inquiry. This applies equally well to office practice. With a member of our Society located in every district acting as a source of information, which he secures from his brother practitioners in other neighborhoods, each knowing that by so replying to inquiries, he is assisting in building an organization to down the dead-beat, there is no doubt of the effectiveness of this without any need whatever for a blacklist. This can easily be worked out and without much expense to the Society, and prove of great value, and I believe we could affiliate in some manner with the Credit Men's Association, as all have the same object in view.—J. A. H., in *Bulletin Allegheny Co. Med. Soc'y.*

Coming In.

We hear, with great satisfaction, that lodge doctors, all over the State, are resigning from these lodge positions, and are proving their loyalty to their respective County Medical Societies. We are also reliably informed, that it is the object of these lodges to increase the amount of weekly benefits in cases of sickness, and dispensing with their lodge doctors thus enabling their members to employ the physicians whom they prefer.—*Lancaster Co., Bulletin.*

(Book Reviews one leaf over.)

Salvarsan 0.6 Gram and Neosalvarsan No. VI (0.9 Gram)

Ample quantities of these products have been received from Germany by permission of the German Government, upon the explicit orders of Kaiser Wilhelm, and on permits issued by the British and French Governments for safe passage.

We are now prepared to supply physicians and hospitals direct, at the price prevailing hitherto, of \$4.50 per ampule, in such reasonable quantities as purchasers may desire for current use.

In view of the appearance on the market of substitutes of Salvarsan and Neosalvarsan, some of which infringe the Ehrlich patents, others exhibiting marked toxic properties, and still others being absolutely fraudulent and harmful, we desire to impress upon the medical profession that we are the sole importers of and agents for Salvarsan and Neosalvarsan in the United States. These products can only be procured from us at the present time. Direct distribution is carried out to prevent speculation on the part of unscrupulous persons or dealers and will be followed during the continuance of the war.

FARBWERKE-HOECHST COMPANY

H. A. METZ, President

PHARMACEUTICAL DEPARTMENT

111-113 Hudson Street, NEW YORK CITY

KORA-KONIA



A SCIENTIFIC DUSTING POWDER THAT FILLS A LONG-FELT WANT

KORA-KONIA is a combination of four efficient sanative ingredients which produce a dusting powder combining perfect mechanical lubrication and high therapeutic value.

This new MENNEN product, which is the result of our long experience in the making of high-class powders and our cooperation with physicians to produce a dusting powder to meet exactly the requirements of the profession, is already being prescribed by thousands of doctors and we are sure you will find it the best preparation of its kind you have ever used.

KORA-KONIA is indicated in Acne, Dermatitis, Intertrigo, Eczema, obstinate cases of chafing, prickly heat, nettle rash, chicken pox, measles, scarlatina, etc. It is excellent as an umbilical dressing and for use after operations for boils and carbuncles.

Druggists sell it. If you have not received a sample write for one.

THE HOUSE OF MENNEN

Newark, N. J.

Book Reviews

International Clinics.

A quarterly, edited by H. R. M. Landis, M.D., Vol. I, 26th series. Philadelphia, J. B. Lippincott Company.

This volume of 325 pages contains an able general review of medicine for 1915 and numerous clinical monographs rather too extended for journal publication but valuable to the physician who aims to be well informed. Among these are: "Drug Therapy in Cardiovascular Disease," by Dr. Thos. E. Satterthwaite, an able paper on "Pellagra," by Dr. Beverley R. Tucker, "Pro-lapse of the Genital Organs in Women," by Dr. Henry T. Byford, "The Management of Inevitable Abortion," by Dr. C. L. Nichols, "Combined Efforts to Annulify Surgical Shock," by Dr. George S. Foster, as well as many others, all maintaining the high standard of this admirable quarterly.

New York Health Almanac.

This is a novel almanac for 1916, issued by the New York State Department of Health, Albany. C. E. A. Winslow is editor, and he has produced a novel publication other States should copy. It is truly a medical almanac, like the patent medicine almanacs and yet very unlike them. Sanitarians everywhere should ask for a copy.

New and Non-Official Remedies.

This, the 1916 edition of this annual publication, contains descriptions of the articles which have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association. It constitutes a reliable book of reference upon the newer drugs and biologicals which are of scientific integrity and definite composition. No description is given of mixtures except in an appendix. Also there is included the rules of the Council and references to the literature upon products not accepted for inclusion in this work. The book is bound in cloth, has 440 pages, and is published by the American Medical Association, Chicago, Ill. Price \$1.00 postpaid.

The scientific prescriber will find this annual work of reference a valuable desk handbook of the newer remedies, giving actions, doses and other data so hard to recall but so necessary to know. It is a book the reviewer has long used with the utmost of confidence as a daily guide in prescribing.

The Younger Life Insurance Companies.

A paper-back booklet prepared from authoritative sources and giving the financial status of the newer companies in the field. Alfred M. Best Company, Inc., 100 William street, New York City. Fifty pages. Price, \$1.00.

(Helpful Points continued one leaf over.)

LISTERINE

In the treatment of Summer Complaints of Infants and Children

"The clinical basis of treatment is antiseptics and disinfection of the intestinal tract; not with a purpose to completely destroy the offending bacteria and their toxins, which we know to be neither possible nor necessary, but to assist the normal defenses of the body to gain the ascendancy."

"There are four principles of therapy which govern the treatment of these infections:

- "(a) To give the gastro-intestinal tract physiological rest."
- "(b) To remove as much as possible of the infective elements."
- "(c) To stimulate natural defenses."
- "(d) To reinforce these natural defenses with local antiseptics."

"By local antiseptics we can inhibit many of the pathogenic bacteria in the bowel before they enter the mucosa. The antiseptic agent must be selected with a view to certain requirements; for example, it must not be strongly acid. It must not coagulate mucin. It must not be astringent. It must be easily soluble and not upset osmotic conditions, and finally it must be non-irritant and non-toxic."

"Listerine answers to all these requirements and furnishes an ideal agent of local antiseptics in these cases. It has the additional advantage of being compatible with almost any other medicinal agent with which the physicians may desire to administer it."

The above is abstracted from a pamphlet entitled

"Acute Intestinal Infections of Children"

a copy of which we shall be pleased to send to physicians upon request

Lambert Pharmacal Company, 2101 Locust St., St. Louis, Mo., U. S. A.

Hay Fever Vaccine Mulford

For the Prevention and Treatment of Hay Fever, "Fall" or "Autumnal" Type

Hay Fever Vaccine "Fall" Mulford contains the protein extract from the pollens of ragweed, golden rod and maize, dissolved in physiological saline solution and accurately standardized, and may be used without preliminary diagnostic tests. If treatment does not give entire relief, skin tests may be made to discover possible hypersusceptibility to pollen not contained in the Vaccine.

Noon, working in Sir Almroth Wright's Laboratory, was the first to report successful results in the treatment or prevention of hay fever with subcutaneous injections of pollen extracts. Clowes, Lovell, Lowdermilk, Ulrich, Hitchens and Brown, Koessler, Manning, Cooke, Wood, Goodale, and many other scientists have amply confirmed Noon's work.

Hay Fever Vaccine "Fall" is furnished in:

Packages containing 4 sterile glass syringes

of graduated strengths, \$5.00

In single syringes "D" strength, 1.50

Syringe A	contains	0.0025	mg.	extract of the pollen protein
" B	"	0.005	"	" " " "
" C	"	0.01	"	" " " "
" D	"	0.02	"	" " " "

In ordering Vaccine for Hay Fever occurring during the late summer specify "Hay Fever Vaccine 'Fall' Type Mulford."

For Immunization against Hay Fever, first dose (Syringe A) should be given at least 30 days before expected attack, followed by B, C and D at five-day intervals. Syringe D strength Vaccine should be used at weekly intervals during the entire period of accustomed attack or until immunity is established.

For Treatment of Hay Fever, the doses are given at five-day intervals, beginning with Syringe A, followed by B, C and D in order, followed with Syringe D at weekly intervals during the entire period of accustomed attack, or until immunity is established.

There are no contraindications to the therapeutic or prophylactic use of Hay Fever Vaccine Mulford so far as known. A small percentage of patients may be hypersensitive to the protein extracts, in which case the doses may be accordingly reduced.

Literature mailed upon request.



H. K. Mulford Company

Manufacturing and Biological Chemists

Home Office and Laboratories

PHILADELPHIA, U. S. A.



Mention Medical Council—it insures prompt attention and special service.

Helpful Points

Salvarsan Available!

Ample quantities of Salvarsan 0.6 gram and neosalvarsan VI (0.9 gram) have been received from Germany by permission of the German Government, upon the explicit orders of Kaiser Wilhelm, and on permits issued by the British and French Governments for safe passage.

Farbwerke-Hoechst Company are the sole importers and agents for these products in the United States and physicians are warned against fraudulent imitations and substitutes. These products can be had direct from the company at prices prevailing hitherto—direct distribution being carried out to prevent speculation on the part of unscrupulous persons. For further information address Farbwerke-Hoechst Co., Phar. Dept., 111-113 Hudson St., New York, N. Y.

A Typewriter for Copywriting.

A typewriter is now being manufactured and placed upon the market which is called the "Multi-plex Copy-Writer." This machine makes it possible to accomplish quite all that any one has ever imagined in such a typewriter, for display and all other copy writing.

Various sizes or points of type may all be used on this one machine and are arranged in an *instantly interchangeable form*. Two complete sets or styles of type are in the machine *at once* so arranged that they may be removed and in a few seconds two additional fonts *instantly* substituted. In less than a minute's time, for instance, six fonts of type may be introduced and used in this one copy writer.

The inception of this machine is due to Mr. John R. Rogers, well known inventor and Chief Engineer of the Mergenthaler Linotype Company, and its carrying out is due to Mr. Edward Krusius, of the Experimental Department of the Hammond Typewriter Company and to General Manager Brooks, who gave Mr. Rogers hearty cooperation.

Warning!—Doctors in Connecticut and Massachusetts.

Look out for E. C. Treadway, who claims to represent the Dennos Food Sales Co., of 220 W. Ontario St. Chicago, Ill. Do not give him any money, as he is a fraud. If he calls, detain him in your office and notify the police, who will telegraph this Company. All authorized representatives have a letter of authority under the Corporate Seal of the Company.

✓ DENNOS FOOD SALES CO.

A Mineral Water Bottled Under Sanitary Precautions.

It is a matter of common knowledge that prior to the war a great deal of money was being annually spent in Europe on mineral waters. During the past year or so this has of course largely stopped. There are in America some mineral springs better than any European product. We refer particularly to the French Lick Springs, the home of Pluto Water. Every provision has been made to protect the water from any form of contamination.

Pluto Water is not a strong purgative, the use of which is calculated to produce reaction and to defeat the ends for which it was employed. On the contrary, it has a genuine aperient effect, and its

(Helpful Points continued one leaf over.)



Growing Children Need

O'Sullivan's

HEELS



The activities of the vigorous child induce a continual jolting and jarring of the spinal cord and higher nerve centers.

This repeated shocking of delicate structures is bound in time to make its pernicious influence felt in some way. Even though the nervous system may not show these ill effects immediately, the vital functions are sure to suffer sooner or later. Increased susceptibility to all manner of ill health is an inevitable result.

The solution of the problem? Insisting that every child as it begins to romp and play wears O'Sullivan's Heels of new *live* rubber.

The resulting relief of jar and jolt ~ the absorption of shock ~ means the removal of a depressing influence, the avoidance of a real handicap ~ and the health and vital resistance of the growing child are conserved accordingly.

The earlier O'Sullivan's Heels are worn the sooner their benefits begin to accrue.

O'SULLIVAN RUBBER COMPANY, 131 HUDSON STREET, NEW YORK CITY

Mention Medical Council—it insures prompt attention and special service.

A Capital Summer Lunch

A lunch of prime nutritive value, quick, economical and agreeable for all classes—especially brain workers who require nourishment which does not overtax the digestive organs—

Grape-Nuts and Cream

There is just the kind and amount of nourishment in **Grape-Nuts** to give "punch" to mental workers; and it does not "put one to sleep," as does the usual heavy meat and pastry luncheon.

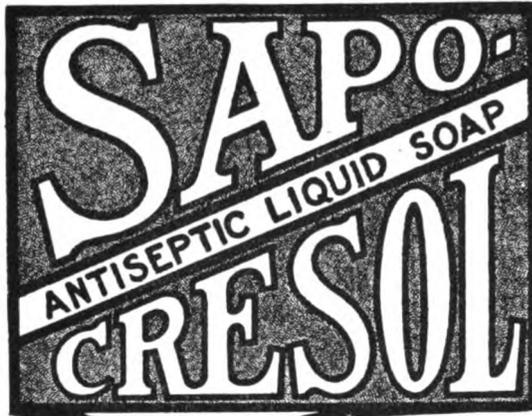
It has been found by many persons in all lines of work, that **Grape-Nuts** and cream fills the bill as nothing else does.

Made of whole wheat and barley, this famous ration has the nutritive elements necessary for both body and brain upkeep, and is so easily digested and so promptly assimilated as to belong in a class by itself.

Grape-Nuts is not only rich in the carbohydrates—largely converted into soluble dextrin and grape-sugar by the diastase in the barley; but is likewise rich in the essential phosphates which are recognized as necessary in perfect normal cell-elaboration.

The *Clinical Record*, for Physician's bedside use, together with samples of **Grape-Nuts**, **Instant Postum** and **Post Toasties** for personal and clinical examination, will be sent on request to any Physician who has not yet received them.

Postum Cereal Co., Ltd., Battle Creek, Mich., U. S. A.



*Economical
in Cost*

An ideal soap for the surgeon and nurse, suitable for sterilization of instruments and parts for operation, for use in the sick room, physician's toilet, etc.

Prove its quality by sending for sample. Sign your name in margin, enclose 10c stamps or coin and mail to

*Sample one-half
pint sent for 10c
to cover postage
and packing*

CaPhenin Chemical Co.
Waverly, Iowa
Manufacturers of Highest Purity
Pharmaceuticals

Helpful Points

use for a comparatively short period will abolish constipation and induce regular habits. Pluto Water is especially valuable as its analysis will demonstrate in the treatment of gout, chronic rheumatism, obesity and nephritis.

Samples and literature on request. Address French Lick Springs Hotel Company, French Lick, Indiana.

A Notable Therapeutic Agent.

Clinical experience is, after all, the most searching and satisfactory test of therapeutic action, and on this basis Iodeol has proven its usefulness beyond all possible question.

Particularly has its field of utility been shown to be extremely broad and extensive, and in all acute pulmonary infections, in typhoid fever, syphilis, mycosis, furunculosis, pulmonary emphysema, asthma, arterio-sclerosis, toxic obesity and many other similar or associated ills its therapeutic efficiency has warranted new confidence in iodine therapy.

Iodeol is presented in four forms: Ampoules, capsules, for external use, and ovules. For interesting literature address David B. Levy, 96 Warren St., New York City.

Tonic for a Difficult Period.

Genitone will be found a splendid tonic for patients during the climacteric and menstrual period. It is non-narcotic and non-habit-forming, although antispasmodic, tonic and sedative. Formula and sample may be had from the Wm. S. Merrell Chem. Co., Cincinnati, O.

The Business Side.

There's a vast difference between the grasping, mercenary doctor, and the type that fully appreciates the "business" side of his calling, if you please. The Doctor who is afraid to collect his just dues should give a thought to his neighbor, the banker, whose very commercial existence centers around his ability to 'get the money.' The unfortunate who can't meet his honest debts is worthy of sympathy, but the man who can but doesn't or won't is not entitled to undue consideration. Understand your man, and his circumstances, then treat him accordingly. The Publishers' Adjusting Association, Midland Bldg., 4th floor, Kansas City, Mo., possesses the necessary skill to handle obstinate cases with great success. Write for full information; they can probably save you considerable time, work, worry and expense in doing your collecting for you.

Campetrodin.

This preparation is an oleaginous solution of Iodine in Camphor. Soothing, penetrating, powerful antiseptic, local analgesic, alterative, ideal surgical dressing.

The great therapeutic value of Campetrodin is attributed to the fortunate properties of its vehicle, which permits the remedy to enter the tissues and blood stream, as it were, by osmosis, bringing about results immediate and satisfactory. Wherever the therapeutic properties of Iodine are indicated, Campetrodin can be relied upon minus the disadvantage of crude Iodine. It relieves local pain promptly without local irritation; on the contrary it can be

(Helpful Points continued one leaf over.)

POMPEIAN OLIVE OIL ALWAYS FRESH

DOCTORS recommend Pompeian—its merit has won the endorsement of hospitals all over the country—for Pompeian—finest quality olive oil—is always fresh.

☞ The enlightened purchasing public is now, at last, face to face with the fact that olive oil cannot remain sweet and pure indefinitely—as tinned vegetables. They realize that olive oil is a commodity that should be handled with the same care as dairy products.

☞ Fresh Eggs, fresh butter, sweet milk—and Pompeian Olive Oil—the up-to-date housewife places them in the same category. For the Pompeian Company—proud of its product and solicitous for the welfare of its consumers—jealously protects the sweetness of Pompeian Olive Oil.

*Write for our book of selected salad recipes
mailed free to any address*

FULL MEASURE TINS
Gals., ½-Galls., ½-Pints, Pints, Quarts

THE POMPEIAN COMPANY
GENOA, ITALY BALTIMORE, U. S. A.

THE STANDARD IMPORTED OLIVE OIL

Stanolind Liquid Paraffin

Trade Mark Reg. U. S. Pat. Off.

(Medium Heavy)

Tasteless—Odorless—Colorless

Restores the Independence of the Intestines

MOST therapeutic agents employed to relieve constipation, create a certain dependence caused by stimulating unnatural muscular activity of the intestines.

Stanolind Liquid Paraffin does not excite undue peristaltic activity. It does not irritate; its action is solely that of a mechanical lubricant and protective agent. Only the normal muscular activity of the intestines is influenced. Stanolind Liquid Paraffin is administered in decreasing, rather than increasing dosage.

This feature adds emphasis to our statement that Stanolind Liquid Paraffin is a safe and dependable agent for continued internal administration.

A trial quantity with informative booklet will be sent on request

**Standard Oil
Company**
(Indiana)

72 W. Adams St.
Chicago, U. S. A.

29a





Your Ideal Bran Food Delicious—Efficient

Under able advice, we have met in Pettijohn's the physician's ideal of a bran food.

It's a whole-wheat food—a flaked wheat food—which everybody likes. It has been for many years a favorite breakfast dainty.

We roll into these flakes 25 per cent of unground, tender bran.

Thus you get flake bran—the sort you want. You get an efficient amount of it. You get the whole-wheat nutrition.

You get all this in a well-liked dish at which no one will rebel.

We hardly think you will find another bran food which so meets requirements.

Pettijohn's

Rolled Wheat with Bran Flakes

This is soft, flavory wheat rolled into luscious flakes, hiding 25 per cent of unground bran. Can be cooked in 20 minutes. 15c per package.

Pettijohn's Flour is another bran product. It is 75 per cent fine patent flour mixed with bran flakes—25 per cent. To be used like Graham flour in any recipe. 25c per large package.

The Quaker Oats Company
Chicago (1352)

Helpful Points

applied to denuded or burned surfaces as an anodyne.

As an antiseptic dressing it is equal to any, and without the dangers of most of them. In all cases where prompt absorption or lymphatic stimulation is desired, it penetrates the tissues almost as soon as it is applied to the skin.

Campetrodin (double strength) is especially valuable in reducing swollen glands and relieving obstinate, deep-seated rheumatic and neuralgic pains.

Both strengths supplied on prescription in one, three and eight-ounce bottles.

On request the manufacturers, A. H. Robins Company, Richmond, Va., will be glad to send samples for clinical test.

No Advance in Price.

While there has been a tremendous advance in price of Oil Sandalwood and other drugs, because of the long established price for years, The Merz Capsule Company continue to supply their very effective filled capsules at the old low price. Samples and prices will be sent to you on request to Merz Capsule Company, Detroit, Mich.

An Exceptionally Good Offer.

Turn to page 6 and see the big typewriter offer Harry A. Smith makes. A standard No. 4 Visible Smith, having all the latest features and medical characters—at only \$32.50 cash—or \$34.15, paying \$2.00 a month.

This excellent machine is sent on five days' trial so that you know it is what you want before buying. Turn to page 6 and fill in the coupon, or if you desire further information, address H. A. Smith, Room 904, 231 N. Fifth Ave., Chicago, Ill.

Pleasing Bran Foods.

Pettijohn's flour, used in place of white flour, means an extra nutritious food, and an efficient bran food, for it contains 25 per cent. bran and in flake form as you want it. With Pettijohn's food and Pettijohn's flour a bran course is made delightful. Give it a trial, you will be pleased with the results.

That Troublesome Hay Fever.

Calcium Chloride has been used with success by many physicians in hay fever. To get the best results and no gastric disturbance prescribe Elixir Chloro-Calcium (Sharp & Dohme)—5 grains of the c. p. salt to the fl. drm. Every stomach will readily retain this preparation of Calcium Chloride.

Sharp & Dohme, Baltimore, Md., have just compiled some interesting clinical data on hay fever. Write today for a free copy of this.

The Best the Market Affords.

Armour & Co., Chicago, have unusual advantages for the manufacture of organo-therapeutic products, and are always assured a plentiful supply of the best raw materials.

Corpus Luteum (Armour) is made from true substance (the corpora lutea of pregnant animals). The glands are gathered in their abattoirs and they know what they are using. Corpus Luteum (Armour) is supplied in 2-grain capsules, bottles of 50; 5-grain capsules, bottles of 50; and 2-grain tablets, bottles of 100.

(Helpful Points continued one leaf over.)

USOLINE

the original
Russian White Mineral Oil

CREATED
in this country the theory of
Internal Lubrication

Why prescribe fancy-priced substitutes when the original product can be had at

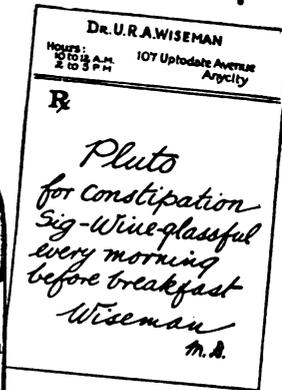
- \$.25 per 6-oz. Bottle
- .50 per 16-oz. Bottle
- 1.00 per Quart Tin
- .50 per 2 doz. 40-min. Capsules

through any reliable druggist?

Original literature and liberal sample gladly furnished.

OIL PRODUCTS COMPANY
Incorporated
Whitehall Building NEW YORK, N. Y.

A Practical Prescription



Samples, clinical data and literature sent on request

PLUTO

Bottled by the **FRENCH LICK SPRINGS HOTEL CO.**
French Lick, Indiana

Physical

IN many cases the judicial physician appreciates the importance of a course of scientific exercises adapted to the individual patient—as an adjunct to his medication in promoting the patient's bodily vigor.

Mere directions as to the amount and character of the physical exercises to be taken are often not thoroughly followed or neglected, and for this reason, the physician will frequently find it advantageous to enlist the co-operation of one trained in methods of scientific physical culture, who is competent to direct this indispensable part of his treatment.

In other words the physician, while appreciating the value of a course of properly regulated exercises, often lacks the assistance of one qualified to supervise and co-operate with him in carrying out this line of treatment.

It will therefore be of interest to every practitioner to acquaint himself with the methods of



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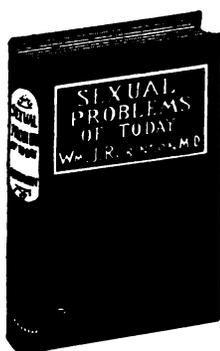
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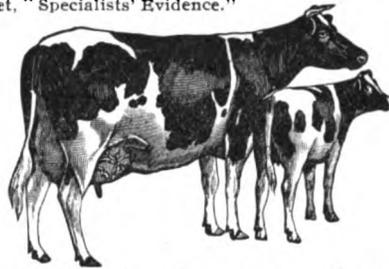
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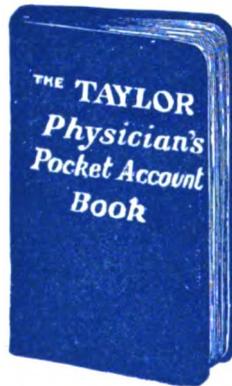
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THOS. S. BLAIR, M.D. }
EDITOR

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The Intravenous Treatment of Cancer.

CHEMOTHERAPY, especially Ehrlich's studies with the dyes and arsenic, has established itself as a promising line of research. There is ground for hope that the line of study resulting in an intravenous treatment for syphilis may also bring to light a parallel line as relates to cancer.

Goldman proved that certain dyes introduced into the circulation were taken up by preformed elements of cell structure, more especially the basic dyes. Fischel added the view that there is no really *vital* staining of cells; and Evans and Schulemann contend that it is the phagocytes that carry the dyes. Kite added the information that the cell surface opposes the entrance of dyes, but that once in the dye diffuses readily. Dead or injured cells stain readily; hence tumors in which central necrosis has occurred stain readily in the necrotic area, while other tumors do not. Wassermann's experiments with eosin were more successful as regards living cells, but were not conclusive.

Richard Weil, in *The Jour. of Cancer Research*, Jan., 1916, reports his experiments in the staining of necrotic areas. He, with Van Alstyne, found that solutions of sodium iodide were found, after killing the animal, most largely in the blood, then in tumors, then in the liver, and least in the other tissues. Non-necrotic tumors took up less iodine than did necrotic ones. Tuberculous tissue acts similarly.

Wells, DeWitt and Cooper proved that necrotic tissues, whether tubercles or other lesions, behave like any non-living colloidal mass into and from which crystalloids diffuse readily and rapidly, while colloids enter very slowly or not at all. This rule, however, has exceptions, for trypan red and trypan blue, which are colloidal, stain caseous tubercles; and there are other known exceptions.

The benzidine group of dyes, if persisted in, will penetrate tumors beyond the necrotic areas, following up minute foci of necrosis. This has

been proven of congo red in the human subject; but thus far it has no therapeutic significance. The electrical charge and the chemical reaction seem to influence the diffusion of the dye.

The Clinical Bearing.

All of this proves that dyes, or some of them, follow up the necrotic areas of tumors and cancers when intravenously injected, even to the microscopic areas of necrosis. And it also proves that the dyes themselves have no therapeutic value. Where, then, is the hope in this line of research?

First of all it is proven that cancer cells take up certain chemicals, notably the iodides. Secondly, it is known that multitudes of new synthetic compounds of dyes and toxic chemicals are a possibility, many having been produced.

The advantage possessed by these synthetic compounds intravenously injected is that the dye would carry to the minute ramifications of the necrotic area, bearing with it in combination the toxic chemical. The problem first to determine is which compounds of this character will be broken up in the necrotic tissue, liberating the toxic agent capable of penetrating the non-necrotic tumor cell. This would all be animal experimentation. The next problem would be to find which ones of these synthetic compounds could be intravenously injected without grave risk of death to the subject. And the last problem would be the therapeutic availability and effectiveness of the safer agents. Such investigations are now proceeding, but only as regards the initial problems.

A Long Hunt.

But it will be a long hunt. Salvarsan was the six hundred and sixth substance experimented with before one resulted that served the purpose. It may require even more extended search to find a substance specific to cancer cells. It will not be found accidentally, but only by

painstaking laboratory research. That it will finally be found is more than probable. When it is found, and if some specific cancer reaction paralleling the Wassermann test is also discovered, which is more than probable, then we will be in position to treat cancer in its pre-surgical incipiency and to prevent much metastasis after surgical removal of cancer not recognized early.

That such an intravenous treatment for cancer would limit the amount of surgical intervention is beyond question; but it is not at all likely that it would take the place of surgical removal of the mass in operable cases. Such a remedy would not cure a large proportion of advanced cases; it could not overcome cancer toxemia; but it would be effective, with other indicated treatment, in immensely limiting the ravages of cancer if employed early in the disease. At all events, the outlook for investigations along this line is hopeful.

Stand Aside.

NATIONALIZED medicine and federalized doctors are a necessity in preparedness. The National Guard of the States had to be suddenly federalized in an emergency. They should have been federalized years ago as a measure of preparedness. So should medicine have been federalized. The doctors must be knit together, that they can serve together for the Government. If you are opposed to this, stand aside.

What of the wounded that may be turned back from the battlefield? Must they stand aside because thousands of surgeons are registered only in one State?

Ninety thousand sick were removed from the Gallipoli peninsula, and despite the splendid medical organization of the English army there were not enough doctors. England never stood her doctors aside, as we have done. What would we have done with far less than English preparedness?

Just after the second battle of Bull Run there were not sufficient ambulances and doctors, and 600 men remained on the field wounded and suffering, many dying from exhaustion. If you oppose improving such conditions, stand aside.

Our ratio today is five doctors to every thousand soldiers in the service. France, in time of peace, has four times that proportion. Surgeon General Gorgas says in time of war ten doctors are needed for every thousand soldiers as a minimum estimate. If the United States put a million men in the field, ten thousand doctors would be needed. We have a few hundred in the serv-

ice, and it takes six months to fit a good civilian physician for army service. If you don't want medicine federalized and the profession made fit, stand aside.

We now have a National Board of Medical Examiners, and the medical politicians of the States are fighting it tooth and nail. For shame! Let them stand aside.

The Government favors federalizing medicine; business men favor it; the rank and file of physicians favor it; the general public favors it. If you don't, stand aside.

We will have to do it *suddenly* some day. Then you *will* stand aside.

Yes, stand aside, and be quick about it. Doctors are as necessary as gunners; but, in medical preparedness, the politician is nothing but an infernal nuisance and an enemy to his country. Dying men can't wait. Shall we let them die? Or shall we wake up to the needs of the country and save them because we are prepared as doctors of the United States? Stand aside, obstructionists, stand aside!

Needed: A Hippocratic Oath For Science.

EVERY PHYSICIAN is bound by an ethical code of fealty to the sick, the suffering, the wounded and the diseased. This ancient treaty is one "scrap of paper" the dreadful war has not torn to pieces, even in Europe-at-war. *Fraternitas Medicorum* is the only international flag still unsullied and not dishonored. Long may it wave!

What a pity no Hippocratic oath has bound the chemist, the physicist and the non-biologic scientist!

Great universities have honored the scientist. The investigator has had millions of money laid at his feet. He has done much for the arts of peace; but what has he done now?

Poison gas that renders thousands not mercifully killed susceptible to tuberculosis; submarines that murder women and children; liquid fire more hellish than the inferno; frightful explosives that rend the works of civilization along with the fighting line; bombs from the sky worse and less discriminating than lightning!

Chemistry; oh, Chemistry, what crimes are being committed in thy name!

The chemist was never bound by an ethical code, a Hippocratic oath.

Had he been, he would not now be a traitor to humanity. If he is not soon so bound he will be a menace to the race.

Let Medicine Beware.

Pure science is becoming interwoven with biologic science; medicine has many votaries not in touch with the bedside, but bounded in perspective by the walls of the laboratory; specialism is less humanitarian than the workaday round of ministering to the poor; the medical investigator is having millions laid at his feet.

Brothers, let us guard our birthright—our oath, our code, our humanitarianism. Let us exact of our scientists, allied with us in our fight with disease, that they subscribe to our code and our oath.

The Clinical Range of Radium.

In superficial epithelioma and giant-cell sarcoma radium, properly used, is a demonstrated success. Its post-operative use in uterine cancer seems abundantly well justified. But because radium is useful in these cases, it does not follow at all that it is useful in all forms of cancer and neoplasm.

There are a number of men who are wonderfully enthusing over radium as an empiric "cure," but gentlemen of the same type were the erstwhile cock-sure exploiters of the X-ray as the sure thing in cancer. The X-ray is useful, but has limitations.

It all harks back to an ingrowing empiric diathesis—the same thing that makes a man enthuse over a new drug before it is at all upon an established basis. There is no doubt that radium possesses utility in several directions. The men who have long used it in Europe have recovered from early enthusiasm, whereas most of our men on this side have not yet had time to cool down. European experts are still using it, and writing sensibly about it. Let us profit from their experience.

Dr. Dewell Gann presents in this issue a balanced and conservative article upon it, to which we urge attention. The use of radium is yet in the experimental stage.

Doctor, your country may need you. If you have personal adaptability to any line of service, review the subject now. Get efficient now. Don't wait for the call.

INFANTILE PARALYSIS.

Especial attention is directed to an article on the Serum Treatment of Acute Poliomyelitis which appears under "Practical Therapeutics" in the abstract department.—Editor.

The Induction of Labor at Term.

IN CHICAGO they have a live Gynecological Society, and many of its members don't believe that "meddlesome midwifery" is always as meddlesome as it is supposed to be. Nature should not always be allowed to take her course, especially when an inert womb fails to perform according to schedule and a mother suffers the tremendous traumatism of giving birth to an overgrown babe. Dr. Charles B. Reed recently read there a paper upon this subject, as reported in *Surgery, Gynecology and Obstetrics*, March, 1916.

According to Von Winckel, the gestating child is mature in 275 days, and its longer remaining *in utero* brings danger of morbidity or mortality to mother and child, as well as the liability of operative complications. Dr. Reed says: "The apple is picked at maturity—why not the child?" Watchful waiting, he does *not* believe, puts obstetrics in the domain of clean surgery, but rather the opposite. He assumes that a mature child is 50 cm. long and weighs between five and eight pounds, one more than eight pounds being post-mature in seventy per cent. of the cases. To judge of maturity requires keen analysis and much experience, aided by the findings of Mueller's method of crowding the head into the pelvis. Then, too, Ahlfeld's rule helps, which is: "In vertex cases measurements are made with the pelvimeter from the upper border of the symphysis to the breech of the child, the result is doubled and 2 cm. subtracted for the thickness of the abdominal walls. The result is the length of the child." External pelvimetry is used. The usual clinical data is, of course, carefully considered.

Inducing the Labor.

Term being determined, the patient is put in the exaggerated lithotomy position, the vagina retracted, mucus wiped away, an anesthesia given (only in some cases), the cervix brought down by the vulsellum forceps, and the os is instrumentally dilated if necessary (usually not necessary). A Voorhees bag No. 4 is emptied of air, rolled like a cigarette, seized with Pean forceps so that the tips extend to the largest diameter of the rolled bag, anointed with sterile glycerine, the curve of the forceps turned toward the patient's left leg, and introduced, turning so that the forceps curve looks upward, lock released, tube connected with syringe, and sterile solution forced slowly into the bag. Remove forceps and vulsellum; tie tube with tape; disconnect syringe; put sterile pads on either side of tube, and wait.

If pains do not start within an hour hang a one- or two-pound weight to the tube and hang over the foot of the bed to which the patient has been removed. Within four hours the bag is expelled by strong pains, and labor is on. There we are! What is more simple?

Yes, it is if there is no infection carried in with the bag; but the short duration of labor seems to minimize the danger. Nevertheless it is a danger.

Dr. Reed reports one hundred consecutive cases with, on the whole, admirable results from the surgical point of view; but there were two maternal deaths, one from placenta prævia, and one from pneumonia. These could hardly be charged to the use of his method. But seven babes died, and forceps were used in twenty-three cases. This will look bad to the practitioner in the average community; but have you ever practiced obstetrics in Chicago, where difficult labor is very common? But they don't average up so badly as did these cases. His process may "work in strict harmony with the principles of modern science," as he says in concluding his paper; but "science" and a high infantile mortality are not necessarily harmonious. We have attended in usual course vastly more than one hundred cases with a much, very much, lower mortality; so we are dubious about the method, and particularly so as regards such common use of forceps.

Some Objections.

The discussion of Dr. Reed's paper brought out plenty of objections; but some were in agreement with him, as Chicago has a coterie of militant obstetricians of ultra-surgical type. Nevertheless these same men warn against such technic in general practice, which is wise upon their part. Ahlfeld's measurement technic is not commonly accepted as being dependable; nor is it agreed upon at all that one can estimate with any certainty when the 275 days are up. Inducing labor with a dilating bag where the head ought to be is more than apt to induce, as well, malpositions and malpresentations. We have had this happen, to our consternation. Why hurry the labor by attaching a weight? We fail to see the point. Look out for a laceration in an os rapidly dilated or dragged down by the vulsellum forceps.

We believe we will still stick to ten grains of quinine and a big dose of castor oil when labor seems to lag; but we may not be modern enough. Certainly it would be lovely to attend labor cases on schedule and always by daylight. Great is science, even with a lower-case s; but greater is Nature, for she merits a capital N.

Therapeutic Notes.

Look out for fistula in the phenol injection treatment of hemorrhoids.

To control hemophilia in a child inject normal human serum if obtainable.

Intensive mercurial inunctions in syphilis are not dangerous if the mouth and teeth are kept clean.

Injecting the serum of a convalescent from scarlet fever is good treatment for the early stages of a severe case.

Be sure you have made an accurate specific diagnosis before venturing upon the therapeutic use of a polyvalent vaccine.

Vincent's angina yields to nitrate of silver applications. Wipe dry and apply a 2 per cent. solution twice a day for 2 days; then once a day for 3 days.

If a child is fed exclusively on pasteurized milk, it lacks vitamins and may develop a mild type of scurvy. Add orange juice to the diet and the trouble clears up or is avoided.

Sodium bicarbonate may be given intravenously to an infant suffering from acidosis with diarrhea. Use a 4 per cent. solution, injecting from 75 to 150 cc., repeating in 3 hours if needed.

The question of whether digitalis raises blood-pressure has been a subject for debate, pharmacologic experimentation showing an increase in animals but clinical use in man not giving such results. White and Sattler have recently shown by use of the electrocardiogram that blood-pressure is not raised by digitalis.

Dr. C. A. L. Reed asserts that epilepsy is an infection caused by a bacillus he has isolated and named the *Bacillus epilepticus*. It invades the system through the alimentary tract, its chief focus being the cecum. It is a spore-bearer and hard to overcome. Treatment demands its obliteration from the bowel by purgation and antisepsis. Its eradication from the blood is an unsolved problem.

Thymol is a useful drug originally obtained wholly from thyme; but ajowan seed from India also yields thymol, and much of our supply has been so derived. The war has seriously interrupted supplies. Now the U. S. Department of Agriculture has issued a bulletin to the effect that our common horsemint, *Monarda punctata*, yields thymol in quite considerable quantities; and the statement is made that its production here may be profitably undertaken.

The following papers are contributed exclusively to this journal. Republication is permitted if credited as follows: *MEDICAL COUNCIL, Philadelphia.*

ORIGINAL ARTICLES

Sentences, like sunbeams, burn deepest when most condensed.

We are not responsible for the views expressed by contributors: but every effort is made to eliminate errors by careful editing, thus helping the reader.

*Radium as an Aid to Surgery.**

By DEWELL GANN, Jr., A.M., M.D.

LITTLE ROCK, ARK.

In talking to you to-day on the subject of radium I realize a new field is being entered in the State and is therefore the object of some criticism; however, this is lost sight of when we remember that in the beginning of any undertaking that is contrary to a more or less general opinion we cannot hope to have all agree with our ideas. It is less than thirty years ago that thousands of people were dying with so-called inflammation of the bowels, preventable by a

who see in it the agent that will revolutionize the treatment of cancer and those who condemn it without knowing even the first principle of its application or effect. It cannot be unjust to state that one who will condemn anything, radium or other, without a fair and impartial trial does so for reasons that should not be mentioned.

It is not my aim at this time, nor shall it be at any future period, at least until sufficient time has elapsed for the results obtained with radium to be compared with other agents used in treating malignant disease, to advocate its gen-



Fig. 1. Lupus Erythematosus, Before Treatment.



Fig. 2. Lupus Erythematosus, After Ten Days' Treatment.



Fig. 3. Lupus Erythematosus, After Thirty Days' Treatment.

timely removal of the appendix, an operation which at that time was bitterly opposed, but which today is recognized, not only by the doctor but by the layman.

The effects of radium at times are so startling that it need not excite wonder that those who have not had the opportunity to investigate it are undecided as to whether it really belongs to the armamentarium of the physician or among the humbuggeries of the quack. Like all new methods, radium has its enthusiastic advocates

eral use in preference to surgery. Neither do I wish to impart the idea that radium is to supersede surgery. On the other hand, the writer believes with others that operative surgery has almost reached the limit of its curative and palliative efficiency, and a substance that has demonstrated its powers in so many ways should at least offer increased hope.

More than the first decade of its use has passed, but the true value of radium is to be determined. Yet it is only fair to say that stripped of all extravagant claims radium is an asset of permanent value to surgery and an

*Read before the First District Medical Society, at Jonesboro, Ark.

agent for the relief of human suffering; therefore may we not dismiss prejudice from our minds and think for a moment of the carcinomatous nodule surrounding a blood vessel that cannot be removed with the knife. Such a condition means an inevitable recurrence with resultant suffering and death. If we have a substance that can prevent such an inevitable thing why should any one object? It is not the desire to create the impression that in every case radium will obtain the sought-for result, but it has been done so often that it is an established fact that radium possesses great and positive value and its place in therapeutics cannot be disputed.

Origin of Radium.

Radium was discovered by Madam Curie while working out a master's degree in her husband's laboratory in 1898. A short time after the isolation of the element, a tube containing a small amount was given to Prof. M. Henri Becquerel for experimental work. The tube was placed in his vest pocket to be removed a few hours later. At the time no inconvenience was noted but about two weeks later a burn which corresponded to the size of the tube appeared on the abdominal wall. This was the famous Becquerel burn and from that day to this when those unfamiliar with the action of radium hear of it they immediately think of a burn, and more than one uninitiated pathologist has made the statement that radium cures by burning. Nothing can be farther from the actual fact. It is true that it liberates heat and will burn in the course of time, but a burn is easily avoided when the radium is properly applied. Unfortunately it is not as simple to handle as some other agents and the technic of its application can only be learned by long and tedious study. The burns that are seen to-day following radium applications I believe to be due to over-treatment.

Radium is derived from uranium by atomic reduction and belongs to the strontium-barium group of the alkaline earths. When freshly prepared it looks somewhat like brown sugar except it is not crystalline and does not glisten. It has a characteristic spectrum, an atomic weight of 226 and loses a portion of its atom to become a gas called emanation. Pitchblende contains one part of radium to 3,000,000 parts of uranium.

Radio-Active Substances.

There are a number of radio-active substances, fifteen in the radium group and eleven in the thorium group, any of which may be recognized by 1, their effects on sensitive photographic plates; 2, their ability to produce fluorescence; 3, their ability to ionize air and, 4, their produc-

tion of heat. From all of these substances there is an emission of rays, from which their therapeutic value is derived. These are classified according to their physical properties into alpha, beta and gamma rays.

Of the three types the alpha particles are the least penetrating, being completely stopped by a thin sheet of paper and not being detectable after passing through three inches of air. They are positively charged minute particles the size of atoms, the action of which we see in a spinthariscopes, a screen of zinc sulphide in front of which there is a small fragment of radium, so small it cannot be seen with the naked eye. From a gram of pure radium bromide it is estimated that twenty thousand millions of these particles are expelled per second with a velocity of approximately one-tenth that of light.

The beta rays are negatively charged electrons, smaller than the alpha and travel with a velocity of one hundred and seventy thousand miles per second. Their penetrating power is therefore much greater than the alpha particles, it requiring a piece of lead two millimeters in thickness to intercept them. They will penetrate several centimeters of tissue.

The gamma rays are ether vibrations rather than particulate, as are the alpha and beta rays. They have a much shorter wave length than visible light and their penetrating power is extraordinary. Even the interposition of a human body does not intercept all of them. In the therapeutic application of the rays, because of these properties it is possible to use them all together or separate them, as may be desired.

Radium Applicators.

For the purpose of application radium may be obtained in the form of varnish applicators or in small glass tubes further encased in brass, platinum or silver capsules. The latter prevents loss in case the glass tube is fractured. The rays pass from the tube in radial lines, thus producing a sphere of radiation. The walls of the tube intercept the alpha rays and therefore only the beta and gamma rays are used in the treatment of disease; the dosage depending upon the age of the patient, the nature and extent of the condition, the amount of radium to be used, the screening, etc. It is the ideal aim in the treatment of any condition to obtain the same intensity dosage at the point of greatest extension, as at a point nearest the radium.

The rays being given off from a point in every direction their intensity will vary inversely in proportion with the square of the distance. For example; a unit radiation may be obtained in one minute at a point one millimeter distant from the radium that it would take 625 minutes to

obtain at twenty-five millimeters. When the rays strike a substance the substance becomes the source of secondary rays which are similar to the primary beta rays emitted from the radium. It is the action of these rays that is usually responsible for the so-called radium burns, but fortunately by the interposition of rubber dam between the screen and the lesion such can be prevented.

A Selective Destructive Action.

Radium is said to be possessed of a selective destructive action and a general destructive action, and the common impression that it acts by burning is erroneous. The selective destructive

sistance is that tuberculous glandular involvements disappear under radiation, while tubercle bacilli growing in culture in the test tube are unaffected by its rays.

The Physiology of Radium Action.

In explanation of the action of the rays in this manner, certain other facts well known to those familiar with the use of radium can be explained. First and foremost the fact that under identical conditions as regards dosage and application, and identical conditions as regards the patient, we occasionally fail to get a result in one, while in the other the sensitiveness of the tumor is most remarkable. I have seen cases



Fig. 4. Basal-Celled Epithelioma, Before Treatment.



Fig. 5. Basal-Celled Epithelioma, After Ten Days' Treatment.

action is advocated because of the fact that a tumor is very often seen to disappear from beneath the skin, after the use of radium, without any apparent effect upon the normal tissues. As a matter of fact, there is a marked selective tendency in this direction and assuming that radiation has a deleterious effect upon all tissues this selective action may be explained in the following manner, which, to me, seems to be the most plausible theory concerning the effect of the rays on normal and pathological tissue:

First, although the radium produces a certain deleterious effect on all living tissues, the fluids and protective agencies of the body are all constructed to help the normal and though weakened the normal cells do not die. Second, the pathological tissues are weakened to the same extent as the normal, but since the body fluids and normal protective agencies are not constructed to aid in the up-keep of these pathological cells they disappear. Another fact concerning the selective action of the rays and the body's re-

that were apparently absolutely hopeless whose conditions yielded in a way that seems almost magical; however, in making this statement it is not desired that it shall be interpreted as a plea for very advanced cases.

Malignancy.

It would seem that for a cure in malignant disease everything points to an early diagnosis and treatment, yet in the face of an absolute diagnosis of malignant disease the patient will not always take the advice of the physician who recommends immediate attention but will go shopping from doctor to doctor, just as we see shoppers go from one department store to another, until some quack guarantees them a cure without the use of the knife. The next time we see them they are in an advanced stage of malignancy with metastases to the neighboring glands and the inevitable end close at hand.

Administration.

Radium may be introduced into the body by any one of several different channels. The

emanation which is in the form of a gas may be inhaled and in this manner it may be utilized for the treatment of pulmonary disorders. It may be introduced intravenously or subcutaneously and is of unquestioned value in treating high blood-pressure. Radium water may be taken by mouth for the treatment of rheumatic disorders, gout, etc., or it may be used for bathing purposes. Lastly, radium contained in applicators may be applied inside or outside the body, very much in the same general way that a poultice is applied and without pain. Because of the fact that it does not produce pain it is especially useful in treating the very old or very young. It not only does not produce pain but in many instances relieves it. It is in this field of direct application that radium is most widely used at present, although articles are appearing from time to time on its internal use.

When applied to the skin radium may produce a reaction which is characterized by an erythema, an erythema followed by a desquamation, by vesication with superficial ulceration or deep ulceration, the extent of the reaction depending upon the amount of radium used, the length of exposure, the interposition of screens, the nature and extent of the condition treated and personal idiosyncrasy.

Therapeutic Value.

In the discussion of the therapeutic value of radium it will be necessary for me to quote frequently from articles written by my instructors, Drs. Kelly and Burnam, of Baltimore, where the greater part of my radium observations were made. Generally speaking, radium may be said to be indicated in every case of malignant disease as an *adjunct to the knife before and after operation*; in conditions that are so extensive that it would be impossible to remove them surgically; in conditions that are particularly susceptible to its rays; and, lastly, in inoperable cases for the relief of distressing symptoms, not only annoying to the patient but to those around him. It is worth something to be relieved of pain during one's last days, and a cure with radium in the absence of internal metastases is always possible.

In the treatment of any case with radium it is well to know the age of the patient, the nature, size and location of the growth, the susceptibility of the particular type of growth and whether or not metastases are present.

Radium in Dermatology.

In dermatology radium has one of its widest fields of usefulness. Warts, corns and moles, especially the deeply pigmented hairy moles,

yield readily to short exposures of half-strength applicators. The applicators are usually square with a metallic back, and the radium is evenly distributed over the surface. They are prepared in full, half and quarter strengths. The full-strength applicator contains 5.4 mgm. of radium element per square centimeter of surface. The half-strength contains 2.7 mgm. radium element per square centimeter and is the one of preference for cutaneous work. A very useful applicator is the half-strength containing ten milligrams of radium element. This may be obtained at a cost of twelve hundred dollars.

In the treatment of *nævi* (port wine marks) radium seems to possess a selective action producing an endarteritis with a resulting proliferation of the endothelial cells and an occlusion of the blood vessels.

Lupus Erythematosus.

To date I have treated one case, the history of which I will briefly state. The present trouble began in January, 1914, as a small red spot beneath the left eye. In about six weeks it seemed to form a blood blister, which scabbed over. The scab soon came off, leaving a red ridge. This began to spread and the patient consulted his family physician, who removed it with a knife, but the incision never healed. His face was then treated with the X-ray without result. During the treatment a similar condition appeared on the right hand. This was also treated with the X-ray and was cured. After a short time his physician advised him to consult a specialist, who told him he had a cancer and treated him with a white paste, which was very painful, over a period of seven months, at the end of which time there was no improvement and the patient returned to his home. Figure 1 shows the condition before treatment. Figure 2 ten days after treatment. Figure 3 thirty days after treatment.

Keloid.

In keloid radium gives most satisfactory results, acting almost as a specific.

In pruritus of the anus or vulva, short un-screened exposures of radium give almost instant relief. In a case recently treated by myself relief was obtained in two short exposures, the case being four years in duration and having reached the point that operation was being considered.

Carcinoma.

Basal-celled (rodent ulcer) is the most amenable of all forms of malignant disease to radium treatment. The following case report will show the extreme sensitiveness of this condition in its early stages. Mr. A., a laborer, age fifty,

came to me stating that Dr. Shipp, at the Folsom clinics, had diagnosed his case as cancer and advised him to consult me in regard to radium treatment. Figure 4 shows the condition before treatment and Figure 5 ten days after treatment.

The squamous-celled carcinoma is not so sensitive to the rays as the basal-celled, but in early cases responds equally as well to persistent treatment.

In carcinoma of the uterus radium has done remarkable work. In one out of four inoperable cancers an apparent cure is established. This compares favorably with the results of operation in operable cases, the operative statistics of Kelly being twenty-five per cent. and those of Kroenig twenty per cent. By combined treatment, that is, operation plus radiation, Kelly has been able to raise his percentage of cures from twenty-five to seventy-five per cent. Hopelessly inoperable cases are invariably relieved of the metrorrhagia, leucorrhoea, pain, odor and discharge, and in many cases there is a sclerotic transformation of the tumor.

Sarcoma.

In its early stages, before dissemination has taken place, sarcomata, especially lympho-sarcoma, do exceedingly well under radium treatment. I am at present treating a case of sarcoma of the orbit referred to me from the Folsom Clinics by Dr. F. Vinsonhaler, which I feel in the end will yield a splendid result.

Hodgkin's Disease.

One case of this malady has come under my observation. The case presented massive glandular involvements in the neck and axilla. After the first radiation, which was very heavy, there was a marked reaction in the course of twenty-four to forty-eight hours, the temperature going to 104° F. This was accompanied by malaise, pain in the long bones, headache and backache, all of which subsided in the course of two days. At the end of two weeks the glandular involvements were perceptibly smaller, and the patient apparently made an uneventful recovery. The case was treated in March, 1914, but since her discharge from the hospital I personally have not heard from her. A. E. H. Pinch in his report of the work carried out at the Radium Institute, London, reports four cases, all of which were improved.

Goiter.

Since my purchase of a supply of radium, several cases of this type have applied for treatment. No case has received more than one treatment, but in all there is a marked benefit to be noted. Pinch reports four cases, an improvement being noted in all of them.

In Gynecology.

Radium is most useful in gynecology in the treatment of uterine hemorrhages due to metropathies or disturbed ovarian function. Practically all cases are sufferers from secondary anemias and very few are good operative risks. They may be relieved by radium in almost every instance, a much simpler means than hysterectomy. From one to three applications may be necessary and in more than fifty per cent. of cases menopausal symptoms, hot flushes, etc., are relieved.

Uterine Fibroids.

The earliest case of this kind was treated by Abbe, in 1905. In the article in which it is reported he states that "it is quite probable that when the exact dosage of radium and its best method of application can be certified, it will be found to be a uniformly curative agent for fibroid tumors." Kelly and Burnam, in 1914, reported twenty-one cases, in all of which the hemorrhage was controlled and the tumor decreased in size. In eight cases the tumor entirely disappeared. In a later article by Burnam published in May, 1915, he states that "about five per cent. of the cases treated do not decrease in size. Some of these are calcified fibroids and in others the patient lacks the necessary solvents in her blood. Neither the size nor the position of the tumor are of moment.

Tumors of the Breast.

In the malignant type radium will not only take care of the primary growth but will cause glandular metastases in the axillary and supraclavicular regions to disappear, but in the light of present operative statistics with eighty-five per cent. of cures in the absence of glandular involvements, operation should always be recommended to be followed by radiation. Of course where operation is contraindicated radium is and should be used. Local recurrences respond exceedingly well to the effects of the rays. Until mediastinal involvement is evidenced, radium offers hope in any case of carcinoma of the breast, primary or recurrent.

Conclusions.

1. Radium has great and positive value, the exact boundaries of which have not been determined.
2. With few exceptions, as in epithelioma of face, in dealing with malignant disease, it should always be used as an adjunct to operation.
3. By the combined use of radium and operation, operative statistics may be materially improved.
4. In inoperable conditions radium offers new hope, and although not a panacea will in many instances establish an apparent cure.

Epididymopuncture.

By NOAH E. ARONSTAM, M.D.,
30 Adams Avenue West.
DETROIT, MICH.

Epididymopuncture, if the author be permitted so to call it, is a valuable procedure in relieving inflammation of the epididymis from any cause, pre-eminently so when due to gonococcal infection. The treatment of epididymitis in vogue heretofore consisted in the application of various forms of ointment to the scrotum, internal medication, suspension and rest. While the latter two are indispensable in the proper handling of such cases, the former two have absolutely no influence upon the course and duration of the disease. How an ointment is able to penetrate the thick, dartos tissue of the scrotum is a source of speculation to the author; such a method is only a vestige of blind adherence to medieval forms, that still stubbornly cling to us, in spite of our better knowledge of the pathology of this affection. Without denying the efficacy of bacterin and rest in these cases, the author wishes to recommend and lay stress upon a *modus operandi*, but recently introduced, for relieving and aborting cases of epididymitis.

By looking over his records the writer found within the past year 23 cases that appeared for treatment of epididymitis, mainly caused by extension of the process from a specific urethritis. Abandoning all older methods, he had recourse to but three, viz., suspension, bacterin and—which is of far greater value—epididymopuncture. While heretofore his patients were generally confined to bed for five days to a week, under the old regime, they never were for any length of time under the new method. Except for a day of repose after puncturing the epididymis, they resumed their usual duties shortly after it, of course with thorough suspension of the scrotum and occasional injections of the gonococcus bacterin (combined). He does not question the importance of the latter as auxiliary measures, but only desires to point out the great value of epididymopuncture in the treatment of epididymitis.

Methods of Procedure.

The field of puncture is thoroughly cleansed and painted with tr. of iodine. The scrotum is grasped firmly, so that the swollen epididymis is between the thumb and index finger, and a previously sterilized hypodermic needle joined to the syringe is thrust into the epididymis; the piston is then withdrawn. At times a small amount of serum enters the syringe, occasionally

admixed with blood; then again there may be a complete absence of both serum and blood, but this matters little. The puncture, *per se*, is of vast benefit both as counterirritant and to relieve tension. The needle is withdrawn and the puncture sealed with collodion. The patient is told to keep to his bed for a day, after which he may return to his usual work.

On the next day, as a rule, the patient feels better; there is a pronounced abatement of pain, and the swelling has considerably decreased. Resolution takes place rapidly thereafter, so that at the end of one week the epididymis has subsided to its normal size, except perhaps for a small node that still remains; yet it is but insignificant in size as compared to that which is left as a result of ordinary resolution, obtained by the older methods. No untoward complications or effects have been noted by the writer. *En passant* it may be remarked that no local anesthesia of whatsoever kind has been used.

The following are the advantages derived from epididymopuncture:

1. It is a simple and easy method requiring no complicated apparatus.
2. It can be done without the aid of a local anesthetic.
3. It markedly curtails the course and duration of the inflammation.
4. A repetition of the process is seldom necessary.

In conclusion the writer wishes to recommend epididymopuncture as a safe and rational procedure in quickly relieving inflammation of the epididymis from any source.

The Epidemic of Infantile Paralysis.

As this issue goes to press a serious epidemic of infantile paralysis is spreading over the country from New York City. The daily newspapers are printing really able articles upon what is known in the way of prevention and cure, and it is incumbent upon physicians to co-operate in every way with these agents of publicity, and more particularly with the Boards of Health.

We regret inability to offer any suggestions except a careful study of recent text-books, so the attending physician may make an early diagnosis. There is no known cure. But, Doctor, don't despair. Use your best judgment in the general management of your cases. We wish to urge a reading of "Serum Treatment of Acute Poliomyelitis," in the abstract department of this issue, as also "Hypochlorous Acid Intravenously," which immediately follows the other article.

Oral Infection in Relation to Systemic Infections.*

By HARRY E. MYERS, M.D.,

Clinical Instructor in Gynecology, Ohio State
University College of Medicine,
Columbus, Ohio.

It is a fortunate circumstance that at the present time the medical and dental professions have their attention drawn to one subject which is of vast importance to us all, and were I to attempt to cover all the ground on the subject it would be impossible.

There is something new and startling in medicine every day. At one time it is a new serum, at another time it is "twilight sleep," at another it is a bacillus to prevent old age; but who, ten years ago, would have dreamed that rheumatism, acute nephritis, neuritis, and other systemic diseases, are in a great number of cases associated with hypertrophied and diseased tonsils, or to a concealed unrecognizable abscess at the root of a tooth. Yet this is one of the greatest scientific discoveries in medicine and dental surgery today.

The human body is like any other delicate mechanism: it is a composite of separate units, all of which must be in good condition and perform their separate functions perfectly if one's health and mentality are to be conserved. A watch will not keep correct time if the tiny hair-spring is bent; a compass will not be true if the needle becomes demagnetised, and one can not be well if all the organs are not functioning harmoniously. It is an unrefuted fact that the general health depends largely upon the condition of the teeth and oral cavity.

Riggs' Disease.

The question may arise as to how Riggs's disease and apical abscesses at the root of a tooth may cause disorders in remote parts of the body, and also as to how infection of the tonsil and naso-pharynx may be the initial cause of infections elsewhere in the body. Generally apical abscesses, as these concealed abscesses are called, are formed on teeth which have been treated by a dentist. Usually the root-canal has not been thoroughly filled, possibly due to a crooked root, from which it was impossible to extract all the dead nerve, the remaining portion of which in a short time decays; there being no outlet, the pus works inward through the root of the tooth, and

an abscess forms at the apex in the bone tissue in which the teeth are set, and in advanced cases necrosis or destruction of the bone tissue. Pus, no matter where it forms, seeks an outlet at a point where there is least resistance. It has a most extraordinary power of working through muscle or bone tissue, until at last it finds an outlet, or is absorbed by the blood.

This toxic poison is distributed throughout the circulatory system. It requires no great imagination to see how any portion of the body, however remote, receiving the poison generated in the mouth, may become the seat of infection, or why, if the cause is removed, the patient may recover from the systemic disturbance of whatever nature.

Etiology.

The causation of the progressive characteristic infectious condition which has become known as pyorrhea alveolaris, has been the subject of many researches. Like all infections, there are internal or predisposing, and external or exciting factors involved. The reason for localization of any infectious agent in the various selected parts of the body is a subject of debate.

In pyorrhea local irritations, such as faulty dental work, and constitutional conditions have been charged with the creation of the local susceptibility. Undoubtedly they play an important but variable rôle in the lessened local resistance. As exciting causes we have the advent of various forms of micro-organisms.

Amebic Involvements.

Until of recent date the causative micro-organisms were supposed to be entirely bacterial in character, although no constant species or race of bacteria could be held to be the exclusive etiologic agent.

Although it has been known that amebæ were to be found in the mouths of large numbers of individuals, it remained for Drs. Barrett, Allen J. Smith, C. C. Bass, F. M. Johns and W. B. Middleton to show their intimate association with the deep-seated lesions in various stages of pyorrhea, or Riggs's disease, thus giving a renewed interest to the etiology of pyorrhea and especially to its prevention and treatment.

Bacterial Involvement.

According to a report from Dr. Henry Ludwig Ulrich, of the University of Minnesota Hospital, in an effort to correlate oral sepsis with systemic infections or lesions in patients ex-

*Read before the General Practitioners' Medical Society, February, 1916.

hibiting rheumatoid conditions, special inspections of mouths was made for pyorrhea, gingivitis, caries, and, by means of the Roentgen ray, for apical abscesses. He was surprised at the frequency of apical abscesses in these cases. His findings, on examination of 500 cases, were as follows:

Number of teeth abscessed 669, or 67.5%; number of dead teeth 1,350; number of dead teeth with root canal fillings 976; number of abscesses in pulpless teeth due to caries or accident 439, or 32.62%. Total number of abscesses 1,108, or 83.42%.

Henrici reports 107 cases from the university clinic, of which 100 showed the *Streptococcus viridans*; and 52 from private clinic, 50 of which showed *Streptococcus viridans* or *Streptococcus hemolyticus*, and occasionally *Streptococcus mucosa*. Thus 150 of the 500 cases exhibited the streptococcus either in pure culture or as the dominant organism. Occasionally the *Staphylococcus aureus* or *albus*, or the *Micrococcus catarrhalis* was also observed in connection with the streptococcus.

Hartzel and Henrici found in 163 cases that 150 yielded streptococci. They report inoculation of twenty-four rabbits with *Streptococcus viridans* isolated from apical abscesses. Heart lesions were found in five, kidney lesion in seven, those of aorta in three, and of joints in two.

Focal Infection

In the light of the doctrine of the focal infections the prevalence of these abscesses, with their flora and pathogenicity, takes on added significance. It stands to reason that apical abscess is merely another evidence of a focus of streptococcal focal disease, just as the lesions found in the heart, mucosa of the stomach, articulations, or the kidneys, are evidence of secondary deposits, or may be metastatic in character.

It would seem probable that focal infections are no longer to be looked upon merely as the place of entrance for bacteria, but as a place where conditions are favorable for them to acquire the properties which give them a wide range of affinities for various structures.

Origin of Infections.

Experimental evidence as to the mode of origin of these abscesses has not been secured. Their pathology and their relation to other concurrent foci show ample clinical verification. We may cite three striking forms of evidence for basing our judgment, as follows:

First, acute *exacerbation* of systemic symptoms takes place following operative removal;

or, in other words, focal reactions occur owing to auto-inoculation at the time of disturbing the focus, as in the dental work on abscessed teeth, or operations on infected tonsils.

Second, acute *new* systemic symptoms have followed reduction of these areas followed by the removal of these sites.

Third, local and focal reactions occur with vaccines prepared from infected apical areas.

Analyzing Cases.

Seventy-six cases were analyzed clinically at the Minneapolis Hospital, in which a streptococcus was isolated from apical pockets. For convenience they were classified as follows: First, a rheumatoid group, in which the special feature of the cases consisted of arthritis deformans, rheumatoid arthritis, neuritis, and myositis, with or without cardiac involvement (38 cases); second, a cardio-vascular group exhibiting as the main feature heart lesions or hypertension without any appreciable rheumatoid manifestations (6 cases); third, an asthenic group closely allied to group one, showing joint, periarticular pains, nerve or muscular pains, but in the main feature is one of athenia, mild anemia, albuminuria and occasionally myocardial weakness. Visceroptosis is a common finding in this group (18 cases); fourth, a gastro-intestinal group exhibiting gastro-duodenal ulcers, gall-bladder or pancreatic symptoms, and acute enteritis and diabetes mellitus (4 cases); fifth, a genito-urinary group allied to group one in having at times rheumatoid pains with renal, bladder, prostatic or vesicular involvement (2 cases).

Sub-groups—*Streptococcus* infection superimposed on tuberculosis, syphilis, primary anemia, or vice versa (8 cases).

Diversity of Manifestations.

A striking feature of this analysis is the diversity of clinical manifestations for which streptococcal focal disease is responsible.

In analyzing these groups, we find manifestations of rheumatoid conditions, 51%; heart lesions, 47%; blood secondary anemia, 43%; tonsils, 40%; pyorrhea, 25%; kidneys and pancreas, albuminuria, diabetes and acute nephritis, 34%; caries, 15.8%. The tonsil or pharyngeal ring is the commonest focus, and possibly the primary portal of entry.

Treatment.

To us who are attempting active immunization against disease, a diseased naso-pharynx, hypertrophied or diseased tonsil, or blind dental abscesses, have a very practical significance. Apical abscesses may be the only focus, evacuation of

which will permit the re-establishment of renewed integrity to all parts. It may hold the balance of power in the struggle of the body for complete sterilization.

It is only within the very recent past that the rank and file of the profession have come to realize the intimate relation between oral and systemic infections. As a matter of fact, an unfortunately large percentage of the profession still remain insufficiently acquainted with the extent to which oral sepsis may affect the organism as a whole.

No one will dispute the fact that the united efforts of the dental and medical professions to acquaint the laity with the dangers of oral infection has served to make us individually and collectively more familiar with their nature and immensity. No one will deny that in urging others to be more cautious we have ourselves become more cautious. In disclosing to others the danger of germ-laden oral accumulations, we have revealed to ourselves many of its dangers to which we long remained too indifferent.

467 Wilson Ave.

Appendicitis in Children.

By THOMAS H. KELLEY, M.D.,
4715 Drexel Boulevard,
CHICAGO, ILL.

In these days, when so much emphasis is laid on efforts to lower the mortality from children's diseases, it seems proper to direct attention to a condition which, while admittedly not common, should not entirely be ignored in the causation of death in the early years of life. Many lives might be saved annually if the possibility of appendicitis were weighed in the bedside consideration of the acute abdomen in children.

The recent literature is especially scant in reference to this condition. It seems to be the settled conviction of practitioners that the condition is so rare, and when present is so surrounded with diagnostic obstacles that it is almost negligible as a clinical entity. The writer's contact with these cases leads him to firmly believe that this condition is more frequent than it is generally supposed to be, and that if the possibility of its presence were more frequently entertained and its attendant symptoms closely searched for, a not inconsiderable number of lives might be saved.

Anatomical Considerations.

The appendix in children is relatively larger than is the case in adult life. It is found more downward, inward and deeper, the region being often accessible to rectal palpation. In females the appendix is usually permitted a freer blood supply, owing to proximity of the ovarian vessels, and this accounts for the less frequent incidence of the condition in the female.

The comparative thinness and delicacy of its coats explain the ease and rapidity with which early rupture takes place with the production of either a local, but more frequently a general, dif-

fuse peritonitis. The appendix may exhibit in long-standing cases all the thickening, kinking and bound down condition of a chronic case. It is noted that its relatively greater length renders it prone to make fast to surrounding structures, often to the ovary and bladder. A few cases are on record where in its inflamed condition it perforated into the bladder. It seems probable that a chronic indolent inflammation, with periodical acute exacerbations, gives rise to certain cases of irritability and lack of robustness seen in children. Adhesions may bring about mechanical disturbances in the abdomen of a persistent nature.

Frequency.

Statistics vary somewhat as to the frequency of appendicitis in children. Dixon, of St. Louis, found a gangrenous appendix in the strangulated hernia of a child twenty-four days old. The appendiceal tip had been adherent to the hernial sac, probably due to a previous inflammation. Several surgeons have reported cases in infants of about two months. McCosh found in a series of 1,000 cases in children that 1.7 per cent. occurred between one and five years. Churchman, in an analysis of 1,223 cases at Johns Hopkins Hospital, found less than 1 per cent. in children under six years; but he is painstaking to state his belief that this low figure is due to difficulty attending the diagnosis. More recently, Deaver, in 1911, finds 8 per cent. in the first five years on the basis of 500 cases. In June of this year Klopton, of St. Louis, presented a rather large series of cases observed at the St. Louis Children's Hospital during the preceding eighteen months. He found 9 per cent. in children under five years; 54 in children between five and ten years, and 37 per cent. in children between ten and fifteen years. His figures may

be taken as fairly representative of the occurrence of appendicitis in childhood and as according more nearly with the beliefs of most present-day authorities.

Symptomatology.

The symptomatology is characterized usually by a slow gradual onset, but exceptions are many. For a time these symptoms are indefinite and greatly resemble those of the usual gastroenteritis. Soon the child gives evidence of increased pain, and vomiting ensues, which tends to persist even after the stomach is empty. However, in a small percentage of cases there is little or nothing of vomiting. Finney states that gentle massage of the abdomen usually quiets the child, although quite the opposite is known to be the effect in the adult. He seems to be alone in his delineation of this finding. In a considerable number of cases a frequency of, or slightly painful, micturition is noticed, due to the juxtaposition of the appendix to the bladder or ureter. Again, not infrequently the little patient may tend to flex the right leg, bespeaking contact of the inflamed structure with the ilio-psoas muscle. There will be present a distinct rigidity generally of the whole abdomen, but the determination of its localizing significance is difficult owing to the fears of the child and its lack of coöperation.

Rupture of appendiceal contents often supervenes as early as twenty-four hours, with the production of either a local or general peritonitis. In the former case a localized swelling gradually makes itself prominent, with fever and general toxic symptoms. This abscess often lies low in the pelvis and is detected much better by rectal palpation. The general form, with its board-like rigidity and accelerated breathing, is all too familiar to need explanation.

A Series of Cases.

In my series of seven cases, observed during the last two years, the ages ranged between eleven months and five years. Six of these cases were in males. All seemed to suffer intense pain distributed generally through the abdomen. There was marked rigidity in all cases. A tendency to raise the right leg was observed in all. Most of them complained of more or less disturbed urination. In all not operated within twenty-four hours, there were signs of a spreading peritonitis at that time. The leucocyte count was noticeably low considering the nature of the infection. All cases were submitted to laparotomy, three showing gangrene and one a definite localized abscess. One of the cases, a boy, eighteen months old, died from diffuse peritonitis, but the other six made uneventful recoveries.

The diagnosis is more difficult the younger the child. Given an acute abdomen, the possibility of appendicitis should be borne in mind. Careful and repeated efforts should be made to allay the suspicions and fears of the child and secure its coöperation. This is especially necessary in rectal palpation which gives a wide scope of the lower abdomen and which should be unflinchingly employed. Pain and vomiting, the latter tending to persist when food is withheld, are important symptoms. The urine should be examined to help eliminate the condition in this tract.

Differential Diagnosis.

The most prominent conditions that loom up in the differential diagnosis are gastroenteritis, intussusception, pneumonia, hip disease, cystitis, pyelitis, and cyclic vomiting. Not infrequently is the surgeon called to interfere in supposed abdominal crises when on careful examination some acute pathological condition of the lower chest is found. Pneumonia, as regards pain and rigidity in the right lower quadrant, often simulates appendicitis.

Mortality.

Von Barmann places the mortality in children at 50 per cent., owing to late and faulty diagnosis. But, I believe, there is no reason why there should be a mortality above 1 per cent. if the case is treated surgically within the first twenty-four hours.

Treatment.

Operative interference is indicated similarly as in cases of adults. The risk of the anesthetic and shock are but slightly greater. The proclivity of the condition to progress to early rupture makes operation indicated even earlier than in later years. The appendix should be removed even in abscess where this can be done without too much disturbance of the delicate encircling wall of defense. Even when only a high degree of probability as to the diagnosis can be obtained, it seems proper to resort to an inspective laparotomy.

In conclusion, I desire to emphasize the point that while appendicitis in children under five is rare, its consideration should not be discarded in acute abdominal disturbances. The symptoms and signs are more obscure than in adults, but much definite information may be elicited by careful examination and tactful handling. When the diagnosis is reasonably certain, operation should be strongly urged in view of the probability of impending rupture and peritonitis.

If you know young and healthy nurses who might be useful in military hospitals, urge them to study army nursing and field-hospital technic.

The "Hit or Miss" Use of Pessaries and Uterine Supporters.

By FRANCES A. HARPER, M.D.,
PITTSBURG, KANSAS.

In ancient medicine displacements of the uterus, other than prolapse, received but little attention. In the Middle Ages prolapsus was treated by the use of solid pessaries, wood, and similar materials, being used for making them. Parè (1573) was the first writer to describe a number of these instruments, but they were probably used before that time.

Having little or no anatomical knowledge of the correct relations of the pelvic organs to guide them, it is small wonder that the various contrivances used by the ancients served as nothing more nor less than a sort of *plug* or *prop* intended to hold the organs up. *How or where, they wot not; but why?—just because they had dropped down!* Reason enough!

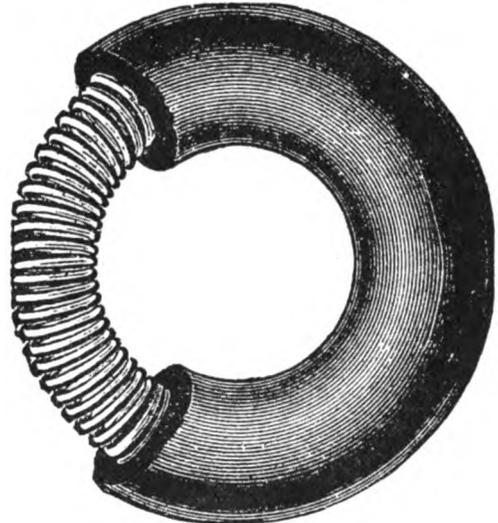
About the middle of the nineteenth century displacements came to occupy an important position in gynecology; at that time the treatment of these conditions was almost entirely by means of pessaries, *many hundreds of different forms being used*. The tampon was used by a few physicians at that time, but *pessaries were used indiscriminately*, and often with unsatisfactory results, until finally during the 60's the pessary was generally abandoned in favor of surgical methods.

In recent years the use of the pessary has been revived for certain selected cases by many physicians, and as long as intelligence and discrimination are exercised in its application and use, all is well; but you can no more overcome uterine displacements and distortions by the "*hit or miss*" use of pessaries or supporters than you can cure a broken leg by the unintelligent manipulation of the broken bone and the haphazard application and use of splints, bandages and crutches. Do you see the point? *First, reduce or correct the existing displacement, deformity or fracture; then the splint or bandage or "crutch" will hold the position gained, until they may gradually be dispensed with altogether.*

Abuse of the Pessary.

Dr. Goldspohn, in the discussion of Boldt's paper (1908) says: "The great evils which occurred in connection with pessaries, and therefore led the profession to exclude them from use, *were not due to the pessary, but to its ignorant use, its abuse, in introducing it as if it were a jackscrew to raise something.*"

"*Tamponade*" gets a black eye because the scientific principles of pelvic support are not carefully studied and worked out and applied, the vaginal canal being considered as *simply a space to be filled*, without regard to existing conditions above. Why, the ancients obtained the same effect from their pessaries of wood and iron. Either one's conscience or brain must be asleep when he will continue such methods of "treatment" from year to year.



Proper Application.

All mechanical contrivances acting as remedial measures serve a good purpose if intelligently and properly applied when specifically indicated, and removed and discontinued when the need for their use no longer exists; so it is with the use of the pessary, and the various other uterine supports; when properly adjusted—and *indicated*—the results are good; when improperly applied, and *contra-indicated*, indifferent or bad results will accrue. Their indications or contra-indications can only be determined by a careful examination and diagnosis of conditions, followed up by rational treatment, thoughtful experimentation and experience.

When Pessaries Should Not Be Used.

A pessary should not be used in uncorrected flexions or other deformities of the uterus, inflamed or prolapsed ovaries, or where there exists inflammatory infiltration of surrounding tissues, for obvious reasons; all such complications

should first be treated for correction, before the application of a pessary is at all practicable; these complications are overcome by local treatment, the need for such artificial support no longer exists. Occasionally, however, in chronic cases of retrodisplacement, where the general and, in the great majority of such cases, when vitality of the entire system is greatly impaired, even after all complications are apparently overcome, there may still remain a certain tendency to a laxness of the uterine musculature. In all such cases, it may work a great benefit to the patient to have a proper pessary adjusted, which simply acts as an efficient "*crutch*" to obviate any possible tendency to a recurrence of the displacement, until Nature, with the aid of various hygienic measures, and general tonic treatment, has had time to build up and make firm and strong again the unduly weakened structures.

The Test of Efficiency.

As a rule, the test of the efficiency of a pessary (as in the use of tampons) is the total absence of untoward symptoms from its presence. It should surround the cervix, fit easily and comfortably within the sacral curve, and give no sign, except that of comfort and relief. Any feeling of discomfort or tenderness arising from its use should be immediately investigated and corrected, either by adjustment or treatment, as much harm may be done by erosion of the tissues, or even pressure upon adjacent organs, unless discretion is exercised in this direction, and an easy adjustment made.

No uterine supporter should be worn continuously over a long period of time, but occasionally should be removed and permitted to remain out for certain intervals. In this way the tissues are better enabled to regain their inherent buoyancy and strength, and do not get to depend upon any artificial means for their support.

Self Application.

With a little instruction and practice the patient will be able to remove and replace a pessary at will, and it is well for her to do this, for perfect comfort and cleanliness. Immediately at the cessation of each menstrual period it would be well to remove, cleanse well, and replace for a week or ten days; then, it may again be removed, replacing it at or near the beginning of the next period. Thus the organ is effectually supported at the time of its greatest functional activity and consequent relaxation, and any tendency to displacement thereby corrected.

In treating all deformities and flexions of the uterus it will be observed that the general relaxation of all the tissues, incident to functional

activity, is apt, for the time being, to bring about a recurrence of any pre-existing displacement or deformity. Such a tendency is overcome, free and perfect drainage established, normal and painless expulsive contractions brought about, and a long-drawn-out and exhausting menstrual period brought to a normal and speedy close, by properly adjusting a suitable pessary just before the expected period, and allowing it to remain to its close. In this manner I make use of the pessary, as I would a crutch for a broken leg, a sling for a disabled arm, to take off all undue strain, effort, weight or pull, and to give as nearly perfect rest to the structures as possible, until Nature gets in her reparative and corrective work. And thus should all artificial remedial measures be used, whether for medication or mechanical support.

Which Pessaries to Use.

In treating uterine displacements there are but a few of the pessaries or uterine supporters which I have found of especial value—the Smith-Hodge, hard rubber, and the soft rubber, spiral spring, in retrodisplacements; the glass or hard rubber spheres for prolapse complicated by rectocele or cystocele, with good perineal support to hold in place; and the McIntosh Uterine Supporter, especially applicable to cases of elderly women with prolapsed state of uterus and adnexa, whose age or condition precludes the advisability of instituting operative measures. Thus will it be seen that a pessary or uterine supporter may be used as an *effectual supplementary aid* to other *curative measures*, or it may serve merely as a *palliative*, in either of which instances a wise purpose is served.

In my own practice I make use of a pessary *more as an effectual supplementary aid to other local measures* than as an independent support; the simpler the pessary, and the easier the adjustment, the better.

I believe I could almost exclude all the above mentioned pessaries or supporters, excepting the *soft rubber, spiral spring*; in fact, I rarely use any other. It serves as the "*crutch*" which so many have inquired about and asked me to describe. It is soft and flexible, yet gives good support, and is easily adjusted by the patient herself, when necessary. I frequently use it to supplement my supportive packing, by slipping it in after packing is adjusted, where it is desirable to have a continuous support for a considerable period of time. At the expiration of twenty-four or forty-eight hours the patient may herself *withdraw the supportive packing through the pessary*, without dislodging it; and by pushing it up from its lower edge, the pessary re-

main *in situ*, encircling the cervix like a collar, and making the ideal "crutch."

Copious douches and postural exercises may be taken as indicated and instructed until next treatment is given, when I remove the pessary, introduce supportive packing, and re-introduce the "crutch." I have found this method especially applicable and very efficient in treating those cases residing at some distance out of town, who cannot always get back on schedule time; and also as a patient improves and gradually

gets out from under treatment, this "crutch" keeps them ever "on the mend." These cases yield readily to such methods of procedure, and there is seldom a recurring displacement to correct, and it is not long until the *habit* or tendency is completely overcome.

But, "everlasting vigilance," should be our motto. The only way to cure displacements is to prevent their recurrence. Then "PREVENTION" must spell "cure."

*Atypical Polineuritis.**

By HANSELL CRENSHAW, M.D.,
Neurologist to Grady Hospital,
ATLANTA, GA.

That atypical polineuritis may perplex or even mislead the neurologist is the contention of this paper.

Polineuritis, or multiple neuritis, is an inflammatory and degenerative condition of the axones and their central connections of various nerves, particularly nerves of the extremities. The causes of the degenerative process are two: (1) toxic substances in the blood which circulate around the nerve fibers; and (2) defective nutrition of the nerves or their trophic centers. Either or both general factors may act to bring on multiple neuritis.

The toxic substances may be divided into three classes: (1) those received from without, as alcohol or lead; (2) those due to grave infections, such as diphtheria; and (3) those generated within the body as a result of faulty metabolism.

Differential Diagnosis.

This disease is to be differentiated from tabes, myelitis, anterior poliomyelitis, neuralgias, and hemorrhage into the cord. From tabes it may be known by the absence of the Argyll-Robertson pupils, absence of sphincter disturbances, and absence of gradual onset; and by presence of atrophy, reaction of degeneration, and paralysis. From myelitis it is distinguished by decreased instead of increased knee-jerks, rare instead of constant bladder involvement, a less precipitate onset than in myelitis, and much instead of slight atrophy. From anterior poliomyelitis the differences are that multiple neuritis is symmetrical, while anterior poliomyelitis is usually not symmetrical; that in multiple neuritis there is more

tenderness of the nerve trunks and a much greater degree and persistence of pain and sensory disturbance; and that multiple neuritis usually attacks adults (except the diphtheritic form), whereas anterior poliomyelitis is essentially a disease of childhood. Neuralgias are seldom bilateral while polineuritis is always bilateral; and there is not the persistence of tenderness in the neuralgias that obtains in multiple neuritis. Also neuralgia does not cause atrophy nor loss of reflexes. Finally, spinal hemorrhage is associated with pain in the back that is absent in multiple neuritis, and runs a different course from the malady under discussion.

Salient Features.

The salient diagnostic features of typical polineuritis are: Comparatively sudden onset; paresthesia, pain and tenderness over the nerve trunks; gradual atrophic paralysis of legs and hands; loss of patellar and triceps reflexes; early loss of reaction to faradism and early changes in the reaction to galvanism; wrist-drop and foot-drop; and bilateral involvement of both upper and lower extremities, more particularly the lower.

Prognosis.

The outlook is favorable for most cases of multiple neuritis—a disconcerting fact to those hasty diagnosticians who occasionally mistake atypical cases of this affection for tabes. Virtual recovery obtains in the majority of instances, except cases of pernicious type and advanced alcoholic cases. Even in the alcoholic cases, however, partial recovery at least generally follows withdrawal of the alcohol and application of appropriate therapeutic measures.

In the light of the foregoing well-known facts let us consider now the following brief summary of a case recently studied by the writer and seen

*Read before the Atlanta Neurological Society, April 13, 1916.

by two other members of the Atlanta Neurological Society:

An Illustrative Case.

A newspaper writer, 34 years old, was well until three days prior to examination, when he awoke in the morning and discovered that his visual perception of objects was double and that he walked unsteadily. He managed, however, to dress, come down town and work through the day at his desk. By night he was worse, and next morning remained in bed because he could not walk without assistance.

At examination the subjective symptoms were pain in the back of the neck and shoulders, diplopia, photophobia and emotional distress. Objective findings at the bed-side included slight retraction of the head, divergence of the right eye-ball, ophthalmoplegia, unequal pupils, ptosis of the lids, non-reacting left pupil, thick difficult speech, coarse choreiform movements of the fore-arms (especially the left), marked incoördination of both upper and both lower extremities (particularly the left), absence of tendon reflexes, slightly subnormal temperature, pulse of sixty-five, systolic blood-pressure of 130 m. m., and retention of urine. At this time there was little, if any, sensory disturbance, other than pain and later parasthesias; pain and astereognosis developed in the hands, but more in the left.

Laboratory Findings.

The laboratory reports showed nothing abnormal in the urine nor in the blood except a high percentage of lymphocytes. The Wassermann of the blood and spinal fluid was negative and the cerebrospinal fluid was normal in other respects also.

The visual fields were not notable except for one or two scotomata. But the eye-grounds were interesting indeed. There were six diopters of choked-disc in the left eye and four in the right. Later this increased to ten in the left eye and six in the right.

The family history threw no light on this case; and the only features of interest in the personal history were recurrent pneumonia (first at puberty and again six months prior to the present trouble) and prolonged exposure to cold and wet (reporting a foot-ball game) on the day preceding the onset of the disease. The patient was not addicted to alcohol.

While there was some thought of multiple neuritis, among other possibilities, at the beginning of the case, nevertheless there were features in the picture which seemed to negative such a diagnosis; and polineuritis did not begin to claim serious consideration till much later.

On account of the excessive choked-disc, we at one time thought of the advisability of a decompression operation to save the patient's eyesight. Fortunately, however, the edema of the discs began to subside and operative intervention was deferred and abandoned.

The speech difficulty was at first puzzling, but turned out to be due to a sagging of one side of the soft palate and consequently was not cortical, but attributable to involvement of the motor nerves to the palate.

Again, the participation of the third, fourth and sixth nerves naturally led to the notion that there might be a lesion in the vicinity of the fourth ventricle.

Add to this the large and rigid left pupil, the initial slow pulse and pain in the cervical region and it is evident that the idea of brain edema, a brain hemorrhage, and possible hemorrhage into the cord also could not be easily dismissed.

The Subsequent Course.

The subsequent course of the case, however, has led the writer to believe that there was no hemorrhage and that a diagnosis of atypical multiple neuritis will probably account for all the features of the case.

A neuritis affecting the motor nerves to the eye accounts for the palsy of the extra-ocular muscles and the choked-disc may have been due to an optic neuritis, a view supported by the intense photophobia in this case. Likewise the palatal paralysis was a consequence, no doubt, of neuritis.

The inequality in the pupils might possibly be explained by an injury to the left eye years before and likewise the fact that this pupil did not react. But it is more likely that the third-nerve neuritis might have affected the pupillary reaction.

In conclusion it should be said that the patient after four months has recovered, except for a wrist-drop on the left side; and that only two weeks ago was it discovered that he had two badly infected tonsils, which may have fed his neuritis in considerable measure, but which have just been enucleated and rendered *hors de combat*.

Pregnancy and Diabetes Mellitus.

Dr. Elliott J. Joslin, Boston, in *Boston Medical and Surgical Journal*, December 2, 1915, says these cases should be under constant observation throughout the pregnancy and for some months after confinement, treating them by the methods followed in the non-pregnant, only more carefully and for small amounts of sugar present. Be careful in anesthesia, especially if ether is used, gas and oxygen being preferable.

Pregnancy in diabetes does not demand immediate abortion, not even if acidosis is present. It is not proven that pregnancy aggravates a diabetes, the idea that it does being due to many such women eating an unusual quantity of food. Nor is nursing the babe necessarily contraindicated. Too little data is at hand to assert that there is an excessive weight in children born of diabetic mothers.

*Some Results of Neglect in the Examination of Sick Children.**

By H. BROOKER MILLS, M.D.,

Professor of Pediatrics, Medical Department
Temple University; Pediatricist, Samaritan,
Garretson and American Stomach Hospitals;
Consulting Pediatricist, Hebrew Sheltering
Home and Day Nursery,
1411 Spruce St.,
PHILADELPHIA, PA.

The question of the examination of sick children is one about which but little appears in medical literature and which still less is referred to in medical meetings. This may be largely because so many physicians feel that it is impossible to make a careful and thorough examination of a sick child, when as a matter of fact it is easier and more reliable than would be an examination of the adult. This is largely because the language of disease in childhood speaks only the truth, whereas the adult will frequently wilfully deceive his physician, especially if he fears that surgery may be indicated.

The object of this paper is to report some personal experiences within the past few months of wrong diagnoses being made, largely because of insufficient and incomplete examinations and not because of any lack of ability or knowledge on the part of the attending physicians. It is not my desire to criticise, but rather to suggest, as no doubt in some of the cases a correct diagnosis could not have been made even after a most thorough examination, but in many of the cases, at least sufficient doubt would have existed in the minds of the doctors as to what the right diagnosis was, had they stripped the child and examined it thoroughly, to warrant them in withholding any diagnosis at all until a later date, when the appearance of other symptoms would have made the correct diagnosis an easy matter.

Retropharyngeal Abscess.

The first two cases I wish to report were those of children suffering with retropharyngeal abscess, both of which were operated on for adenoids in the belief that they were the cause of the trouble. At the time of the removal of the adenoids the tonsils also were removed and the resulting traumatism to the parts, of course, simply tended to aggravate the existence of the abscess, so that, in one case, an enormous cervical adenitis developed, requiring a second operation; and in

the other case tracheotomy, it was feared, would have to be done to relieve the frightful dyspnea present, due to the enormous edema. A very cursory examination of the throat, either with the eye or with the finger, would have instantly made the diagnosis in both cases. Strange to say, one of the cases was wrongly diagnosed and operated upon by a man making a specialty of nose and throat work.

Scurvy.

Some time since a patient was brought into the hospital with a large swelling on the inner side of the thigh. The diagnosis was either abscess or sarcoma. It only took a moment's observation to detect the spongy, bleeding gums, the swollen joints and the petechial hemorrhages under the skin and mucous membrane to ascertain that the real diagnosis was one of scurvy, which promptly cleared up under the administration of fruit juices.

Empyema.

A little patient, about the age of two years, was recently sent into the hospital with a diagnosis of frequent attacks of pneumonia, one occurring about every two or three weeks for the preceding eight or nine weeks. This diagnosis was made because following a real attack of pneumonia the temperature would continue to rise and fall, running a typical septic course. A day or so after reaching the hospital a very pronounced bulging the size of a lemon was noticed between the ribs, which broke before operation was possible, thus making a diagnosis that should have been made long before, *i. e.*, empyema.

Abscess vs. Enlarged Thyroid.

A little child with a pronounced swelling under the chin, the diagnosis of which seemed to puzzle the attending physician, was referred to a throat specialist, who made a diagnosis of enlarged thyroid. Before accepting this diagnosis, the attending physician referred the patient to a surgeon, who recognized the condition as one merely of abscess, upon opening which an enormous amount of pus was evacuated.

Several cases of cervical adenitis have been seen where operation has been advised, in some cases actually performed, only to return, because the real cause of the trouble, in some cases decayed teeth and in others diseased tonsils, had not been recognized and treated; in other words,

*Read before the South Branch of the Philadelphia County Medical Society, June 23, 1916.

the effect had been treated without removal of the cause, which naturally could only result in failure.

Abdominal Symptoms in Pneumonia.

Several cases of lobar pneumonia, both in children and adults, have been operated upon for appendicitis, largely because the attending physician failed to recall the fact that, during the first twenty-four hours of lobar pneumonia, particularly in children, the symptoms are largely abdominal, there being no physical signs in the chest at the onset. Had the pulse and temperature received less consideration and the respiratory rate been given its full value, these operations would not have been performed.

Tonsils and Abscesses.

The patient who was the subject of a paper I recently read on pyelocystitis in children is a good illustration of cause and effect which it is possible to establish by carefully watching the symptoms. This patient was brought into the hospital with abscesses on both feet and one hand, and I was able to establish the fact that these abscesses were primarily of tonsillar origin, the tonsils producing the pyelocystitis from which, by absorption, the abscesses developed. This was proven to be the case by an examination and culture of the pus from the urine and from the abscesses, an examination of the blood and a culture of the exudate from the tonsils after they were removed. This case was recently referred to by the English "Lancet" as being the first of its kind to be recorded.

Gonorrhoea in Children.

An infant was recently brought into the hospital to be treated for a persistent diarrhoea with a suspicious discharge from the rectum. Some slight vaginal discharge was also noticed, and an examination of the rectal and vaginal discharge disclosed the case to be one of Neisserian infection. The rectal discharge having apparently been present sometime before the vaginal, the mother was questioned as to having a vaginal discharge herself, which she admitted, and for which she had used douches. She had also given the child rectal irrigations for its diarrhoea with the same syringe, and the so-called chronic diarrhoea therefore was simply a Neisserian infection of the rectum, later extending to the vagina.

Two cases of pyelitis were seen, in one of which all the symptoms present had been blamed on teething and the other on gastrointestinal disturbance. An examination of the urine, so often neglected in young children, promptly cleared up the diagnosis.

Renal Tuberculosis.

Tuberculosis of the kidney existed in a little

patient in which almost every conceivable diagnosis had been made without the real one even being suspected, much less examined for.

Several cases of congenital syphilis where the diagnostic signs were very marked were diagnosed and treated as cases of malnutrition, or marasmus, the food being frequently changed because it was believed to be the cause of the frightfully emaciated condition of the child.

Otitis Media.

Cases of otitis media have been frequently overlooked because of the failure of the attending physician to remember the well-known fact that this condition may, and frequently does, exist in children without pain.

A ten-year-old child, complaining of coldness of the hands and feet, with blue lips, loss of appetite, dyspnea, and irritability, was ordered plenty of physical exercise to overcome the supposed poor condition of the circulation, when the real diagnosis proved to be an endocarditis secondary to a number of attacks of tonsillitis; and therefore absolute rest, rather than physical exercise, was the one thing needed above all others.

A number of other cases of a similar nature might be mentioned, but they would only serve the one purpose for which the foregoing are ample, *i. e.*, to prove that the failure to strip the child and thoroughly examine it is frequently productive of disastrous results. Physicians frequently claim that a careful examination of a crying baby is not possible, nor is it satisfactory; but while I realize that this is true, I also feel that a little tact and patience on the part of the physician and mother will usually attract the child's attention for a few moments, at least sufficiently long to get the information desired. It is true one can hear nothing in the lungs when the baby is crying, nor does an abdominal examination reveal anything when the muscles are in a state of rigidity as they are the moment the child's abdomen is touched; but in this connection I would call your attention to the fact that much may be learned as to conditions existing in the abdomen by placing the child face downward over the hand of the examiner. In this way the abdominal muscles are relaxed and any abdominal condition, if present to any considerable extent, especially any enlargement—as for example of liver, spleen or kidney—may usually be felt very readily.

Tact, Patience and Thoroughness.

As I intimated before, my object is not to criticize others, nor to give the impression that any one else would have done any better than they did, but merely to urge tact, patience and thor-

oughness in the examination of sick children and the withholding of a final diagnosis, especially of a surgical nature, until this can be done. More frequent examinations of the middle-ear and of the urine should also be made, and much less blame should be placed on such normal physiological conditions as teething than has been the tendency in the past.

In conclusion, let me remind you always to

bear in mind the thinness of the chest walls and the presence of the thymus gland in children—many diagnoses of pneumonia and tuberculosis being wrongly made owing to the failure to recall the latter point—and also to be careful to postpone to the end of the examination all tests that are unpleasant to the patient, as, for example, of the ears, nose and throat.

1411 Spruce Street.

*Acute Abdomen.**

By JOHN J. GILBRIDE, A.M., M.D.,
Assistant Professor of Surgery, Medico-Chirurgical College, Philadelphia, Pa.
1934 Chestnut St.

The acute abdomen is caused by conditions which demand early recognition and proper treatment if we are to benefit any considerable number of these cases. That a very large percentage of these patients can be saved when they receive the right treatment within the first twelve or twenty-four hours has been conclusively demonstrated. Not all patients coming within the twenty-four-hour period can be saved, but after that period the mortality mounts rapidly.

I believe that the majority of practitioners are keenly alive and thoroughly aroused as to the exigencies of those cases, while of course here and there one may meet one of the few physicians who are still following the practice of twenty-five years ago. All those doctors of slow pace and hesitating, halting step are not on the outside of hospitals, so to speak. There still lingers an occasional one on the "inside," as I have seen a case of undoubted perforation of the duodenum allowed to remain in the ward of the hospital unoperated from early morning until late at night "waiting developments." These instances must be rare. Decision therefore is of the highest importance in these cases. The most common conditions causing the acute abdomen are diseases of the appendix, the duodenum, the pancreas, perforation of the stomach and of the gall bladder, certain pelvic conditions, thrombosis of the mesenteric vessels, etc.

Acute Appendicitis.

The most frequent cause of what we call acute abdomen is acute appendicitis and the profession is now pretty well able to diagnose the great ma-

jority of cases; however, there are atypical cases that demand a most careful examination, and even then one may not make a correct diagnosis.

When a patient gives a history of abdominal pain or so-called cramps, this demands careful investigation, and one should look upon the case as a serious one until it is proven to be otherwise.

Not a few cases of perforated duodenal ulcer have been mistaken for acute appendicitis, since the pain and tenderness may be localized in these cases, and the extravasated fluid following certain visceral planes has gravitated to the right iliac fossa. If this mistake has occurred, one can, at time of operation, differentiate the latter from the former by the character of the extravasated fluid, perhaps by the presence of air in the abdominal cavity, and by the absence of local signs of appendicitis.

Perforation.

Perforation of gastric and duodenal ulcers requires prompt recognition and surgical treatment, as in both conditions the result of operation and the mortality is in proportion to the time that elapses between the perforation and the operation. In many of these cases there is a clear history of the disease, but one must not expect the typical text-book symptomatology in all cases.

In a few cases of peritonitis it is difficult to decide whether the case is one of appendicitis or a duodenal ulcer that has perforated. Under these conditions, a previous history of attacks of appendicitis on the one hand, or a previous history of intermittent attacks of indigestion accompanied by "hunger pain" on the other hand, is strongly in favor of duodenal ulcer. Hunger pain is a valuable symptom of duodenal ulcer and before we recognized this symptom we were absolutely helpless in making a diagnosis.

In perforation of a gastric or a duodenal ulcer there is a sudden, sharp, severe pain in the abdomen, which is followed by that characteristic board-like rigidity of the abdominal wall.

*Read before the Cumberland County Medical Society at Vineland, N. J.

Perforation may occur during exertion or follow the ingestion of food or drink. The pain is usually at first in the upper abdomen, epigastric mid-abdominal, or in the right hypochondrium and occasionally in the right iliac fossa; or the pain may radiate to the back. Often from the severity of the pain the patient is unable to localize it. Sometimes the patient at the time of perforation has a sensation of something having given way. These patients lie on their backs; the abdominal wall scaphoid; the knees drawn up, with fixed muscles, and they remain in one position. Abdominal rigidity sets in early and is often termed "board-like." In the first few hours after perforation it is most marked in the upper abdomen but rapidly becomes generalized. Tenderness may also be localized in the upper abdomen in the region of the perforation, but owing to the rapidly spreading peritoneal irritation other areas of peritoneum become sensitive to pressure. If one should have the opportunity to see these cases within the first few hours following the perforation one probably could follow the extending peritonitis from above downward in contradistinction to the peritonitis of appendicitis which spreads from the right iliac fossa upward to the epigastrium. However, when these patients are seen, usually it is difficult in some cases to determine the point of beginning peritonitis; this is especially true when in perforating ulcer of the duodenum or pylorus in which, as has been pointed out, the contents escaping from the stomach or duodenum follow the grooves to the right iliac fossa.

Vomiting a rather constant symptom.

In the majority of cases a history of the ulcer type is obtainable; but if such a history should be lacking, it should not deter one from making the diagnosis of perforation.

Shock in varying degree is generally present immediately following perforation. In most patients it is transient and of comparatively short duration.

Vomiting is a rather constant symptom not of much importance as an aid to diagnosis except the vomitus may rarely contain a little blood.

So far as the temperature, pulse-rate and respiration are concerned, there is nothing very striking. The temperature is generally normal; the pulse-rate may be and frequently is slightly increased; respiration is also increased in a compensatory way.

In most cases there is an increase in the leukocytes within a few hours after perforation, and there is generally a proportionate increase in the polymorphonuclear leukocytes. However, there are cases in which there is no increase in the leukocytes.

The important points in the diagnosis of duodenal ulcer are: the definite relation of pain to food; the time interval; the re-occurrence of the attacks; the chronicity of the disease; the intervals of good health between the attacks; the relief of pain by alkalies, and the presence of hyperchlorhydria.

Acute Pancreatitis.

In acute pancreatitis the symptoms described by Fitz are as follows: It begins with intense pain, especially in the upper abdomen, soon followed by vomiting, which is likely to be more or less obstinate and not infrequently accompanied by slight epigastric swelling and tenderness, with obstinate constipation. A normal or subnormal temperature may be present and symptoms of collapse precede death by a few hours, which is most likely to occur between the second and fourth days.

Acute pancreatitis is frequently diagnosed as intestinal obstruction.

The disappearance of liver dullness is a myth and it would have been better if this harmful sign had never been mentioned. It has been the custom of the writers of the older text-books, and unfortunately a few of the newer books, to retain disproven statements, to emphasize later symptoms, those founded upon dead-house pathology, as against the opportunity for observation of the pathology of the living. Authors must learn to clean house and discard the rubbish from symptomatology.

Not for the Country Doctor.

Coöperation in any form is greatly to be desired and at the same time the most unlikely occurrence imaginable among country practitioners.

We who live in the smaller communities never see other physicians, except a distant view of the "skinflint" who lives around the corner or an occasional specialist, before whom we bow down as to a demi-god.

Because we work alone and are aware that a great proportion of our patients recover under our treatment, while at the same time we form our opinion of our competitor's work through watching the trips of the hearse to the homes of his patients, we become egotists and imagine ourselves little lower, medically, than the angels, and our professional neighbors—most of whom are our equals or superiors—several degrees lower than the meanest imp under orders from His Satanic Majesty.

No, I do not think any sort of coöperation will work among the present generation of country doctors; but, if it should come to us unexpectedly, we would live a more nearly ideal life than any other class of men anywhere under any condition, in any place on earth.

FREDERICK D. KEPPEL, M.D.

Cazenovia, N. Y.

OUR OPEN FORUM

The Terrible Incidence of Insanity.

I have recently had opportunity to observe closely the stream of insanity cases passing through the County Hospital here and on to the State Asylums.

While I was aware, in a general way, that insanity was on the increase in this country, the facts have staggered me to my very soul's marrow.

I promised myself to get these facts before the medical profession, in a way to get some of our bright men after the causes; but personal sickness will prevent this at this time.

Doctor, the menae of this hideous condition is frightful!

Every public asylum in the country is crowded with the poor ones; and sanitariums and retreats for the rich ones are multiplying; and still the ratio of increase of insane cases grows by leaps and bounds.

Over 20,000 new cases of dementia precox in these United States last year; with probably three times that number of other forms!

Should one-fourth of these figures be presented by some zymotic disease, every power of our Public Health Department would be exercised to locate the cause and remove it; and not one real, scientific thing is being done to handle this cancer eating the very vitals out of our national life.

You are in a position to present this alarming condition to the profession, in a way to enlist the live men in a movement to locate its real causes, and remove them.

I wish I might make a personal appeal to some of the real diagnosticians of the profession—men who can follow back from an effect to its true cause, and not be side-tracked.

Some of the men, and women, who think all the really big work in medicine has been done, can find a field here that will yield results that will rank second to none.

I lack the words to show the hideousness of this hellish menace of insanity. Death in a few days from some infectious disease would be Heaven's own mercy by the side of the misery caused by these cases of insanity.

Surely you can start some live men after this blighting thing.

Los Angeles, Cal. WILLIAM R. LEE, M.D.

Dr. Lee does not overstate the matter. The causes are these: Syphilis, a main factor; alcoholism, a close second; lowered vitality from tuberculosis and the "strenuous life" degenerations, a good third; economic pressure and "the dark and dismal routine," a growing fourth. Most cases of insanity have a material basis in

pathology, and insanity is a resultant, not an initial, condition.

Insanity is what may be called ingrowing sin—sin in its larger aspect, moral, mental, psychologic, physical, of omission and commission. The prevention is a sane civilization. Sane civilization has gone to seed and the crop is a frightful war and a world-wide unrest. The cure will be the new civilization to follow reconstruction, in which nations and the individual man will be given a square deal.—EDITOR.

The Capabilities of the Old Doctor.

Given, a physician fifty to sixty years of age, with strong and unimpaired physical ability, finely trained mentality, his brain a veritable store-house of valued experience, his trained mind and hand, his ability to successfully cope with the varied emergencies and requirements; and in my opinion he occupies about the same relative position in the profession as a fully equipped captain of an ocean liner to a midshipman, and should he care to take up his professional duties in a new field, he does not have to experience the so-called process of building up a practice; it is simply waiting for him.

So many instances of this kind have been witnessed by myself and many other physicians that I feel inclined to enter a demurrer to the popular but erroneous idea, for an incentive and encouragement of many a capable physician and surgeon, otherwise included in the list of the incapacitated.

I have been favored with the intimate acquaintance of one of the most prominent physicians in the Connecticut Valley, who told me that his income, solely from professional duties during his seventieth year, exceeded that of any previous year of his entire life as a practitioner. He enjoyed the ability to practice until eighty years of age.

Of course, in order to obtain this result, the elderly physician must be ever alert to the advancing avalanche of medical science, which together with his matured judgment and experience, render him a veritable bulwark to the profession and a life-saver to the community fortunate enough to procure his services.

It is granted that the physicians here cited are the exception, but not the rare exception.

The opinion of the editor kindly solicited.

Gladstone, Mich. E. H. BIDWELL, M.D.

Being fifty years old myself, and just as busy and active as ever, naturally it comes easy to agree with Dr. Bidwell.—Ed.

Announcements for September.

"Vitamines and the Deficiency Diseases" and "Vegetable-Engendered Ptomaine Poisoning" will be the subjects of two leading editorials.

ORIGINAL ARTICLES.

"Weighing the Psychic Factor in Gastrointestinal Cases," by Dr. George M. Niles, discusses in a most helpful way the subjective side of gastroenterology, and shows its relationship with the objective one.

"The Stomach Tube and Its Uses," by Dr. D. W. Reed, is a brief and practical paper of general interest.

"The Administration of Ether," by Dr. J. W. Kennedy, a most able presentation in much detail. Some rather revolutionary views are promulgated, but they are based upon an immense experience.

"Cancer," by Dr. E. E. Fisher, is another scholarly and yet practical paper upon a subject we have been exploiting from month to month. This paper shows some angles of the subject not previously covered.

"Milk and Its Relation to Infant Mortality," an instructive paper contributed by the Department of Chemistry, Colgate University.

"Typho-Malaria," by Dr. Henry Bixby Hemenway, is a sensible clinical article of very general interest—an old subject in a new guise.

"Some Recent Theories on the Causation and Treatment of Stammering," by Dr. G. Hudson-Makuen. This is an able paper by an authority on the subject.

"Struma and Goiter," by Dr. A. Seibert; "Disease of the Pituitary Body," by Dr. W. R. Dillingham; "The Management of Fractures," by Dr. Jas. A. Foltz; and "Bleeding Arteries Controlled Without Torsion or Ligating," by Dr. T. F. Lockwood, are other papers on hand, all of which it is possible to crowd in, will appear in September.

THE BUSINESS SIDE.

"Are We the Cause?" is a searching paper on our deficiencies as physicians as a basis for our business failure. It is by Dr. J. Henry Dowd.

"Lo, the Poor Doctor" is an interesting skit full of human interest, by Dr. Edwin G. Kyte. Several other *brief* articles will appear.

LOOK FOR THE SUPPLEMENT ON THE NEWER DRUGS.

We are striking the stride of strenuous service. Get in step, Doctor; get in step, and join our forward march. There's always something doing in MEDICAL COUNCIL'S pages.

NOTE.—Unless this column is specially marked and a bill for subscription inclosed it is not intended for you. Or if you have just recently remitted and a bill is inclosed here, please ignore it. With a subscription list well over 25,000 it takes several days for a subscription to pass through, be finally credited and the stencil transferred from one classification to another.

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If when you pick up this copy of MEDICAL COUNCIL you feel,—“Here is a journal that *truly* belongs to *me*, a journal with only *one* idea—to give me and my brother Practitioners real help in the problems of our everyday work”—then we are attaining the goal of *true service* that we are earnestly striving for.

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<p><i>While we, as physicians, desire to be scientific students and practitioners of medicine, and that is the primary purpose for which this journal is published;</i></p>	<h2 style="margin: 0;"><u>THE BUSINESS SIDE</u></h2> <p style="margin: 0;"><i>of Medical Practice</i></p> <p style="margin: 0;">"The laborer is worthy of his hire."</p>	<p><i>yet, for the welfare of our dependent ones and our standing in the community, we must secure a fair compensation for the services we render our fellowmen.</i></p>
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*The Medical Profession of the United States and Canada: Its Present Social Standing and Future Possibilities.**

By ADRIAN SCHOLTEN,
INWOOD, IOWA.

The members of the McGill Medical Society doubtless realize that the medical profession is an important factor among the many groups working on social reform, and therefore we deem it interesting and profitable to discuss with you the position that this group holds in our social body. You will note that I have limited my subject to the profession of the United States and Canada, for there is sufficient difference between the medical profession of these two countries and that of others to give it distinctive characteristics. From time to time we have been impressed by information tending to show that the spirit pervading the larger and better element of France, England and Germany is that of public service, scientific progress, and a commendable zeal to attain high standing in the community, the remunerative element being a very secondary consideration.

Financial Returns from Practice.

It is believed by many that this is not the case in the United States and Canada, but that the financial return is uppermost in the minds of most physicians. They consider fee-splitting to be quite prevalent, for they have met physicians in whom the commercial spirit undoubtedly predominates.

A study of the history of medicine in the two countries with which we are dealing shows why the commercial rather than the scientific spirit is in control. In the time before medical schools had been established, graduates from the lecture halls of Paris, Edinburgh and London who had received the "advanced education" which these centers afforded, carried to this country the scientific and professional ideals which resulted in the establishment of medical schools and hospitals. At first their work in this line was crude and without system. But by reason of the resource-

fulness, conscientiousness, and self-sacrifice of these men the schools they established did noble work, for the ideals of the product of these schools were beyond criticism.

Medical Education.

But the sound start in medical education was not to last long. Commercial corporations began to educate all those who could pay their price for a degree. Medical schools were considered profitable from the commercial viewpoint and therefore many such institutions were established in different sections of the U. S. and Canada. From the year 1810 up to the present time more than 450 medical schools have been established. Fortunately some were short lived; others survived in the struggle for existence and graduated a large proportion of the practitioners of our present generation.

The creation of the commercial medical school was the forerunner of the destruction, or serious depreciation of scholarship and the high ideals of the earlier medical graduate. This type of school has resulted in incalculable harm to medical education and medical practice. Their curriculum was many times illogical and very short. The laboratory work or equipment was no more than was absolutely necessary, when viewed from a business standpoint.

School Competition.

As late as 1876 to 1880 the efficiency and the ethics of the medical graduate were sacrificed to bitter competition between different schools and to their desire for larger classes, larger receipts, and more extensive advertisement. Many of the professors we believe were teaching because of the fact that they were on the faculty of a locally well-known medical school increased the income from their private practices.

It is but natural that students passing out from an atmosphere of this kind should be permeated by a similar spirit. In fact, the graduate of such schools had for their highest ideal the monetary return, and were entirely lacking in that other

*Prize essay, McGill University Medical Department.

higher, more admirable ideal, scientific progress, a better profession, and unselfish medical service.

Personal Competition.

True, here and there during this degenerative period of medical education, we find individual graduates of commercialized schools who in every way surpassed graduates of better institutions. However, in the case of the *average* graduate of such institutions the environment in which they had been educated bore fruit in ideals and practices which have been handed down as an evil legacy even to the profession of today. There is still a keen rivalry between local practitioners as to who shall have the more extensive practice and who shall be able to glory in the largest income. It is this spirit and ideal which characterizes the North American from the European physician, who would ten times rather do something for his community, or occupy some obscure place in a research laboratory, at a modest salary, than to have the \$25,000 income of an unethical but celebrated American practitioner.

The Tide Is Turning.

But the tide is turning, thanks to the improvement in our medical education. Rather miraculous changes have been made in the medical courses offered by various schools, and in consequence many of those who were connected with these institutions for commercial reasons have withdrawn. A large number of third-rate institutions were "forced out of business" by the American Medical Association, and the remainder are bringing their courses up to the standard which that organization has drawn up.

Although medical schools such as Johns Hopkins, Harvard, Washington University, McGill, and a few others, have practically satisfied all the requirements of the American Medical Association's "Ideal Standard," there are still a number of low-grade schools which have shown little or no improvement, and as there is no hope of their reaching the standard set, they have no excuse for their existence.

The Profession's Relationships.

Having thus given you an epitomized history of certain factors which have influenced and molded the medical profession of the United States and Canada, we wish to divert your attention to the main thought of our subject, viz., the *present* social standing of this profession and its future possibilities.

We shall present it from three viewpoints, viz.: The profession's relationships; its economics; and its value to the community.

Its relationships are both intrinsic and extrinsic. Its members have certain mutual rela-

tions to each other and to the profession as a whole, and they are also closely related to the public. There was formerly such a bitter rivalry in the "business" of healing the sick that it was frequently impossible for local practitioners to be friendly or have any dealings with each other. Bitter aspersions, unkind and even dishonest criticisms of a brother practitioner were considered a legitimate part of the professional etiquette in the race of "getting business." Such conditions will soon be history, for bitter rivalry is being replaced by a friendly spirit of helpfulness, mutual interests, a healthy respect for the abilities of others, and a splendid charity for their weakness.

In organizations composed of physicians, ideas and experiences are exchanged, papers are read, helpful criticism is offered and thus that bitter animosity engendered by competition is being replaced by a spirit of coöperation and brotherhood. However, the picture is not without its blemishes. In every community we find elements which do not show a coöperative spirit. Unprincipled physicians get certain gossiping tongues started with derogatory reports about their fellow practitioners and in other ways violate the Code of Ethics. Such men have failed to realize that if the medical profession is to be a true guide and guardian of the lives and health of the community, they must coöperate and not fight; they must enlighten and not confuse.

Mutual Relations of Doctors.

If the mutual relations of the members of the medical fraternity have made favorable progress, the relations of the profession to the public have progressed in proportion. As a body they are doing more for the good of the community than any other body of social workers. We believe it can be truthfully said that the medical profession is at the present time showing a sincere and determined interest in the welfare of the community. This attitude is not localized, nor is it passive. It is not confined to the U. S. or Canada. It is world-wide; for the desire of the medical profession to improve the physical condition of all people has almost become a passion.

Preventive Medicine.

In the past, and not long ago, the physician was a medicine man; a distributor of pills, powders and bitter tasting liquids. He confined his work to the treatment of those who were ill or injured. With the dawn of preventive medicine, with its numerous avenues of usefulness, a new field has been opened up to him. This field is large and promises returns more in proportion to the work done. It has given to the conscientious physician, who almost despaired of the useful-

ness of his profession because of the uncertainty and frequent futility of his remedies, a confidence and an enthusiasm for his chosen work. He feels that now he does not resemble the quack. Problems such as are presented by communicable diseases demand his attention, and if he does not personally take up the scientific study of these problems he studies the work of others to see if there is some new development which he can utilize in his efforts at prevention or cure.

Social Problems.

Social problems, such as school and industrial hygiene, municipal sanitation, eugenics, feeble-mindedness, etc., are all urgently beckoning, and he does his part in meeting these various obligations imposed upon him by the science of preventive medicine. In each and every one of these different fields of activity we find the medical man leading in the work. By improving the health conditions and diminishing the amount of sickness, the physician is reducing to that extent the opportunities by which he contrives to obtain a livelihood. However, only by "sawing off the branch upon which he is sitting" can he live up to the medical profession's Code of Ethics.

Medical Economics.

Medical economics is interesting because it is innately different from the economics of any other group of workers. It should be studied, for it behooves society to know whether it is receiving fair returns for the outlay it makes for its medical service, and the medical profession should know whether it is being dealt with fairly by society.

The system of fees upon which the doctor depends for his living originated in the times when the barber was the doctor. His fee was a variable quantity, depending entirely upon the generosity of his patient. Royalty and the nobility often rewarded their medical attendant handsomely, but not a few physicians paid for their failure to cure with their heads. Public opinion and custom have allowed the doctor to establish certain arbitrary fees and these are now considered almost as much of an obligation as a grocery or clothing bill.

We find that in the industrial and mercantile business, service can be computed on a profit-producing basis. Not so in medicine, nor can the time element be made a basis for the charge. The removal of a chip of steel from the cornea—an operation delicate enough to at times strain even the skilled operator—may take only five minutes, yet who shall say that it is not worth more to a patient than a visit to his home to

see a child suffering from acute indigestion, which visit may involve an hour of the physician's time. (The child's indigestion if it had been left to Nature would probably have righted itself without medical attention.)

Medical Fees.

The medical fee in actual practice we find is arbitrarily placed at about the point where the public will stand for. It seems to us that the financial element is one of the sore points in the work and lives of medical men, realizing as they do that their work is essentially humanitarian. It is a painful experience to be called upon to coldly calculate the value of "service rendered" in dollars and cents. This is especially true when he is convinced that he has rendered no service, but must accept the usual fee. It is a fact that the medical situation in this country does not afford the average practitioner a sufficient income to equip himself properly for his work and at the same time provide proper maintenance for his family—if he has any—and to the credit of our profession, be it said that most physicians have a large or a small family.

Too Many Physicians.

There are at the present time in the United States an average of one physician to about 640 persons, the proportion varying as to locality—1 to 460 in New York City, 1 to 580 in Chicago, 1 to 245 in Washington, D. C. (Why the capital of the country has so many physicians is an interesting problem.) Knowing that one physician to 2,000 would be a more rational proportion, and believing that Canada also has too many doctors, this question demands our attention. We have found that this overcrowding of the profession seriously interferes with the financial returns of the individual men and thus prevents them from keeping in proper touch with the progress of medical science by attending clinics or taking post-graduate courses. To this extent it handicaps him from rendering more efficient and better trained service.

Doctors' Accounts.

In a city where we have had the pleasure of managing a collection agency which handled nothing but doctors' accounts we have been able to gain much information concerning the subject under consideration. The seventeen physicians of that city can be taken as a representation of the entire profession. Some had ability and high ideals, others had neither of these, but were financially more successful.

This city has a population approximately 12,000, which allows 750 people to each medical practitioner. From our work, we judge this city

affords \$2,500 per annum for each physician, but this amount is very unevenly distributed. The annual income of some is more than \$6,000 while others scarcely receive a living wage. Such financial returns can surely not be conducive to a healthy ambition to give the best *service*, nor does it allow a surplus for investment in necessary equipment.

Is Our System Wrong?

From the viewpoint of the public, is it receiving adequate returns? Is the present system economical and efficient? From a study of the conditions in the city in which we had access to the financial status of each physician, we concluded that the average per capita tax for medical services would be \$3.50 per year. In an adjoining city with a population of only 3,000, we place the per capita tax at \$2.50. These estimates are general, being based upon the actual figures taken from the account books of the physicians when this was possible, but when not possible from any available and seemingly reliable sources. In that city in which the per capita tax is estimated at \$3.50 an average family of six persons should pay each year \$21 for medical services. This sum is, of course, at present unevenly apportioned. Some families have much more illness than others, and unfortunately the brunt of the burden often falls on those least able to pay.

Every collector meets cases where the income of the family is entirely cut off, by reason of the head of the family being ill. There is no recourse in such a case; he has simply to abide the issue, and if the illness is protracted his account cannot be collected. This phase of the present system of medical service is highly unsatisfactory. The physician often receives no reward for his services, for the unavoidable tax of sickness or accident works a hardship not only on the poor but on that large respectable middle class whose earnings are ordinarily sufficient to provide for their families but who are quickly stranded by any extra contingency.

Our Fees Are Low.

With the average per capita rating approximately \$3.50, and knowing the meagre income of certain able physicians in that city, it is hard to see how prices could be diminished in justice to the physician, even though they are too burdensome for many patients. Yet when we consider that about half of those physicians could easily render the same service to all the inhabitants it becomes apparent that good economy is not practiced. It is this overcrowding of the profession that at the same time handicaps the

doctor and unnecessarily burdens the public. And the worst feature is its effect on efficiency of service. Because of excessive competition, many physicians fail to associate themselves with the rest of the profession and come to view society too much as a source of income rather than an opportunity of service. These physicians are a drag upon progress and lower the standing and usefulness of the medical profession.

State Medicine.

Great Britain has been face to face with the same problem in medical economics. The rich were able to command adequate and efficient service. The destitute were taken care of by free dispensaries and charity hospitals; but that large class, "the workers," often deprived themselves of prompt and able medical attendance on account of its cost, which they found themselves unable to afford. The growing demand on the part of that class for state aid and their practice of employing the lowest priced doctor resulted in passing the National Insurance Act. Much of the hostility which the radical bill aroused in certain sections disappeared in the first year of its actual application. For the first time the physician was paid for all his work, and preventive work was encouraged.

The War and Medicine.

The war is intensifying the problem of medical economics in Canada. Many returned soldiers are requiring medical attention and at present are receiving such free of charge. Those who fail to return often leave families who will find it difficult to finance ordinary needs and doubly difficult to meet the added expenses of illness. After the war immigration will bring newcomers who must also manage to pay all obligations on very small incomes. The doctor will be doing more charity work than ever before. Therefore it is our opinion that some such legislation as the National Insurance Act represents should result in Canada in the near future, and thus a sore spot in the lives of many will be removed.

The Doctor a Community Asset.

The social value of the medical profession to the community is both conservational and educational. The physician is not a parasite, living upon the rest of the community, but a tremendous help in its growth and development. To conserve the public health, and indirectly its wealth, is the especial privilege of the medical profession. The cure of disease and the caring for the injured form the traditional sphere of his usefulness, and this is still and will always be

a valuable asset to the community. But that larger sphere of influence aiming to lessen the sufferings of humanity by the prevention of disease is the *modern* conception of his usefulness. The medical man is now the doctor-citizen—no longer is he merely the family doctor, but a teacher, hygienist, sanitarian, medical inspector, and health councillor. These phases of his work have been most cheerfully assumed by the present-day medical practitioner, and we hope that those here gathered will carry on the good work which has only begun. Such a rôle will be impossible to any one who views the profession as a lucrative business.

A Doctor Can Do Something Except Practice Medicine.

In the February issue of THE MEDICAL COUNCIL Dr. Charles F. d'Artois-Francis asks the question, "What is a doctor good for aside from the practice of medicine?"

In this question the good doctor gives expression to a doubt whether or not a physician is able to get a living if he is compelled by circumstance to relinquish his chosen profession. I have no doubt that a doctor need fear about his livelihood if his practice ceases.

Prior to the average physician's entering the profession of medicine, it is presupposed that his preparation for that calling has put him in position to gather data relative to other vocations, which he may use as a means of subsistence. The only question that would arise under such circumstances is whether he is willing and ready to harmonize his vaulted pride with the change in his calling which he has been forced to take up.

If he has been thoroughly prepared to practice medicine, that preparation has given him workable information in other fields of activity, and I cannot conceive of any fears that his death-knell for livelihood has been sounded.

It is true that his time and energy are taken up with the idea of making himself more efficient in medicine, yet I don't think that his cosmos is limited particularly and especially to routines of his profession without a working knowledge of other helpful vocations to which he may turn his attention for a living. There are always possibilities and hope for the physician to do something else to maintain his existence aside from practice of medicine, if by chance he is driven into other fields.

J. W. PIERCE, M.D.

Dendron, Va.

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Surgical Scissors

As wielded by Douglas H. Stewart, M.D.,
F.A.O.S.

The scissors of an editorial office are bright, keen, polished and practical. May this space imitate them and its quality be helpful.

Gas Bacillus Infection.

A. M. Fauntleroy, M.D., U. S. N., in *Annals of Surgery*, January.

The robust young patient, unless promptly and efficiently treated, falls as easy a victim as a less vigorous or older man. Under certain circumstances the infective process becomes circumscribed, to a varying extent, because mixed staphylo, or pyocyanus contaminations may account for a protecting wall of leucocytes. Since the gas bacillus is an anaërobe, an abortive or other plan of treatment demands the production of aerobic conditions in the wound, as a cardinal surgical indication. Free opening of wound, thorough irrigation, removal of foreign bodies are all good steps.

Bandages and Other Matters.

Given two Surgeons; let them dress two separate wounds but use the same technique. Then one will almost always procure some sepsis, while the other will not. Apparently they have done the same things. Admitting the evil that follows too large sized or too tightly drawn ligatures; then, the same corresponding success, or its lack, will follow certain men, even when no stitch, ligature or suture is employed.

Failure, in this instance, waits upon the more able and conscientious man. One who pulls his threads too tight or who is an expert bandager is apt to marvel at the excellent results obtained by his associates when the work of the latter appeals

to his eye, not at all. Let him wrap one wound up in a baggy, sterile towel and bandage the other with an artistic, narrow bandage, and he will then realize the full truth, as Joseph Bryant maintained it, viz.: "The widest practicable bandage should be used, if rapid healing is desired." Trial will clearly reveal that the wide bandage gives better results, is more comfortable to its wearer, and does not look quite so pretty when compared with an unduly narrow one; but it demands approval because it refuses to become cord-like or to strangulate tissues or to produce any effects that are irreconcilable with hyperemia or healing. This "wrinkle" and its application to the injured hands, arms and legs of workmen will save many dollars to any community.

The Hypodermic Syringe.

A little practice with an empty hypo. will show that the following rules have good reason for their basis. They are collected from various sources:

1. Hold between thumb and forefinger and then plunge directly downward for intramuscular injection.
2. Hold between index, middle and thumb for sub-dermic injection.
3. Hold between all four fingers and thumb and then rotate. That is, bore between the layers of the skin, for intra-dermic injection.

Thermic Destruction of the Gonococcus.

Am. Jour. Urology and Sexology, Jan., 1916, J. A. Fulton, M.D.—This is an article which treats of applying heat to the urethra. Since the gonococcus perishes in a temperature of 113° F., and the urethra can endure 120°; and as heat penetrates living tissues, in time, consequently a bougie maintained at 120° and held in the urethra from 30 to 50 minutes should destroy all gonococci whether of the surface variety or buried. The details of the apparatus and the striking results claimed are told in the *Med. Review of Reviews*, page 206, March, 1916. The idea is to utilize the continuous flow of heated water through a bougie closed at one end.

End Results of Resection of the Ovaries for Microcystic Disease.

John A. McGlinn, A.B., M.D., Philadelphia, *Am. Journal of Obstetrics*, March, 1916, page 437.—Instead of resecting ovaries, simply puncture surface cysts; with a minimum of handling, clear up the "associated pathology" of the pelvis. Bring ovaries into proper position and maintain them there. Any ovary which is not amenable to this treatment should be removed. It has not

been found necessary to reopen a single case when an ovary has been so treated. On the other hand, the practice of resection has necessitated reoperation a number of times.

Tin Fracture Splints.

C. C. Johnson, M.D., Creighton, Neb., in *Lancet-Clinic*, April 22, 1916. This is a paper read before the Northwestern Nebraska Medical Society.

The author says that the bones will tolerate less infection than other parts of the surgical body and that this is doubly true of the joints. He gives pictures and schemes for making splints out of tin, and he claims a large range of usefulness for these splints, with new possibilities for their employment, every day. They may add to the supporting power of adhesive plaster, may stiffen dressings, may be easily shaped for use about fingers, thumbs, crushed hands, arms or legs, for fractured ribs, over the spine and around ankles. These splints may be shaped, perforated or fenestrated, whereas ready-made splints never fit. It is maintained that plaster (of Paris?) may be used in carefully selected cases, but it should never be used as a first dressing in fractures or dislocations, nor if you find something (better!) to take its place—such as tin, a piece of stove-pipe or of a wash boiler. It is interesting to hear men of much experience claim to have obtained better results in former days when boards were employed than they have secured with plaster spicas and patent splints. This the author's experience confirms.

Progress Toward Ideal Obstetrics.

Joseph B. De Lee, M.D., Chicago, *Am. Jour. Obstetrics*, March, 1916.

1. The midwife destroys obstetric ideals.
2. She is not absolutely necessary at the present time.
3. Europe for centuries has been trying to bring her up to a tolerable standard, and failed miserably.
4. She is a relic of barbarism.
5. It is impossible to train the midwife sufficiently to make her a safe person to attend labor cases. In educating her, we assume the responsibility for her; we lower standards, we prostitute ideals, we compromise with wrong, and I for one refuse to be *particeps criminis*.

Warmed Ether Vapor For Anesthesia.

Franklin McCarthy and Benjamin Franklin Davis, Chicago, *Annals of Surgery*, March, 1916.—Conclusions:

1. The amount of heat required to warm ordinary ether vapor as used in anesthesia by the

open or closed methods, or by intrapharyngeal or intratracheal insufflation to body temperature, is so small as to be a negligible factor in lowering body temperature and inducing shock in anesthetized patients.

2. The warming of ether vapor, however administered, is accomplished in the mouth, pharynx, trachea and primary bronchi, and the anesthetic reaches the alveoli at body temperature.

3. The quantity of ether required to produce and maintain anesthesia does not appear to be materially influenced by warming ether.

4. So-called cold ether vapor does not appear to be more irritating to mucous membranes than warmed ether.

5. No more mucus and saliva is secreted when anesthesia is induced and maintained with cold than with warmed ether.

Soap.

G. K. Dickinson, M.D., Jersey City, *Medical Record*, March 25, 1916: "Plain soap possesses a real antiseptic power against the staphylococcus, and the typhoid bacillus is even more sensitive to it. Laboratories seem to possess a short cut to the explanation of many things and to perfection of diagnosis. Perhaps good old-time common sense has been neglected and replaced by the findings of the laboratories. The biggest and best laboratory of all is clinical experience of the unconscious type. There is a trend toward hygienic measures and the use of nature's antiseptics, known as soap, water and sunshine.

Unna, after a preliminary wash, pastes potassium soap over his hands and arms, rubbing it until fairly dry, and then, after putting on gloves, proceeds. But even the educated surgeon, after washing, fails to keep his hands in the antiseptic mixture until the last germ has been killed, but splashes a little and goes to his gloving. The resisting powers of various germs vary, even in the same mixed culture; consequently all of the immersed bacilli are not killed by the same time-length of immersion in soap solutions.

By way of comment: Soap, to act as a germicide, must be present, but most surgeons act as if it should be cleansed off as quickly as possible. Contaminate a scalpel; thrust it through a cake of laundry soap several times; test it with blood serum culture tubes, and it will be found sterile. Wipe the blade off with sterile gauze and it will still be found sterile. But thrust that blade through the soap and wash it off quickly with sterile water and then plenty of positive cultures may be obtained. Soap spoils culture tests of hand sterilization, not because it is soap but be-

cause it is washed off too quickly from a skin, the germ-infested depths of which are thoroughly and conscientiously stirred by a vigorous use of the nail brush.

Shirring the Round Ligaments.

John Wesley Long, Greensboro, N. C., in *Annals of Surgery*, June, 1916.—Open the abdomen, expose the parts and with forceps seize the round ligament about midway. Make traction upon forceps and from one-half to one inch of the ligament may be pulled out of the inguinal canal. While the ligament is under tension a curved needle (one without cutting edges) is thrust through it as near the inguinal exit as possible. The needle carries silk or linen and should be thrust through the ligament repeatedly, spacing about one quarter inch between thrusts so that the final needle puncture is close to or at the forceps bite. Pulling the ends of the suture shirrs and shortens the ligament. When the suture is tied the knot hugs the internal inguinal ring. Gentle traction upon the suture develops a tiny meso-ligament. Catching this with the forceps, pulling it over the shirred portion of the round ligament; the needle, still carrying the original suture, is thrust through this meso-ligament from below upward. The needle is removed and the suture tied. The shirred portion is thus covered, not only out of sight; but out of the reach of any intestine seeking a troublesome adhesive alliance.

The aforesaid abstract has met Dr. Long's approval, but the reader must bear in mind that "A bad cook stirs the custard both ways." A good surgeon would know that if the first stitch were put in from right to left, then all succeeding insertions of the needle must be in the same direction. The doctor takes this for granted, of course, and what he says is very clear.

Hemorrhage of Hemorrhoidal Operation.

Rollin H. Barnes, M.D., St. Louis Mo., in *Lancet-Clinic*, June 17, 1916.—Clean-cut incisions, a minimum of traumatism and the use of direct pressure give the least bleeding. Direct pressure does not mean wiping and is employed, preferably, with dry sterile gauze. We do not find large blood-vessels and uncontrollable bleeding when we are operating in the rectal region; but we do find that veins are largely involved and that we are engaged in removing a tumor which is situated within a tube that is itself surrounded by muscles that can contract the lumen of its hemorrhoidal portion.

The secret of hemorrhage-control is to take advantage of all this and to place a piece of gauze

in the anus whenever it is necessary to stimulate contractions of such muscles; but we should not forget to instruct the nurse to remove that gauze when the first sign of contraction is shown. Hemorrhage results from: 1, carelessness as to clean incisions and the lack of proper attention to bleeding vessels, at the time of operation; 2, the use of a rectal plug and consequent interference with muscular contraction; 3, meddling disturbance of the dressings.

A pad over the anus for the first few hours, a fairly tight T-bandage to hold that, and non-defecation, assist the desired contraction. The patient may furnish valuable support by placing his hand on the dressings over the anus. In secondary hemorrhage the escaped blood has a tendency to clot and produce pressure if defecation can be avoided. Interference will seldom be necessary if these principles are carried out.

Urinary Test for Syphilis Compared With the Wassermann Reaction.

Carl D. Gray, M.D., *N. Y. Med. Record*, May 6, 1916.—Two solutions: 1st, resublimed iodine, one grain in chloroform; 2d, 10% phosphoric acid. 1 cc. of No. 1 and 6 cc's. of fresh urine are shaken together. Tube allowed to stand till chloroform settles. Negative reaction shows settlement pearly white. Positive shows pink. Add 1 cc. of No. 2; shake and allow to settle. If after five minutes chloroform turns white, the test is negative. Alcohol, polyuria or glycosuria give positives. Trial in 200 cases showed that in no case was it negative where the Wassermann was positive. On the other hand, in a few suspected cases it was positive where the Wassermann was negative.

A pro pos of syphilis, some gentlemen resented a quotation in *Scissors* about the inunction cure being a means of turning a man into a smelly bed-bug. These gentlemen even defied the present writer to mention any mode of treatment which could be substituted for it. So here goes: 1st, THE COUNCIL is a Philadelphia paper; 2d, in that city was one, S. D. Gross, not unknown to fame; 3d, he used successfully suppositories of blue ointment; 4th, he did this for years; and his works do speak for him. Next!

Tetanus.

N. Y. Medical Journal, page 975, Francis J. Dever, M.D., Phila.—The subcutaneous or the intra-muscular use of tetanus antitoxin therapeutically is of little or no value. The combined use of the intra-spinal and intra-venous injections has reduced the mortality and is the method to be used at the present time.

Also page 999, abstract from *Bulletin de L'Academie de Médecine*, Phocas and Raband. Persistent and progressive contracture is a constant manifestation of late tetanus. A patient with compound comminuted fracture of left leg soon after application of plaster apparatus and on fortieth day of injury, began to complain of drawing sensation in toes of left leg. Pain and spasm increased, and later the masseter muscle showed similar tendencies. Spinal injection of tetanus antitoxin, large doses of chloral, and the Bacelli-phenol treatment led to cessation of muscular spasm in one week. In spite of this and of the plaster apparatus, posterior subluxation of the tibia took place, and the fragments of the fractured bone became markedly displaced.

It may not be out of place to state that a German surgeon named Kras had no antitoxin, so he drew 500 cc's. of the patient's blood, replaced it with normal salt, removed spinal fluid, and replaced that with normal salt plus 1/3 per cent. of sugar. These procedures were repeated and the patient recovered. *Wien. Kl. Wochenschrift*, 1912, XXV. 88, Kras.

Tetanus Antitoxin.

Editorial, *Med. Record*, May 20, 1916.—An investigator inoculated tails of mice with tetanus cultures, and after varying intervals cut off the infected portion, thus removing the source of toxin production. One hour after inoculation, such an operation was too late to save the animal from a fatal attack.

The remedy is not perfect; there are probably no perfect remedies, and a percentage of failures is to be expected. It is, nevertheless, exceedingly valuable and its value will be improved with research.

Kocher states: "I should strongly resent it and call him to account if a doctor treating a relative of mine, who had received a wound that was infected with street dirt, did not administer a prophylactic injection of tetanus antitoxin."

In reference to the aforesaid, it is often urged that the tetanus antitoxin was injected and nothing happened. How, then, does one know that the patient ever was in danger of tetanus? If you have ever seen a case of tetanus you will not wait for a clear diagnosis in a second case, but will give antitoxin a hundred times unnecessarily rather than fail to give it when it is required.

In the United States (1903) were 4,449 Fourth of July injuries, with 406 deaths from tetanus. No antitoxin. In 1907, were 4,413 injuries and 62 deaths. Antitoxin generally used. The lesson is plain. Give it early.

Practical Therapeutics

Giving in concise usable form the therapeutic points from current medicine that are really of value to the busy practitioner.

Serum Treatment of Acute Poliomyelitis.

Frederick E. Batten, in *The Lancet*, April 15, 1916, after giving directions as to the care of the nasal and buccal mucous membrane, and describing the treatment by rest, posture, splinting, electro-therapeutics, massage, baths and re-education, makes the following interesting and illuminating observations on the serum treatment.

It has been shown experimentally that the serum of patients who have recovered from an attack of poliomyelitis has the power to destroy the virus *in vitro*, but that this immune serum has no power to prevent the development of the disease when injected simultaneously or after the virus has been injected. Flexner and Amoss have shown that intraspinal injection of an immune serum is effective when introduced in the pre-paralytic stage in delaying and preventing poliomyelitic infection in a monkey. This method of intraspinal injection of immune serum has been used with success by Netter in cases of poliomyelitis of the acute ascending variety. The method is as follows: Some 20-30 cc. of blood are obtained by veni-puncture from a patient who has passed through an attack of poliomyelitis (the length of time after the attack is not important, for it has been shown that the blood preserves its antitoxic properties for several years). The serum is separated by allowing the blood to clot and by centrifugalisation. Lumbar puncture is performed on the patient, and an amount of cerebro-spinal fluid removed corresponding to that of the serum which it is proposed to inject—usually about 10 cc. The serum is now slowly injected, and the bed of the patient tilted so as to allow it to gravitate cerebralwards, the injection being repeated daily for three to four days.

Little or no difficulty in carrying out treatment.

There is little or no difficulty in carrying out the treatment. The difficulty is to obtain an old case of poliomyelitis who has already been tested and given a negative Wassermann and who is willing to give the necessary blood at the same time as a suitable case of acute poliomyelitis presents itself for treatment. It is useless to carry out the treatment when the disease has already become quiescent, and the most suitable cases are those (1) presenting symptoms of an ascending or progressive poliomyelitis; (2) presenting meningeal symptoms; (3) (if the diagno-

sis can be made) in the pre-paralytic stage.

Since animals are immune to poliomyelitic virus, the possibility of employing the sera of animals has been considered; but Flexner and Lewis found that the sera of horses and rabbits had no viricidal action, sheep's serum was slightly active and might be increased by injection of the virus, but the degree of activity is small.

* * * * *

This serum treatment has been long talked about in an experimental and academic attitude. It would seem from the report given above that there is a practicability in the method deserving of careful trial. Doctor, if the disease appears in your community, and if you have a syphilis-free patient who has recovered from the disease, you should call attention to the above treatment and the fact of your knowing an immune.

Hypochlorous Acid Intravenously.

Rane Flores Córdova, Lima, in *The British Med. Journal*, May 6, 1916, reports upon the antitoxic and antiseptic power of hypochlorous acid *in vivo*. Dakin has shown that *in vitro* staphylococci suspended in saline are killed within 2 hours by sodium hypochlorite, 1 in 500,000, but that when serum is present a concentration of 1 in 1,500 is needed.

Therefore Córdova proceeded to prove experimentally (1) which is the highest concentration of HClO tolerated by animals, and (2) what is the lowest concentration producing an antiseptic or antitoxic effect.

Using rabbits for the test, he used the following solution:

To 800 ccm. physiological saline add 10 grams bleaching powder and 10 grams boric acid, shake vigorously, allow to stand for two or three hours, then filter and add to the filtrate 2 grams of chemically pure calcium chloride. The solution now contains HClO in a strength of between 0.5 and 0.6 per cent.; saline is added until the required concentration of 0.5 per cent. is reached. Owing to its instability the solution must not be used longer than three days after preparation.

While 20 ccm. of this HClO solution, giving a concentration of about 1 in 1,100 in the blood of the animal, were generally well tolerated, 10 ccm. proved to be entirely harmless, and the concentration of about 1 in 2,000 that resulted appeared, moreover, to be near the limit of efficiency; 5 ccm. doses (about 1 in 3,800) seldom led to beneficial results.

Attention may be drawn to the fact that a great number of toxins of bacterial origin are considered to be of an albuminoid nature; it is possible, therefore, that hypochlorous acid may

neutralize toxins by coagulating and eventually precipitating them.

Conclusions.

It has been found that in rabbits 10 ccm. intravenous doses of a 0.5 per cent. HClO solution, even when repeated on two or three days in succession, produce no ill effects, that they may delay or prevent the onset of symptoms due to the injection of the animals with diphtheria and tetanus toxins, and with cultures of *Bacillus perfringens* and *Staphylococcus pyogenes aureus*, the rabbits recovering from the infection or remaining healthy.

Hypochlorous acid intravenously administered is therefore to be regarded as of therapeutic value; the antiseptic apparently delays the development of bacteria and destroys their toxins, thus enabling the natural resistance of the animal to assert itself.

It is suggested that this destruction of toxins may be in the nature of a protein coagulation.

Who has the nerve to try this on man? It looks like a beginning in the long-sought-for antiseptic acting in the blood-stream.

Our Mexican Involvement and Typhus Fever.

Typhus fever, common in Mexico, is disseminated by lice. American physicians must be on the alert for danger.

Kinloch, in *British Med. Jour.*, recommends dry heat to kill both lice and nits. Bake the clothing in an oven at 100° C. Lice and their eggs are destroyed by immersion in petrol for one minute, or exposure to the vapor for thirty minutes. Benzene, toluene and acetone are equally effective.

Soap solutions containing 2% trichlorethylene kill lice and nits in thirty minutes at ordinary temperatures. A 25% solution in vaseline may be applied to the human body. Phenol disinfectants are effective only when heated to 65° C.

Early Arrest of Cataract.

E. L. Jones, in *Annals of Ophthalmology*, does not believe that cataract is a normal senile change, but that it is always a pathologic process. In the early stages he stimulates the lymphatic circulation of the globe by the systematic use of dionin drops with cyanide of mercury—eight grains of dionin in one-half ounce of a 1:1,000 solution of cyanide of mercury. Drop 3 drops into the eye at bedtime every night. The solution makes some eyes very red and chemosed; so it should be used only at bedtime. No claim is made that this treatment is effective except

in early stage and then in properly selected cases only; but it is worth trying, and results are often surprisingly good.

* * * * *

This seems a rational treatment that any practitioner could apply. Perhaps it might be well to begin with the solution half the strength of that noted above. Several physicians have written in to us about instillations of succus cineraria maritima in cataract. We tried it faithfully in a few cases and never observed the slightest effect, favorable or unfavorable. Certainly the suggestion of Dr. Jones is worth trying.

The Therapeutics of Lobar Pneumonia.

An editorial in *Jour. of Lab. and Clin. Med.*, May, 1916, dwells upon the fact that the pneumococcus group includes types serologically strictly distinct though morphologically and culturally entirely alike; hence serums fail unless produced from the strain infecting the individual patient.

But if the pneumococcus type is determined, the proper serum is very effective. There are four general types, determined by agglutination tests on broth cultures of defined types. This is practicable in hospital laboratories, following the technic of the Rockefeller Hospital outlined in the editorial.

Ringworms in Children.

Dr. E. L. Oliver, in *Boston M. and S. Jour.*, May 20, 1916, dwells on the extreme contagiousness of this affection, and he believes the older methods of treatment to be inefficient.

The X-ray, applied by the Coolidge tube, is efficient, shortening the course of the disease from 2 years to 3 months.

Bichloride of Mercury Poisoning

Dr. John H. Wilms, Cincinnati, in *The Lancet Clinic*, recommends an intravenous injection of 7½ grains of calcium sulphide in 7½ ounces of boiled and filtered water as an antidote to bichloride poisoning.

The reaction is as follows: $\text{CaS} + \text{HgCl}_2 = \text{HgS} + \text{CaCl}_2$. Calcium sulphide is soluble in the proportion of one grain to the ounce of water.

Look back over our book reviews and you will note, in the issues for 1915-16, reviews of admirable works on military surgery. Every such book we reviewed is good.

CONSTRUCTIVE REFORM

For the Practical Benefit of the General Practitioner

Constructive Reform in Social Welfare.

By GEO. H. TICHENOR, JR., A.B., M.D.,
4007 Magnolia St.,
NEW ORLEANS, LA.

The physician's educational, financial and social problems are similar to those of the public in general. Let us glance at some important items in statistics in proof thereof. Two per cent. of the people own sixty per cent. of the national wealth. Sixty-five per cent. of the people live on less than five per cent. of the country's wealth. One-third of our workmen are poverty-stricken. One half of employed women receive an average of not more than six dollars a week. Twenty per cent. of school children are underfed. In New York City one in every ten persons dying is buried in Potter's field.

Ninety-two per cent. of mortality in the United States is due to preventable disease. Among our unfit there are 500,000 lunatics, 800,000 criminals, 100,000 paupers, 90,000 idiots and a similar number of epileptics; all of which costs us one hundred millions of dollars a year.

After the War.

The human and material waste of the European conflagration is bound to affect this country, due to a threatened influx of those who wish to escape poverty and excessive taxation.

With the service of fellow-man and universal brotherhood as their keynote, the Southern Sociological Congress recently held a convention in New Orleans, the scope of discussion including many things designed for social betterment. Wisely managed, this great body will be of benefit to the South and to the Nation in the solution of the problems the post-bellum conditions will bring upon us—educational problems, undesirable colonization difficulties, unemployment, and the difficulties of Americanizing these people.

The Medical Problems.

The medical profession must aid in the solution of these problems; and it must begin by eliminating sensationalism, politics and all manner of "graft" from the program. Certain so-called "surveys" are sensational and disgust the public. The social workers must eliminate the

hysterical, exploiting "reformer," or their endeavors will come to naught.

There is nothing more beautiful than truth, nothing more elevating than the study of "man made in the likeness of God." The true physician and scientist despises everything but the truth; hence he gives a cool reception to the "reformer" who is after "political pie." Corporations, insurance companies, various bureaus and commissions, while opposing nostrums and "yellow" policies, expect much service gratuitously from the physicians, and unload what little expense there is upon the State. This is leading to State Medicine, in which business men will be relieved of economic and social annoyances, passing them on to the physicians and the State.

Educating the Public.

Each school of medicine accepts certain facts and tolerates certain theories. How are we to enact laws based upon theories disputed every day in our courts? We must educate the public in *accepted truth*, ignoring theories; and then there will be public demand for sane legislation. Take, for instance, the regulation of vice, which is necessary to a definite extent but must not be made to benefit a certain class financially. Put-over methods are never effective in legislation. First of all, the public must feel the *need* of legislation: cut-and-dried methods carried out by a few leaders in convention accomplish little. I cannot agree with the Congress that the policy should be one of revolution. I think it should be one of education, as revolution leads to politics.

France, a few years ago, became alarmed at the political activity of her hygienists and their "pull." England sarcastically advised the Prince of Wales to study medicine.

The Preacher of Reform.

The fire-and-brimstone medical preacher sees nothing but destruction of the human race by disease. The Lord was thoughtless and careless in making this mortal man after His own image. He makes the public wonder how many sane and healthy people are left in the whole nation after subtracting the diseased in mind and body.

Statistics.

Medical statistics have at present little value in this country and for the simple reason that medical educational standards have been and are now very low. In proof of this assertion I have only to call attention to the fact that in 1853 the Legislature of the State of New York passed an act ostensibly for the incorporation of medical colleges but actually to prevent such incorporation, declaring that the condition for receiving the degree of Doctor of Medicine should consist in an attendance upon medical lectures for two terms of twelve weeks each. In 1884 the Court of Appeals rendered a decision adverse to the United States Medical College solely upon the ground that a medical college is neither a scientific nor a literary organization but only an eleemosynary institution. Diagnoses are erroneous in a surprisingly large proportion of cases, and sanitary surveys are not usually made by the persons who should make them.

The God-given ability to return to the normal should be our peace message to the afflicted world. Medical teaching should emphasize this, not that morbidity is cumulative. Medical schools should be under Federal supervision, and the teaching in hygiene should be, "Be ye temperate in all things."

The Race Question.

The race question in the South was settled satisfactorily years ago, and any attempt to drag it into the limelight will be disappointing and disastrous to the persons or party attempting it. Sectional feeling should never be aroused, even in the great work of public hygiene. These criticisms of some tendencies shown in the Congress are made in good will and with best wishes and simply to urge prudence.

The movement should promote a more thorough study of disease and immorality, government control of life insurance, Federal supervision of medical colleges, State medicine, regulation of the drug and liquor business, compulsory education, physical culture under medical supervision, as well as other important matters.

Unstinted praise should be given to Mrs. E. Cole, of Nashville, Tenn., through whose philanthropy and energy the Congress came into being. All addresses showed marked ability, and the caution which many showed in dealing with their subjects gave assurance of success.

This Congress was attended by about 2,000 delegates and the sessions were remarkable in many ways. Mrs. D. B. Safford, Hot Springs, N. C., in attendance, donated 700 acres of land near Asheville as a site for a tuberculosis sana-

torium; and \$200,000 was pledged for buildings. The enthusiasm of such a Congress, very naturally, brings to the front some not very practical idealisms and some indiscreet generalizations in oratorical flights; but, nevertheless, much good is done, and committees tone down a good many plans when it comes to put them into execution.—EDITOR.

Standardizing the Laboratory.

An organization is being affected whose purpose looks to the standardization of the laboratory offering clinical diagnoses commercially or semi-commercially. The scheme is one to give a grading to laboratories that will make it possible for the physician to know that he will no longer receive false or unskilled reports after paying out his money for a service that may be vital.

It is too bad indeed; but there are laboratories cutting so close on prices that poor service is being given. It is not to be supposed that any laboratory designedly deceives its patrons; but low prices received mean low prices to workers, which means uncertain and undependable reports.

The U. S. Public Health Service keeps track of laboratories producing biologicals for sale, and it is in line with progress that such dependability in laboratory service be extended to those making diagnostic tests for physicians. We have been "stung" ourselves by commercial laboratories poorly manned or equipped, and are in sympathy with any fair and reasonable method of regulation and standardization; but the new organization should be careful that it is always fair.

Lead Acetate as a Drug.

An editorial in *The Therapeutic Gazette*, April 15, 1916, asserts that tannin has displaced lead acetate as an astringent for internal administration. The digestive juices destroy the astringency of the salts of lead; but they do not destroy the lead, and many cases of serious lead poisoning have followed the medicinal administration of its acetate. Furthermore, lead acetate does not have any favorable effect upon the progress of albuminuria and hematuria.

All laboratory workers should review their technic adaptable to military service. It is important that water analysis and camp purification-of-water methods be understood by many men.

September, 1916

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A service of truth, and only a service of truth, from cover to cover.

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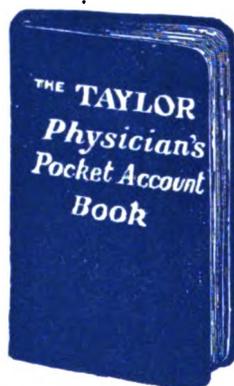
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EDITOR

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Humanized Bacterins.

A Suggestion in the Treatment of Infantile Paralysis.

VARIOUS attempts, some of them crude, have been made to *humanize* bacterins, as it were, probably prompted by the remembrance of the good effects of the humanized vaccine against smallpox and that was used years ago.

The Gilbert autoserotherapy, introduced in 1894, was really the first attempt in this direction. The theory was that this procedure produced antibodies in the system. The treatment was limited to cases involving pleural effusion. In a way, the homeopathic nosodes, once quite in vogue in that school of practice, even before the development of bacteriologic technic, were an effort—perhaps an unconscious one—in the direction of humanized vaccines.

Realizing the weakness of what might be called foreign bacterins, laboratory-cultivated without biologic contact, Besredka, in 1902, introduced sensitized vaccines. He used suspensions of both dead and living bacteria, mixed the suspension with serum from an immune animal, and allowed maceration to proceed for a few hours; the serum was then removed, the bacteria were washed and a salt-solution suspension made in the usual manner. This was an animalized bacterin, having a biologic touch not found in the ordinary bacterin; and it was a real advance.

Marie applied this principle to the treatment of rabies, Meyer to tuberculosis, and now we have quite a series of sensitized vaccines, mostly made with killed bacteria.

Vaughan's theory of protein sensitization added importance to the procedure, since, according to this theory, a sensitized vaccine forms a complex immediately acted upon by the complement in the body of the patient.

Humanized Bacterins.

And now comes Wohl, of the Nicholas Senn Hospital, who, in *The Amer. Jour. of the Med. Sciences*, August, 1916, contends, justly, that the antibodies of an immune animals' serum used

for sensitization differs from those of the patient from whom the organism is derived for the making of an autogenous vaccine; and he suggests the employment of the patient's own serum for sensitizing the autogenous vaccine. In other words he would use a humanized bacterin; and he does not wash the serum away, injecting it with the suspension of killed bacteria.

Something similar to this is being done in the Murphy clinic, and hog erysipelas and plague are treated with serum-plus vaccines.

Dr. Wohl, in addition to following the usual procedure in the making of an autogenous vaccine, obtains from 5 to 10 mils (cc.) of blood from a vein in the patient's elbow; it is chilled for 3 hours and the serum pipetted off; then it is inactivated at 56 degrees C. for thirty minutes, and from 1 to 3 mils (cc.) is added to the vaccine. The serum-vaccine is then placed in an incubator at 37 degrees C. for six hours. Culture the vaccine to test sterility, and it is ready to use. For full technic, see the article, as this is but an outline.

Such humanized vaccines have been employed successfully in furunculosis, cystitis from colon infection, erysipelas, acne vulgaris, otitis media, surgical infection, gonorrhoeal vaginitis and other cases. The results have been good and with slight reaction.

Improvement Suggested.

There would be no foreign protein introduced, making it possible to inject the serum, which might result in anaphylaxis, if that from an animal was used. But in our view, the fact that the serum from the patient is not that of an immune is a weak place in the treatment, at least as involved in diseases in which immunity after the attack is established. Dr. Wohl, however, does not employ it in such cases. But why not do so? Perhaps serum from an immune would sensitize the autogenous vaccine of the sick man even bet-

ter than would his own serum, which is not that of an immune.

Applied to Infantile Paralysis.

Batten (*The Lancet*, April 15, 1916, and abstracted in our last issue) advocated a serum treatment of infantile paralysis by injecting the serum of an immune into the theca vertebralis after lumbar puncture. This treatment is meeting with commendation.

Now we wish to suggest that, in view of the difficulty in securing a sufficiency of blood-serum from immunes, what is procured be used to sensitize autogenous vaccines made from the nasal discharges or the cerebrospinal fluid of early-stage or suspected cases of infantile paralysis; and that the sensitized autogenous vaccines thus prepared, following the technic of Wohl, be injected into the theca vertebralis, after the technic of Batten.

Admittedly an untried and possibly not wholly logical procedure, and realizing the difficulties involved in making an autogenous vaccine from secretions from a case of infantile paralysis, we offer this thought as our contribution to the wealth of more or less valuable suggestions appearing during the present serious incidence of the disease.

And, at all events, the general tendency in the directions of humanizing vaccines is one to be commended. Probably valuable products will, ultimately, be added to our armamentarium by following out such technic.

Be Armed for Placenta Praevia.

Fortunately, the physician is usually warned in advance of this condition. Permit some suggestions, as based upon some cases met without preparedness in advance. The preparedness should always follow upon the warning.

The likelihood of extensive manipulation should warn us to go to these cases more than ordinarily prepared to maintain absolute asepsis. It is a good plan to take to the bedside early, and have ready for instant use, apparatus to give saline intravenously. You may need it quickly, as a rapid fall in blood-pressure is dangerous. It may often save trouble to do a version at just the right moment. When that moment comes don't hesitate, but go ahead. Many physicians are urging the use of pituitary extract in small doses during the latter part of the first stage; then a full dose after dilatation is complete. In this matter opinions vary, and it is too early to be dogmatic upon it.

The Menace of Infantile Paralysis.

THE UNITED STATES, or the most of it, has a tropical summer; and we have the constant menace of tropical disease, principally coming from without. Malaria is an old and familiar disease, now coming to be understood. Then yellow fever made its appearance; and it has been practically subjugated. A few years ago bubonic plague was introduced; and it has been studied and its problems scientifically faced. Pellagra is a comparatively recent visitor; and the students of that disease see daylight ahead. Typhus fever is not strictly a tropical disease, but it spread to us from a tropical country. And our cattle pests, such as have spread from Mexico through the South; many of the pests which blight our orchards and fields, such as the boll-weevil of the cotton country and the constantly feared Mediterranean fruit-fly, are tropical invaders.

Now we face a summer disease, infantile paralysis. Not strictly a tropical disease, yet spreading only during warm weather, in our tropical summer environment it promises to become a serious problem.

But trained investigators have, one by one, patiently but persistently trailed each new tropical menace to its innermost secrets. Give them time, and they will do so with infantile paralysis. It is hard to wait while the babies are dying; but meanwhile we should not lose heart. General sanitary precautions, proper quarantine, and careful general management of each case developing, will at least hold the disease in check.

The Treatment

Some few years ago we had a number of cases to treat. Two of them died, one six hours after first being called to the case, and the other in eight hours. The others recovered. What could treatment avail in these two fulminating cases? Nothing but a specific serum could have availed. Fortunately, few cases are so rapid in development and progress. The two drugs prominently mentioned are hexamethylenamin and adrenalin. The first can do little except in an acid medium, and the tissues we wish to reach with the drug are not acid. Adrenalin is being tried; but as yet little of promise has developed. A number of other and simple drugs have been empirically urged. Nothing worth recording has developed concerning them.

Let every physician study the disease, especially the points in diagnosis. Let us all cooperate most fully with the sanitary authorities; and let us treat hopefully and sensibly any cases coming into our hands.

Above all, let us awaken to the menace of tropical disease in our land; and let us begin a systematic study of the whole class of tropical diseases, for we don't know which one will be our next menace. Let us prepare.

Vegetable-Engendered Ptomaine Poisoning.

BOTULISM was referred to by us in an editorial, some time since, on food poisoning, sausage being held under indictment; but recently it has been proven that the *Bacillus botulinus*, an obligative, anaerobic, spore-bearer requiring darkness and moisture for growth, proliferates in vegetable proteids, especially in home-canned vegetables and fruits. Commercial interests score here, for the commercial canners subject their products to higher temperature than is practicable in home canning.

This bacillus is not itself pathogenic and does not develop in the body; but it elaborates its toxin in food products, the absorption of the toxin being prompt in producing a thrombosis in the blood vessels of the central nervous system, with paralysis.

In Darmstadt eleven out of twenty-one persons who ate a salad made from home-canned beans died of botulism; and in California two "epidemics" of botulism were the result of eating home-canned pears and apricots. In California Dickson worked the matter out without any peradventure of doubt that the bacillus will proliferate in canned string-beans, and the resultant product promptly kill animals.

The spores resist a temperature of 185 degrees F. for thirty minutes. Fractional sterilization, the commercial practice, is the more certain in killing the spores.

The natural habitat of the *B. botulinus* has not been determined; but it has been recovered from pigs' feces.

It has long been known that aldehydes may develop in canned fruits; but this new menace is much more disturbing. Physicians should warn their patrons against the careless canning of fruits and vegetables. It is quite possible safely to can at home if thoroughgoing methods are employed, especially fractional sterilization; that is, immersing the canned and lightly sealed jars in boiling water—some interval after their first cooking and filling into jars—and keeping them in the actively boiling water-bath for thirty minutes or more. An ordinary wash-boiler serves the purpose.

Vitamines and the Deficiency Diseases.

VITAMINES are basic organic substances found in foods and necessary to proper nutrition. Exposure to heat, as in ordinary cooking, does not destroy them. They exist in small amounts in most foods, especially in legumes, fresh vegetables, the outer coats of grains, fruit juices, eggs, fresh meat and milk, yeast, butter-oil, and cod-liver oil.

Denatured foods—cured meats, white flour, polished rice, pure starch, casein, canned foods long kept, etc.—are largely devoid of vitamins.

Many investigators have shown by animal experimentation that a certain content of vitamins is necessary to nutrition, an unbalanced diet in the animals being productive of interrupted growth, faulty metabolism, infective disease of the eyes, glandular atrophies and polyneuritis.

Scurvy, osteomalacia, rickets, pellagra, "scrofula," and beri-beri are deficiency diseases in man, and, to an extent, tuberculosis and certain nervous diseases. Many diseases are aggravated and recovery retarded by food deficiency—a deficiency of actual nutritive material and of vitamins. Calories are not the whole of diet; a certain vital element must be present also. Nature, not the chemist, must balance our rations. Chemistry may make nutritive substances; but there is a something lacking which is vital to nutrition and growth—vitamines.

Fortunately, the symptoms caused by vitamine starvation are readily corrected if taken in time. Cod-liver oil, fresh milk, the yolks of raw eggs, fruit juices and unsalted butter are admirable, while active yeast is particularly so. Then have the patient eat whole-wheat-bread and plenty of vegetables and fruits, and his trouble disappears. Also throwing the water away in which vegetables are boiled wastes the water-soluble vitamins.

During the past summer we have practiced vitamine-feeding with a number of poorly nourished infants—tin-can-fed infants—with surprisingly good results. And many nervous and worn adults have also markedly improved. And, Doctor, don't use denatured cod-liver oil and the casein-glycerophosphate "tonics"; but give whole oil, whole cereals, milk and natural foods. You will be gratified with the results.

Saves a dollar. So much more convenient.

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A Beginning in Federal Licensure.

The new voluntary National Board of Medical Examiners will hold its first examination at the Army Medical Museum, Washington, beginning October 16 and continuing one week. Full particulars may be had from the office of the Secretary, Dr. J. S. Rodman, 2106 Walnut Street, Philadelphia. Only members of the profession presenting first-class credentials will be admitted to examination. The passing grade is an average of 75 per cent.

There is much opposition to this new Board, an opposition not particularly creditable to those involved; and there is no assurance that the certificates of the National Board will be accepted by the State Boards. However, the National Board is composed of optimistic gentlemen, and they announce the belief that their certificate will "soon be accepted by State Boards as evidence of qualification for licensure."

It seems to us that the profession should demand such acceptance by the State Boards. They exist purely for the protection of the public against incompetence. Whatever other prerogatives they assume are quite gratuitous. Members of State Boards are much like legislators; they have to be shown. In this crisis in the attainment of a real Federal basis for medical licensure, it behooves the profession of every State to "show" their board members what the sentiment is in the profession. It may be very much our affair *if we make it such*. Let the County Medical Societies throughout the Union take up this matter of justice to the profession and the public, and work for a rational adjustment of the present intolerable conditions.

The National Board is only a beginning, and it is beginning well, for it has announced a sliding scale of credentials as acceptable from physicians who graduated before 1912. Let it once get under way, and be legally recognized, and there is little doubt that whatever objections may now be honestly held by physicians will be met by fair and constructive policies.

After-Care in Obstetrics.

Honestly, Doctor, women are not so easily killed as we used to believe, and as some of the obstetricians would have us believe yet. We are led to this remark by virtue of the fact that we have been allowing women patients to sit up out of bed two or three days after delivery, and also allowing what a few years ago would have been regarded as a dangerous diet. The lying-in

chamber is a poor place to start a starvation cure. After her ordeal the woman needs nourishment. Why should she not have a sensible diet? Allowing her up for a while each day is the finest sort of natural drainage; and it really appears that women so treated rarely need any sort of drugs during the puerperium. Try the plan, Doctor. You won't kill your patients.

Therapeutic Notes.

The danger of glaucoma from instilling homatropin is slight but real. Better always follow the examination with eserine.

A twenty-five per cent. sterile solution of magnesium sulphate, injected thrice daily for ten days in chorea, has been tried. Heiman reports against it.

Graham claims that isotonic serum may be given to infants by proctoclysis better than by subcutaneous injection, using half a pint an hour at 98 degrees F.

A thick paste of salicylic acid in sterile saline (1 gm. acid, 9 cc. saline), is used by Anderson as an application to the cut surfaces of long bones in septic amputations.

Henderson thinks that, because of acidosis and its dangers, alkalies are being abused; and Hare, who is most conservative in regard to intravenous medication, warns against too active alkali therapy.

Higgins has proven that alcohol does not help in stopping the progress of acidosis, or show any antiketogenic action. Its administration simply increases the consumption of oxygen and causes disagreeable subjective symptoms.

Blechmann has devised a convenient form of mercurial treatment. He applies a lump of mercurial ointment to the sole of the foot and has the patient pull on the sock over it. Walking on it forces the drug into the tissues.

Attention should be called to the fact that many physicians forget that the old compound tincture of catechu has been displaced, in the U. S. P., by a similar tincture of gambir. This latter agent, by virtue of its tannin structure, is really effective in the intestinal tract.

Flexner says the key to recovery from epidemic meningitis is in the phenomenon of phagocytosis. He also says that chemicals are antiphagocytic, when injected. Therefore he expects little from drugs. What about the terebinthines? Bantz asserts that the stearoptenes, except menthol, produce leucocytosis. Pohl claims that terpene is positively chemotactic, preventing the escape of white cells from the blood-stream.

The following papers are contributed exclusively to this journal. Republication is permitted if credited as follows: MEDICAL COUNCIL, Philadelphia.

ORIGINAL ARTICLES

Sentences, like sunbeams, burn deepest when most condensed.

We are not responsible for the views expressed by contributors: but every effort is made to eliminate errors by careful editing, thus helping the reader.

Weighing the Psychic Factor in Gastrointestinal Diseases.

By GEO. M. NILES, M.D.,

Gastroenterologist to the Georgia Baptist Hospital, Moore Memorial Clinic; Consulting Gastroenterologist to the Anti-Tuberculosis and Visiting Nurses' Association, etc., Atlanta, Ga.

In the management of ills, to which the gastrointestinal tract is heir, the physician should never lose sight of the individual. To attempt a rational treatment of these many and oftentimes perplexing manifestations of disordered digestion, without delving into the personality underlying and permeating them all, will in very many instances prove disappointing to both patient and physician.

I admit that in the acute expressions of gross dietetic errors, routine methods to cleanse the alimentary canal and relieve distress are generally sufficient. These conditions require but little scientific acumen, the indications for treatment being obvious. Such disorders, apart from their emergent nature and the demand for quick and intelligent care, do not generally call for any great amount of either tact or patience on the part of the medical attendant.

When, however, an indigestion, either real or supposed, passes the acute stage, and assumes the least tendency to chronicity, then it is that the whole personality of the sufferer becomes involved, and the digestion alone is no longer the only issue.

Realizing the Patient's Views.

When a patient requests aid for any form of gastrointestinal discomfort, his complaints should be received with close attention, and met with kindly interest. It matters not whether the disturbance lies in the stomach, the intestines, or is the reflection of a disturbed mentality, it is a thing of reality to the patient; otherwise, he would not come for relief. He is naturally unable to differentiate between important and unimportant symptoms—all are important to him; and a lack of interest from the one to whom he has come for aid may impair confidence at the start, and greatly handicap the most worthy efforts.

Optimism.

Again, the attitude of the physician toward the patient should be as far as possible *optimistic*. In no class of diseases, other than those purely mental, is there such a tendency toward pessimism, low spirits, or even a settled gloom, as in digestive troubles. The sour-appearing dyspeptic, with his complaints and grumbings, his warped viewpoint of life, and his mournful introspection, has become a familiar and classic picture.

These sad-visaged sufferers nearly always come with a ready-made diagnosis, whose basic supports may be built upon the most nebulous foundations, but who cannot be swerved from their false ideas by rough tactics. No matter how foolish some of these ideas may appear to the trained intellect of the medical man, or how bizarre the fancies, they must be met as if they were real pathologic entities, not ridiculed nor scoffed at.

The Blight of Indigestion.

These varied symptoms do not necessarily denote a weak mentality. It appears that digestive distress, when long drawn out, affects all grades of intelligence with an almost equal blight. It seemingly spares no one. Thus, to assume that a patient is weak-minded because he gives way to depression and food-fear as a result of dyspepsia is in the vast majority of instances absolutely incorrect and unjust. Furthermore, there are few cases of chronic indigestion that can be successfully managed by medical and dietetic measures alone, if administered in a routine manner, unaccompanied by any moral propulsive power. The dynamics of medicine and the dynamics of mind cannot be disassociated. It is, therefore, necessary at the very beginning of the treatment to get in close touch with the individuality of the patient; to discover, if possible, his vulnerable points both for good and ill; to probe with sympathetic interest his hopes, his fears, his aspirations. Many times in such a preliminary investigation the whole secret is bared, the primary underlying cause is disclosed; and,

knowing this, the indications for treatment are clear as the noonday sun.

The "Climate of the Mind."

The temperament, that "climate of the mind," often gives important clues, if rightly read. To expect gastric neuroses in phlegmatic, unintelligent laborers, who perform physical toil requiring no mental effort, and whose bodies demand practically all of the available vitality, leaving but little for the nerves, would be foolish. On the other hand, in this strenuous march of the twentieth-century civilization, to "keep up with the procession" requires a constant tax on every bodily and nervous resource; so that, in the alert and wide-awake individuals of middle age, or younger, it is sometimes almost impossible to differentiate between organic and neurotic disturbances of digestion, unless, in addition to known scientific methods of diagnosis, careful studies of both disposition and temperament are conscientiously made.

Some of the most bitter complaints of various digestive ills come from young, rosy and well-nourished individuals, with no signs of cachexia, but with evident hyper-sensitive nerves. Then we often have to contend with the young or middle-aged woman of good circumstances, of refinement and education, but who has nothing to attract her thoughts outward; consequently they stray inward, to her hurt. Then, and perhaps the worst, there is the successful business man who, after years of unremitting toil, retires from active participation in the serious affairs of life, expecting to enjoy in peace his well-earned rest. Unfortunately, his dreams are seldom realized. Too often his industrious mind, with no tangible daily occupation, will become short-circuited upon his digestion, and he is then liable to become a prey to the many fads and isms preached from the housetops by the various cults, each one claiming the secret of health. Such patients are frequently in the incipient stages of organic disease, the consequence of both age and previous incessant labor, and when there is superimposed an added complication of morbid introspection, the task of the medical adviser is greatly increased. These are the cases where the personality of the physician counts for much; and unless he can get in close touch with such a patient, so as to treat both the disease and the individual, the results are generally unsatisfactory.

The Chronic Complainers.

Another class of patients who require careful personal study are the chronic "complainers." They are often excellent people, who lead useful lives, but who have imperceptibly fallen into the

habit of magnifying every epigastric or abdominal sensation, and have gradually become convinced that they have weak and impaired digestive organs. They can give no good reasons for their unceasing complaints; they simply and automatically complain. These again call for careful study in order to lift them out of the doleful rut into which they have unconsciously fallen, and to place them upon the solid ground of normal thinking, acting and talking.

Examining the Patient.

It is seldom wise to allow a patient to tell his story in his own way. If allowed, he will aimlessly enumerate all his subjective symptoms without regard for chronology, rhyme or reason, taking up valuable time to little purpose.

Usually I first get a general idea of the family history, inquiring as to neurotic ancestry, intemperance, possible malignant or specific troubles, and manner of daily life. The seeds of many digestive diseases are sown before birth, and numberless unfortunates are ushered into life with weak digestive organs, brought about by parental infirmities, and fostered by parental shortcomings.

Many times I have noted patients with a history of poor digestion dating back to childhood, who admitted early recollections of dyspeptic parents, creating a "dyspeptic environment" from which the passage of time had not released them. These sufferers are deeply imbued with their beliefs, and ordinary methods of treatment possess for them no efficacy whatever.

Next I inquire how long the present illness has been in evidence, together with the causes leading up to it. Such indefinite statements as "A long time" or "Several years" mean nothing, and are without value. To arrive at a definite starting point, the physician must learn *just when* the symptoms first appeared, whether the trouble developed suddenly or gradually, and whether it has been intermittent or steadily progressive.

Such information at once classifies the affection as acute or chronic, and clearly points the way for further questions.

Next comes the inquiry as to whether the discomfort is constant or only occasional. This is of importance, because the course and progress of the trouble, the remissions or intermissions, may in themselves name the diagnosis together with the indicated treatment.

Locating the Real Pathology.

Chronic gastritis, nervous dyspepsia, malignancies in or around the digestive tract, stenosis or kinks occurring along the course of the alimentary canal—all these cause a certain amount of

unbroken distress. On the other hand, periodic pains may raise the suspicion of duodenal ulcer, gallstones, relapsing appendicitis, gastric crises, gastralgia, cyclic vomiting, or one of the many forms of psychic indigestion. It is especially necessary to learn whether these periods of discomfort are punctuated by those of entire comfort and well-being, or are simply remissions, where the patient feels better, but is not entirely well.

The Appetite.

Considerations of appetite are of value. Many of the most chronic and persistent alimentary ills flourish right along in company with a normal, or even ravenous, appetite, and this will point to one of two conclusions—either the presence of a neurosis, or the insistent demands of a half-starved body, tortured by a long, rigorous, and perhaps unnecessary course of dieting.

These constant voicings of "cell-hunger" are frequently the unrealized factors that make for the sour disposition and clouded mental horizon so characteristic of the confirmed dyspeptic, who adheres to a limited diet for months and years.

Should, however, the appetite be consistently poor, this fact may point to malignant disease, to a scanty output of digestive juices, to chronic, so-called intestinal auto-intoxication, or even to a long-standing nervous anorexia.

Deglutition.

Having disposed of this, the next question would naturally be in regard to swallowing. Apart from a psychic difficulty, which may be caused by disgusting sights or thoughts connected with food, or by lack of saliva to moisten the bolus, the latter of which may come from either bodily or mental illness, an impediment to the act of deglutition would indicate disease of either the esophagus or cardiac opening of the stomach.

A violent emotion will sometimes as effectually inhibit the power to swallow as a mechanical obstruction. A number of years ago I observed a healthy and robust man attempt to eat a meal while his wife was at the height of her first labor. After several futile attempts, he desisted, saying that had his throat been encircled by a knotted cord it would have been just as possible to swallow. A few hours later, his wife having been safely delivered, he had no trouble in eating a hearty meal.

An intermittent difficulty might mean esophagismus or cardiospasm, but a gradual increase to where only finely comminuted food or liquids can be forced down the esophagus, especially in patients past middle life, would indicate either malignant growth or a gradual tightening cicatrix from previous ulcer. A stenosis following

injury, or burns from corrosive substances, can generally be diagnosed from the history.

Pain.

The next question would be as to the pain or other uncomfortable sensations which brought the patient for relief. This is of deep significance, because a purely functional dyspepsia never causes actual pain. There may be feelings of distress, or distention, or pressure, or desire to eructate gas, or even acute nausea, but as to pain in the strict acceptance of the term, close questioning seldom discloses it. Many patients seem unable to distinguish the difference between pain and other sensory disturbances, and the physician should ever be on the alert lest error creep in.

I include as *pain* sensations of crampy, colicky, cutting, stabbing, boring, or burning nature, and not the various other vague and indefinite feelings of discomfort, even though they bring about decided distress.

The Globus Hystericus.

Another frequent condition that is denominated pain, unless carefully differentiated, is the globus hystericus. This, though easily recognized, needs to be dealt with cautiously and tactfully. The term *hysteric* is looked on with aversion by all, and its application to any patient is sure to excite resentment or even indignation. Many a patient has changed her doctor in anger upon being told that some of the symptoms were hysterical, and few there are who will permit this supposed stigma to be mentioned with equanimity. Really, it is seldom necessary to inform a patient that some of her or his symptoms are hysterical, and my experience has taught me to steer clear of its mention.

Discomfort.

If pressure and discomfort alone are felt, the question arises whether they are constant, or only appearing after meals at irregular or stated intervals. Constant pressure in the abdomen, independent of the meals or the nature of the food, may indicate a gastric neurosis, pressure from a distended intestine, or encroachment upon the abdominal cavity from ascites or enlargement of some of the abdominal viscera.

A pressure located in and around the epigastrium, accompanied by fullness, distention, flatulence, malaise, heartburn, regurgitation of sour chyme, and perhaps vertigo, will excite the suspicion of a decided hyperchlorhydria, or peptic or duodenal ulcer. It might be well to mention, however, that this train of symptoms is occasionally the reflex expression of a chronic appendicitis, or even of a disturbance in or around the gall bladder.

Pressure occurring only after taking solid food indicates chronic gastritis, while if it is in evidence after either solid or liquid food, a neurosis may be thought of.

Should there be actual pain, it is well to ascertain its character, and when and where it occurs. Should it be of a colicky, cutting or boring nature, radiating backward, it may mean one of several morbid conditions. If it recurs every few months, with periods of comparative health between, it may be cholelithiasis or some form of gastric crises. Should it occur daily at a definite time after eating, and be relieved by vomiting or alkalies, it is probably ulcer or perhaps only hyperchlorhydria. Should it be relieved by the escape of gas or free evacuation of the bowels, it may be an intestinal colic brought about by ordinary constipation, by excessive protein putrefaction, or by numerous kinks and twists found in ptosed intestines. The importance of visceroposis, with its train of attendant evils, has but recently been recognized, and only in the last few years has the medical profession realized the excellent results obtainable by raising and straightening out these twisted and distorted intestines.

Should vomiting alone relieve pain, and should the patient find that food taken many hours previously is ejected, it would indicate either a stenosed pylorus or a duodenal kink or other obstruction.

Vomiting.

The symptom of vomiting, in any of its aspects, is important. Early morning vomiting from an empty stomach may indicate pregnancy, alcoholic gastritis, or gastrosuccorhea. Sudden and explosive vomiting immediately after eating indicates reflex excitation; a profuse vomiting of spoiled and fermented food every few days points to a dilated stomach; the vomiting of gastric crises or the cyclic form occur between periods of good health; while if it comes on after dietetic indiscretions, it may mean only the rebellion of an insulted stomach.

The condition of the patient's bowels is always worth careful inquiry. A detailed recital of their habit, character of stools, presence or absence of mucus, state of the mucus in regard to the feces, intestinal parasites, flatus, and other considerations, should never be omitted.

General Symptoms.

After these special symptoms have been noted, it is then in order to obtain a grouping of general symptoms, for now the physician can give them their proper weight in making up his estimate of the whole. Great loss of flesh, progressive weakness, anorexia or excessive appetite, ab-

normal thirst, change of disposition, troubled sleep, mental depression or irritability—all these to the observant intellect of the careful clinician will tell their story, and oftentimes a practically certain diagnosis can be made without going further, though such a diagnosis is not always satisfactory.

Physical Examination.

Having made all the proper inquiries of the patient, the physical and other forms of examination are next in order.

While some patients demur at the necessary disrobing incident to a thorough physical examination, at heart they appreciate the interest shown by the physician. Such objections can nearly always be overcome by a little tact and explanation of the purpose in view and the more complete the examination the more confidence will be instilled into wavering and doubting minds.

Knowing how often patients come with a self-made diagnosis of digestive disease, when the trouble is elsewhere, it behooves the examiner to observe carefully the general appearance of the whole body, not neglecting the facial expression.

With many, especially the uneducated, a disturbance anywhere between the neck and symphysis pubis is denominated "stomach trouble." Not infrequently do I have women with marked ovarian disease, or men with irritations of the urinary bladder, who confidently lay the blame on that long-suffering viscus, the stomach, and are with difficulty convinced otherwise.

The appearance of the skin, its ruddy or sallow hue, its firm or wrinkled "feel," its healthy moisture or harsh dryness, pallor or cyanosis, cachexia or eruption—any of these will tell their story. A slight erythema of the backs of the hands, which the patient has hardly noticed, may fix the diagnosis of pellagra, while the bronze color may stamp it Addison's disease.

The Nutrition.

The present state of nourishment is also of the utmost importance, not only from a diagnostic standpoint, but from that of the nature of treatment, dietetic or otherwise, to be inaugurated. Let it not be forgotten that some of the most abject and emaciated specimens of humanity are brought to their miserable state by foolish systems of dieting. A very strict diet, in which the viands most relished are forbidden, is liable to set up first an anorexia, then a sitophobia, or fear of food. To expect the digestive organs, whose principal advisors and stimulators are the hormones, or psychic incentives, to perform their best work, when every meal is taken with indif-

ference, disgust or gastronomic introspection, is chimerical. So, often, one after the other, loved delicacies are forbidden, while nothing appetizing is substituted, until the patient is reduced to the verge of caloric bankruptcy.

Neurotic Patients.

There is another class of patients who strenuously insist on emptying the stomach at the first sign of epigastric distress, real or fancied. These are generally neurotic or hypersensitive individuals, who imagine that food can exert some malign effect on the stomach if allowed to remain there too long. Without giving the meal a chance to be chymified, or ejected into the small intestine, where it can be of actual service to their body, they wildly drink warm water or some emetic, or, worse still, they contract the "stomach-tube habit," washing out the essentials of the meal before it comes into contact with any absorptive surfaces. Sometimes the obsession takes the form of demanding a speedy evacuation of the bowels by some hydragogue or copious enemas, so that the fecal current is continually accelerated, and the previous mentioned condition practically obtains.

The Abdominal Profile.

The appearance and general contour of the abdomen is most instructive to the practiced eye. Sometimes a view of the abdominal profile will disclose the full and wavy line of a dilated and ptosed stomach; sometimes the outline of a morbid growth. A relaxed and atrophied abdominal wall may reveal increased peristalsis, or abdominal stiffening of some of the muscles. Such signs are specially significant as indicating stenosis of the pylorus, or of the colon.

Visible peristalsis in old or emaciated people, or in multiparous women of slender physique, signifies but little, and must not be confounded with true "peristaltic unrest."

The Tongue.

The appearance of the tongue is fraught with pitfalls for the unwary, and too often it is accorded undue significance. Foul and coated tongues are found in the presence of gastrointestinal disease, and sometimes where there is normal digestion. It would appear that hasty mastication, coupled with careless "oral toilet," is responsible for most of the coated tongues. The strawberry tongue of scarlatina, the tongue denuded of its epithelium in pellagra, the suggestive mucous patches, and the spongy or dry and glistening tongue of depressed bodily states have their import; and I should mention particularly the frequent and painful little aphthous ulcers found on the tongue, sometimes called

"dyspeptic ulcers." These annoying and oft-times occurring little lesions seem to really have some connection with a disordered alimentary tract, though the actual relationship has never been demonstrated. The appearance of the tongue in disordered stomach and intestines may be accorded some corroborative weight; but, with the exceptions mentioned, should not be taken too seriously.

Physical Diagnosis.

Auscultatory or scratching percussion, electric transillumination, inflation with air or carbonic acid gas have their place in mapping out the stomach and intestines, but all are liable to fallacies. When practicable, the Roentgen rays afford the most satisfactory information concerning the size, character and relative location of the abdominal organs.

In the vast majority of cases, intelligent and careful palpation yields the most satisfactory and reliable information. Beginning with the epigastrium, the palpating fingers should deliberately and attentively examine, as far as possible, the stomach, the different divisions of the colon, the sigmoid flexure, the small intestines and appendix, the liver and gall-bladder, the spleen and kidneys, the abdominal rings, the rectum, and the abdominal cavity as a whole, searching for tumors, ascites or transpositions of the viscera.

In order to perform this successfully, the hands should be well warmed, the patient should be put in no cramped or uncomfortable position, and by sympathetic assurances upon the part of the physician he should be free from trepidation or fright, so that the mind will be at ease and the abdomen properly relaxed.

Palpation discloses but little when forced upon a timorous or terror-stricken subject.

Due allowance should always be made in seeking for sore or tender areas, for the mental attitude of the patient. Some give way to bitter complainings at the slightest discomfort, while others, with Spartan fortitude, minimize the most exquisitely painful sensations. The physician will simply have to judge each case according to its merits, making various qualifications as indicated by temperamental infirmities.

The time and care spent in studying and determining the various phases of the patient's character, the cheery interest manifested, and the optimism brought into play, which should brighten and permeate every therapeutic procedure—all these are the necessary factors in getting into close and sympathetic touch with the discouraged dyspeptic, and, like the opening move in a campaign by a wise commander, will often decide the ultimate success or failure of the whole course of treatment.

*Phthisis Pulmonalis.**

By LEON DE VILLE, MD., Ph.C.,
Watts Building,
SAN DIEGO, CAL.

Phthisis pulmonalis is a disease the evolution of which is carried over two periods. The first is the period of preparatory disassimilation and emaciation, the stage where the disease is in possession. The second period is of infection, the stage where the disease is active.

We can say the greatest danger which threatens a consumptive individual is to become tuberculous.

I agree with all medical men, that the degree of infection is on a par with the number and the virulence of Koch's bacilli, but I must add that its evolution depends especially on the structural conditions at the time of invasion. Any one can be infected by tubercles, but phthisis is only brought about by the existence of a previous disassimilation and emaciation.

This makes me believe that the gravity of pulmonary tuberculosis has a close relationship to the degree of disassimilation and emaciation which have prepared the soil for the infection, and which is constantly aggravated by the same.

Diagnosis of Predisposition.

This period of preparatory wasting which already constitutes the malady itself should be recognized early, if we wish to be in a position to treat it with confidence and success.

First, we have to be able to recognize the signs furnished by the external habitus: Diminution of robust vigor, skin white and flaccid, long eyelashes, winged ears, slender extremities, sickly aspect, redness over the cheek bones.

Second, the aspect of the thorax: Lateral narrowing, exaggeration of bi-humeral diameter of Louis' angle, cylindrical thorax, winged appearance of scapula, flattening of sub-clavicular fossæ.

Third, in children: Very rapid growth.

Fourth, emaciation.

Fifth, slight physical exercise leading to premature fatigue.

Sixth, mental agitation, irritability, weakness, gloomy and depressing ideas.

Seventh, a feeling of internal heat, rapidity of thermic rise (fistula in ano, pleurisy, adenitis, etc.).

Eighth, premenstrual fever: Premenstrual fever is noticed in most every case of pulmonary tuberculosis, about two to three days before menstrua-

tion, the patient complains of being warm especially in the afternoon, and by taking the temperature you find a rise of from 1 to 1½° F., with a feeling of *malaise* and sometimes pain over the affected area.

It seems that the heat-regulating apparatus in woman is peculiarly unstable at the time of menstruation. Those who have studied the temperature chart of tuberculous patients at this time have been impressed by the constancy and regularity of these periodic menstrual exacerbations in temperature, which seem to differ only as to the frequency of occurrence. If this is observed in the early stage of the disease, I believe it to be of great diagnostic importance.

What Authorities Say.

A review of some of the literature directly related to this phase of the subject may be of interest.

In *Beitrag zur Kenntniss des les Lungen-tuberkuloses*, of 1899, K. Turban describes a temperature curve with a rise preceding the menstrual period by from 3 to 5 days, and a depression following it. Men like Jesen, Krous, Saborin and Sagmann laid stress on the fact that premenstrual fever lent evidence to the existence of pulmonary tuberculosis.

In my limited private practice and in my observations of the last three years in the San Diego County Hospital, I have seen 24 cases, 22 of which showed a rise in temperature of from 1 to 1½° F, for 2 to 5 days preceding the menstrual period.

Ninth, increase in number of respirations and pulsations bearing above the normal.

Tenth, lowering of the arterial tension as evidence of a predisposition to phthisis.

Eleventh, stethoscopic signs.

Twelfth, thoracic pain.

Thirteenth, laboratory and X-ray research.

Fourteenth, a tuberculin test.

Prophylaxis.

The factors concerned in the spread and development of phthisis are many and complex; they involve more than the mere bacteriology of the disease; they have a bearing upon almost every aspect of the life of the community: its housing, social customs, dietetic habits, standards of intelligence and education, its industries, cost of living, public provisions for the care of the sick, and its outside relations.

As the nature of the problems have become

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clear, it has been possible to classify them under general headings:

First, those which fall to the care of the physician. Every physician should be compelled to report all cases of pulmonary tuberculosis.

Second, those which fall to the care of the Board of Health. Every person suffering from pulmonary tuberculosis should be furnished with instructions as to the measures to be taken to prevent its extension. All premises which have been occupied by persons suffering from pulmonary tuberculosis, when vacated by death or removal, should be fumigated.

Third, those which fall to the care of the community. There should be tuberculosis clinics in every city to furnish the poor patients with proper advice and medication.

The general public should be educated as to the nature of the disease, and the precautions to be taken against its spread.

And last and most vital are those which fall to the care of our National Government, to make laws against the free migration of individuals afflicted with pulmonary tuberculosis.

So long as intercity, interstate and international modes of travel carry daily in commerce clothing, food, animal and human sources of infection across the borders of cities, states and countries, so long will we be forced to suffer from the ravages of tuberculosis.

Climatic Considerations.

The selection of a suitable climate is a more difficult problem.

The first question your patient asks you, "Is this climate good for me?"

Flick and others have contended that there is no value whatever in climate in the treatment of tuberculosis, but with such an opinion few can agree. On the other hand, the extravagant claims of some climatologists go to extremes in the other direction.

To my mind, it is more important to the welfare of the patient *how* he lives than *where* he lives. Modern experience has shown that, given the same care, supervision and dietetic regime, a tuberculous individual will do as well in one locality as in another.

There are, however, certain indications for climatic treatment which present themselves from time to time, and which cannot wisely be ignored. One with copious expectoration, in the absence of extensive cavitation, is best treated in a dry atmosphere and an altitude of from 3,000 to 4,000 feet, unless the patient is above 50 years of age, or there is some contraindication, as arteriosclerosis, nephritis, uncompensated cardiac lesion,

etc. Early cases in the young and the middle aged do well in almost any climate, but do best if favorably situated at an altitude of from about 2,000 to 3,000 feet in a cold climate.

Elderly people do better as a rule at very moderate elevations and mild temperature. But I firmly believe if environments are not equally as good or better, away from home, I always advise my patients to stay where they are and not consider climate at all.

Hygienic and Dietetic Treatment.

This consists essentially in placing the patient in the best possible environment for increasing resistance and counteracting the effects of toxins and waste by maintaining nutrition at its highest efficiency.

It is that which must form the fundamental principles of all treatment of tuberculosis, whether practiced in the home or in the institution, whether it constitutes the sum total of treatment or is merely the basis of the elaboration of some special procedure.

Briefly, it consists of: (a) An almost constant life in the open air; (b) Rest and exercise apportioned to the individual and modified from time to time according to clinical indications; (c) A proper diet suited to the individual's requirements and modified in accordance with changes in regime; (d) Medicinal therapy as indicated.

Open and Pure Air.

Every one admits it a truth that the respiratory count of a phthisical individual is less than that of a healthy man. That his respiratory action, and as a consequence, his hemoptysis, is lowered in proportion to the extent of his pulmonary lesions. That he is, as it were, *hungering for oxygen*, and that all the chemical acts of his organic life are lowered.

It has been shown that the consumption of oxygen and the formation of carbonic acid do not increase during inspiration of air artificially charged with oxygen.

So the advantages of the fresh air cure depend, amongst other causes, on the purity of the air; on its not being charged with dust or with human emanations, and especially on its freshness. When the temperature of the air inspired by well wrapped up and sedentary patients is diminished, it will be seen that the rate of exchanges is lowered, whilst it mounts up if the surface of the body is also cooled. This amply justifies the putting into practice of the open-air cure, during which the warmly clad patient is lying down under cover.

A phthisical subject, whatever the extent or

form of his malady, should live day and night in the fresh air; this is a hard-and-fast rule that admits of but very rare exceptions.

In spite of all prejudice against which the medical man has so often to contend, aside from its action on the general condition of the patient, it furthermore diminishes his susceptibility to cold and inclemency of the seasons, strengthens his appetite, calms his cough, allays his feverish symptoms, encourages sleep and diminishes the sweats.

Rest and Repair in Pulmonary Tuberculosis.

More than 50 years ago Mr. John Hilton, a prominent English surgeon, drew the attention of the profession to the marked value of physiological and mechanical rest as a therapeutic agent in the cure of accidents and surgical diseases. This marvelous contrivance which Nature has employed for securing to the different organs of the body when in health, and the instinctive promptings of Nature to secure rest on the occurrence of accidents or disease, prompts us to advise our tuberculous patients to get as much rest as possible, especially when they get a temperature of from one or two degrees above normal. Rest and growth is much related. Accurate observations of the animal and vegetable world certainly reveals their perpetual co-existence, and growth as a rule seems *pari passu* with physiological rest.

It seems to me that the first and most necessary treatment for the acute and chronic inflammations of the soft tissues, as well as injuries to bones and joints, is to bring about rest to the injured parts. In infection of any part, with or without abscess formation, you would advise rest; then why not in pulmonary infection?

The effect of exercise upon the active disease process in a tuberculous patient appears to me similar to that of fanning a glowing spark into flame—the more bodily activity, the faster the disease spreads. Therefore, that which is a small effort for a healthy individual becomes dangerous exertion for a tuberculous patient with active disease.

Graded Rest.

Rest should be prescribed in definite quantities, just the same as drugs and other therapeutic agents. It is best to give written instructions to patients stating what degree and how many hours of rest should be taken each day.

Rest in Bed.

The question naturally arises: Is it possible to give physiological rest to the lungs? If so, what means are at our disposal to induce such rest? The lungs are so intimately related to the heart

and other organs of the body that it is impossible to give rest to the lungs without giving rest to the body as a whole. Consequently the recumbent position is the one and best means of giving rest to the lungs.

So rest in bed will give the required rest to the diseased lung tissue. In pulmonary tuberculosis the word "rest" should always signify rest in bed.

On the other hand, carefully graduated exercise under experienced supervision and in suitable cases is a most valuable auxiliary in the treatment. But it is impossible to lay down hard and fast rules.

Diet.

Hyperalimentation seemed to be an obvious indication in a disease which, like tuberculosis, is characterized by every evidence of malnutrition and excessive waste.

This forced feeding indiscriminately applied has in the course of time been found to be harmful.

The protest which naturally was raised against forced feeding, as soon as its dangers became apparent, has brought about a salutary modification in this practice, and a more rational and scientific diet is the rule at present.

This, gentlemen, will prove to you that the three elementary factors, open air, wholesome diet, and properly balanced rest and exercise are of most vital necessity to be considered with the tuberculous patient. The process is by no means a simple one. It requires an almost daily readjustment to the individual by one thoroughly schooled in the method.

Favorable to Autotherapy.

I have been using the Duncan method of autotherapy for the past three years, and with most pleasing results.

A man of 56 had tuberculosis following chronic bronchitis. He had taken tuberculin for two years and was improved, but the cough remained. From the morning sputum I made a Duncan filtrate and injected ten drops under the skin of his arm, giving three doses, each a week apart; and he was well of a cough he had had for ten years. I have had a clinical cure of tuberculosis in a boy of nineteen, cures of laryngitis, bronchitis and grippe.

I have had two failures. One, a lady past eighty, who had had chronic bronchitis for forty years, failed to react, though no harm was done. The other case had a cough but no demonstrated pathogenic organisms and, of course, the filtrate did no good.

Marietta, Ohio.

C. J. Scott, M.D.

The Administration of Ether.

From the Clinic of the Joseph Price Hospital.

By J. W. KENNEDY, M.D., F.A.C.S.,
241 N. Eighteenth St.
PHILADELPHIA, PA.

Possibly in no other department of our teaching are we so feeble as in our method of instructing the young physician in the administration of anesthetics. The result is just what might be expected; but the fact that anesthesia technic is not regularly taught in all medical institutions of learning mitigates against its prominence as a subject for study. I advise the interne and student to rise in rebellion and exact their dues. They have a right to instruction in this important subject. The operator has learned the great importance of a safe anesthesia and has educated some sister or nurse for this purpose. There is personal comfort in this sort of thing; but how about the hundreds of young men who as operators will have the responsibility of an anesthesia thrown upon them and who will find themselves totally unable to command the situation?

This operator will find himself crippled in the first and one of the most important working factors in his surgical life. No one can command any department unless he has been a worker in that department. The president of any railroad should have laid ties in his early life.

In Touch With the Patient.

It is absolutely necessary for any operator to be in touch with every breath the patient takes, and to know if that breath is over or underladen with ether. This can only be acquired by an apprenticeship with an ether can in his hands. I have always felt that if operators would learn to administer some one anesthetic well, they would be stronger men under all conditions than is the physician who tries to adapt his anesthetic to a particular type of patient on account of heart, lungs, kidneys, etc. Our experience with ether has been large; we use it entirely in the Joseph Price Hospital.

Dr. Price told me that in over thirty-five thousand anesthetics he had never had a death that could be laid to the anesthetic *per se*. I took it for granted that he did not include some patients who may have died secondarily from kidney, lung or viscera irritation. During my fifteen years' experience in the Joseph Price Hospital and all outside work, I have never seen a pneumonia following the administration of ether.

This is an almost unbelievable statement when one is familiar with the nature of the surgery done in the Joseph Price Hospital. It is even more subject to question when one knows the large per cent. of pus work and the great number of re-operations which constitute the bulk of the work and requires twice the anesthetic which would have been necessary for a primary procedure.

Ether Pneumonia.

In discussing this question of post-operative pneumonia, we have never been positive just what the factors are which produce pneumonia. I have always felt that the unnecessary exposure of patients in the operating room and during the passage through cold halls, and prolonged operations in the Trendelenburg position, were more determining factors than the anesthetic. I might add to the statement that we have never had a post-operative pneumonia and that we never use the Trendelenburg position.

If in my discussion of how to use ether I can prevent a nephritis, a pneumonia, or the water-logging of a patient, it will please me much.

A Good Start.

One can win or lose the battle within the first thirty seconds of the anesthesia. If you start well you can get and keep the confidence of the patient, which is most essential. We use nothing but a gauze towel. I am sure there is no ready-made appliance so good as a gauze towel one yard square, folded until you get a pad about 9 inches square. This gives about the right thickness and is of sufficient rigidity to control and keep tented over the patient's face.

The Inhaler.

It seems absurd, with all the stern difficulties which constantly confront us, to feel it is necessary to talk about some of these details; but they are exactly what gets one man into trouble and keeps the other man out. I see men all over the country placing gauze over the patient's face, then placing a good, big hand on top of the gauze, pressing the pad down on the face, which, of course, gives no room for the ether to volatilize and smothers and alarms the patient. If men will not think, it becomes necessary for some one to think for them.

Place the gauze towel, folded as I have described, over the patient's face in tent shape;

the index finger can be used as the bridge pole of the tent temporarily, until the ether is started. The fourth and fifth fingers splint the lower jaw against the upper, being careful that none of the gauze towel is between fingers and chin, as one can get an ether burn by pressing the saturated towel against the chin. One has absolute control of the situation from every standpoint if he takes this position and keeps it. This will do away with that unseemly pulling and heaving at the jaw, followed by the barbarous transfixing of the tongue with instruments which never should have been made and would not have been if the man who had them manufactured had done his duty as teacher of the administration of ether.

The Patient's Face.

Patients object to having their eyes covered with the towel and most of the overeducated laity will call for some petrolatum to rub over the face. Give them all these blessings or you will be thought ignorant and brutal. One's knowledge is not often judged by his stable qualities but by those superficial things which are a part of the layman's erudition. Show and tell the patient that what you are going to put over her face is only a piece of gauze, and that it is impossible for her to smother. Get her confidence. Encourage the patient to take a few breaths through the gauze towel ere any ether is dropped, then begin by drop-method and continue continuously and progressively until a surgical anesthesia is reached, after which very little ether is given.

The Drop Method.

The drop method is not understood and its name is deceiving. I say begin by drop method and continue progressively, by which I mean that more ether is given in the second ten seconds than in the first and continued in this ratio. In other words, you feed the patient ether as fast as he can take the same without any unpleasant sense of strangulation. The patient can take more ether the second minute than the first, and so it should be given. Do not do that which nearly all do, and that is, over-encourage the patient to take excessively deep breaths.

Tell her to breathe just as though you were not in the room. The patient who has been instructed to take excessively deep breaths will later temporarily stop breathing, which alarms the beginner. The over-instructed patient is an alarmed one. Silence is so forceful and stimulating to the patient. My nurses are all taught to say nothing about the anesthetic and to distract the patient's attention from all hospital happenings.

The continuous drop is not giving the ether in the same ratio that it can be taken, or in which it is indicated, and therefore we see those prolonged attempts to put the patient under ether. From four to six minutes is ample time to etherize. Do not drop the ether on the same point of the towel, but sprinkle a space of four inches square, which gives better chance for volatilization. We know that air will not circulate through a saturated towel, nor do you get any benefit from over-saturating any single point.

Simple Appliances.

We do not use any form of dropper for the reason that at times we want more than a drop. You have good control with the finger, which is nature's best dropper. Get away from all unnecessary paraphernalia and adopt the simple methods. I have really seen a poor fellow embarrassed because he did not have some means of producing a drop and gave it as an excuse for a poor anesthesia.

Co-operation With Surgeon.

An anesthetist should cooperate with the surgeon throughout the operation, never giving the patient more of the anesthetic than is necessary to perform the particular steps in the operation. Some steps in the operation require more relaxation than others; this should be imparted to the anesthetist. It should not be necessary to tell the etherizer to keep his finger from the patient's cornea, his natural ideas of cleanliness and injury should tell him this.

The Respiration.

First, last and always must the patient's respiration be watched. The pulse should be kept in surveillance. The pupil, which is as a rule much watched, can be exposed by traction of the brow over the supraorbital ridge. It is not necessary to say anything about the dilated pupil; all seem to know its indication. The thing to know is how to give an anesthetic uniformly and not cause the danger signals.

The beginner always asks, "How do you know when to give more ether?" To answer this question would be to tell the story which becomes second nature to the experienced anesthetist, who should be in as thorough touch with all the vital forces as the experienced engineer is with every beat and throb of his engine. The experienced engineer will awake from his slumber the instant anything goes wrong with his engine. It is possible for the anesthetist to be just this much in touch with his patient, but the beginner is the one who must have our sympathy and help.

I tell the student, after the patient has estab-

lished his regular mode of breathing, which is of sufficient depth to satisfy the operator, to add a few drops at the first inhalation which seems deeper or more prolonged than the regular type of breathing. This deeper or prolonged inhalation may be called a sigh, and comes from the fact that the patient is beginning to get in control of the muscles of respiration. The patient at this instant is beginning to get control of himself and a few drops of ether at this instant carries him down to the stage required. You cannot tell or teach the beginner the story-complex. Give him some one tangible thing which is most helpful; the story-complex is only acquired from prolonged experience.

Initial Anesthesia.

I do not approve preceding the administration of ether by one of the lighter and more rapid anesthetics, such as ethel chloride, gas, etc.; no two patients take an anesthetic in the same manner; therefore, if one has preceded the ether by one of the lighter anesthetics, the anesthetist has robbed himself of most valuable information which is peculiar to that patient, and has disarmed himself of valuable knowledge which is of vital service throughout the anesthesia.

For the same reason, we do not approve changing anesthetists during the anesthesia; the second anesthetist is not in touch with the patient and has not had a chance to study his peculiarities incident to the anesthesia.

The Type of Patient.

Some pathological conditions make it more difficult to anesthetize; for instance, the patient with a fibroid uterus is more difficult to etherize and takes much more ether than does the patient subjected to any other operative procedure.

I want to call attention to a type of patient who must be watched with apprehension, and that is the one who remains rigid and resisting late in the anesthesia when all other indications are that the patient is well under. The operator is apt to reprimand the anesthetist because the patient is not relaxed; and the anesthetist, in his eagerness to please the surgeon, carries the patient to the danger point. Just why this type of patient goes down so rapidly when they do begin to relax I do not know, unless it is due to the fact that the patient has been expending an excessive amount of nervous energy to the point of exhaustion. This type is that of the highly-strung, nervous individual or one who has had grief or calamity previous to operation. The surgeon should quickly recognize this type of patient and give the etherizer a little more time. The patient will relax without an unnecessarily

deep anesthesia, if she has a little grace extended her.

The Patient With A Heart Lesion.

We do not hesitate to give ether to patients with organic lesions of the heart. It is astonishing how ether properly given will stimulate the heart. Many patients have been permitted to die from unoperated surgical conditions on account of fear of an anesthetic upon the organic lesions of the heart, when the patient would have stood ether with perfect safety. It is like all other drugs: all stimulants are depressant in poisonous doses. We precede all our anesthetics, except in the very young, with a hyperdermic of morphine and atropine. The patient takes less ether; there is less trouble with mucus, and it relieves the patient of the acute sting of the operation.

Shock.

I believe that the patient is less liable to shock when the anesthetic has been preceded by morphine; it dulls the nervous centers and makes less liable nervous exhaustion which comes from fright, emotion or nervous explosion from any cause. We have tried scopolamine, but did not like it as well as atropine, as it seemed to be a marked respiratory and circulatory depressant. The most constant criticism I could make regarding the administration of ether is the lack of a uniform giving of the anesthetic and the great length of time required. Indeed, most of the anesthetics I have seen have required more time than the combined operation and anesthesia should have required.

Summation.

I have this mental picture of anesthetizing a patient: you have a hill to climb, the top of which is surgical anesthesia; it requires a good deal of steam to climb the hill but very little to remain there after reaching the vantage point. Climbing of the hill is *putting* the patient under; the descent is *keeping* the patient under. Now do not climb the hill step by step, but keep going all the time. You gain nothing by taking a patient to a certain half-way stage and holding him there; it is loss of time and ether, to say nothing about injury to the patient. It is not an intelligent conception of the indications of the administration of the anesthetic. So I say, in starting feed the anesthetic continuously to the patient's utmost comfortable capacity.

A struggle during the conscious stage should never be seen and is due to an error in the administration and a lack of getting in possession of the patient. Ether is par excellence *the* anesthetic.

Typho-Malaria.

By HENRY BIXBY HEMENWAY,
A.M., M.D.,
EVANSTON, ILL.

When some of us were in college we were taught that there were three fevers which seemed to be caused by impurities of air, soil, or water—malarial fever, typhoid, and typho-malarial fever. By some they were thought to be three distinct diseases; by others they were considered as essentially one disease, with its varying manifestations. Diagnosis was made only by general symptoms, for it was before the specific organisms had been recognized. Then came the identification of the *Bacillus typhosis* as the cause of typhoid fever. Malaria was still considered as due to atmospheric conditions. In as much as the same organism was found in typhoid fever and in typho-malaria those diseases were considered the same, and it came to be said that one who talked of typho-malaria thereby showed his ignorance.

There are many pseudo scientists in the world, and certain of them seek to raise themselves in the estimation of their fellowmen by a supercilious condemnation of all ideas which they do not understand and endorse. This is very different from a rational skepticism which doubts and attempts to prove that certain theories are not sufficiently supported by facts. While admitting that the evidence seemed to point to the fact that there was no such thing as typho-malaria, still there were some who still held to a modified form of the old notion.

There is a class of cases in which the symptoms and course of disease differs from either typhoid, or malaria. We speak of a disease by a special name when we find a certain class of evidence. We do not speak of a person as having diphtheria simply because of the finding of the diphtheria bacillus in his body, in the absence of symptoms of disease. If healthy we speak of such a person simply as a diphtheria carrier. In other words, a person has diphtheria only when he shows certain abnormal conditions, plus the presence of the specific germ. In that sense it may still be proper to speak of typho-malaria, even admitting that others may contract a genuine typhoid fever from such a patient, showing all the most classical symptoms.

The Organisms Involved

The organism of malarial fever is now well known and easily identified by competent ob-

servers. Armed with this information we now know that there is such a thing as typho-malaria, which is distinct from either typhoid or malarial fever in its characteristics, and from which either pure typhoid or pure malaria may be spread, for it is the result of the action of both germs. This fact has not been sufficiently emphasized.

In the month of February the writer's daughter made a short trip to Florida. Within a week she presented symptoms of malaria, but the time elapsed was so short that I doubted the possibility of malarial infection, and asked that a typhoid test be made. Before she received this request she had reached southern Missouri, and the next morning her temperature was presumably only a little above normal. Later she had a chill, followed by a temperature of 104°. The physician examined the blood and found the malarial plasmodia. Again I requested a typhoid test, and before receiving my letter, because of the puzzling character of the illness, a Widal test was made, and found positive. Then the writer went and remained through the illness until the patient was able to return to her home.

The Pathology

The chill of malaria immediately follows the maturing of a generation of plasmodia, and is apparently the result of the shock to the organism caused by the rupture of the blood cells. Ross says that for a person weighing 145 pounds the chill occurs when about 1,500,000 plasmodia mature at one time. I therefore calculated that the patient must have received at least 300,000 plasmodia in the first injection by the anopheline mosquitoes. Since all the descendants of a single inoculation mature at one time, and in cycles of about forty-eight hours, we expect to have the chill every second day; but as the person gets under the influence of quinin medication this period of maturing seems to be delayed a little. The fact that by the time the patient reached the Missouri physician she began to have chills every day indicated that there were two malarial cycles, as the result of two infections, but the chills were not always at the same hour of the day.

The Temperature Curve

The typical malarial temperature curve begins with a drop, followed by a rapid rise, then a less rapid fall, and temperature near normal for the intermediate day. The typical typhoid curve

is low in the morning, though above normal, and high in the afternoon. The actual temperature of the typho-malarial patient is the mean of the independent temperature curves. The result is very perplexing to one who has been accustomed to the pure infections. In this case there were three temperature curves to be considered. The next morning after I arrived the morning temperature was 101.5°, but I predicted a fall by noon, as a result of a study of the curves. In fact at noon the temperature was 98°, and it remained there until evening, when it went up after another chill.

The malarial trouble was soon mastered by quinin, forty grains a day. (There is evidence that small doses may produce in the plasmodia an immunity to the effect of quinin.) The typhoid infection was controlled by intestinal antiseptics, especially with sodium and phenol salicy-

lates. Temperature was normal within three weeks after first chill.

The points to be remembered about such troubles are:

An irregular temperature in either malarial or typhoid fevers should raise a suspicion of mixed infection.

Diagnosis should be made definite by laboratory tests, and treatment should not be based simply on a symptomatic diagnosis.

Quinin should not be given in the absence of malarial infection. Treatment should be definite, according to laboratory findings.

In typho-malarial cases the prophylactic measures must be taken to restrict the spread of each infection. In other words, the same steps should be taken as would be used in pure malaria, and pure typhoid infections. Against each a modified quarantine should be maintained.

Some Recent Theories on the Causation and Treatment of Stammering.

By G. HUDSON-MAKUEN, M.D.,
1627 Walnut Street,
PHILADELPHIA, PA.

Of all the affections to which the human organism is subject, there are few more difficult to understand than that of stammering speech, and there are few also that entail more mental suffering to the individual. The very fact that the patient himself can not understand the affection, coupled with the conflict of opinions which exists in the medical profession with regard to it, tends to increase its subjective importance and seriousness.

The question of the curability of stammering is an interesting one, and in attempting to answer it many things have to be taken into consideration. Much has been written on the physiology of stammering and recently the psychology of the affection has been coming to the fore, with the result that one fact at least has been well established, namely, that stammering is a psychical rather than a physical disorder, or, rather, that stammering is more psychical than physical. It can not be wholly psychical because it involves important physical activities, the development of which results in the formation of more or less fixed habits, so that one who has acquired stammering speech has acquired also certain physical as well as psychical habits, and the basis of the stammering, therefore, must be regarded as psychophysical in character.

Former Views

Formerly, stammering was looked upon as a purely physical disorder, and attempts were made to cure it by physical or mechanical means, such as operations upon the peripheral organs of speech, with a view to correcting the tendency toward the manifestation of the phenomena; but all this proved to have only temporary, if any, value, and it was found that to be efficacious the treatment, among other things, would have to include a readjustment of the patient's mental and emotional processes which guide and to a great extent control the peripheral organs of speech.

Newer Views

One of the most interesting of the newer theories on the causation of stammering is that of C. S. Bluemel, as embodied in his treatise on the psychology of the affection. Being at once a stammerer and a practical psychologist, his views should command respect, and, briefly, they may be summarized as follows:

Stammering is largely a psychic affection. It is a form of aphasia and due primarily to a transient auditory amnesia. The author claims with some considerable degree of reasonableness that the stammerer stammers because the auditory images of certain elements of speech are not forthcoming at the instant in which they are required for their externalization. This theory is based upon the physiological fact that the elements of speech have distinct cerebral rep-

representations and that the peripheral mechanisms of speech depend directly upon these representations for the orderly performance of their functions. In other words, each element of speech is centrally represented by its appropriate auditory image, and until this auditory image is forthcoming the peripheral mechanisms halt or fail to perform their function, and the phenomenon known as stammering ensues.

This theory as to the causation of stammering is an ingenious one, but it is not altogether satisfactory or conclusive, because the amnesia is merely itself one of the links in the phenomena of stammering and it is not even the initial link. It is the link just preceding that of halting speech and therefore it may be regarded as an immediate cause, but the primary cause of the affection must be looked for further back.

The Cause of Amnesia

The fact is, that under certain varying and favorable conditions, the amnesia does not exist, and when it does exist and when looking for a primary cause we must ask ourselves what is the cause of the amnesia, or what is the link in the phenomena of stammering immediately preceding that of amnesia? This, I would define as being a state of mind characterized by confusion and fear. The confusion is in some instances but little more than that which appears in the minds of most people when about to speak under unusual circumstances, but it is just enough to interfere with the sequence of the normal processes, and the fear appears to be the result of the full consciousness of previous experiences of failure to speak freely under similar subjective and objective conditions.

Hypersensitiveness

Hypersensitiveness characterizes all stammerers, and this hypersensitiveness is both a cause and a result of the stammering; and so we come back to the vicious circle without knowing definitely which of the links in the chain of the circle is the one which should be regarded as the first in point of time, and therefore which of the phenomena of stammering should be regarded as the first or primary cause of the affection.

Mr. Bluemel considers also the possibility of training the auditory imagery in order to increase its distinctness or tangibility, and he calls attention to the fact that just as we may train one's visual imagery and make it sharper and clearer, so we may probably also develop or re-integrate the auditory imagery by suitable exercises and thus cure the amnesia which, by the way, is not strictly speaking a verbal amnesia but merely an amnesia for the coloring or inflections of certain syllables and words.

Faulty Visual Imagery

Dr. Walter B. Swift has called attention also to a faulty visual imagery in stammerers, and the fact is, I suppose, that so confused is the stammerer's psychic operations during attempts at speaking that there necessarily must be confusion in all the psychical processes employed in speech production.

The Thymsus Theory

Another theory which is at present claiming the attention of not a few who are interested in stammering speech is that by Dr. William Browning, as published in the *New York Journal of Medicine*, in 1911.

Dr. Browning is of the opinion that stammering is frequently associated with an enlarged thymus gland, and he has reported twenty-five cases in which he claims that a reduction of this gland by X-ray treatment has seemed to cure the affection.

That stammering may be associated with the enlargement of the various glands of the body is quite possible and even probable, but that it should be cured by the method described seems to me to be little short of miraculous, and I confess that I shall have to see such results as are reported before I can quite bring myself to believe them to be possible. A temporary improvement in the condition of the stammerer usually follows the application of electricity in any of its forms, but this is due, of course, to its psychic effect and to the suggestion which goes with it.

The diagnosis of thymic enlargement by any method whatsoever is not in itself an easy matter, and that a reduction of the enlargement, whether by the X-ray or any other method, should cure stammering except possibly in its very initial stages is quite incomprehensible to me; for whatever else may be said of the affection, we must all admit that in what may be called its chronic stage it has become a complicated psychophysical habit, and whatever may have been the original cause of its development it is not reasonable to suppose that the removal of this cause can possibly cure the habits of speech which have been acquired as a result of it.

A Fixed Habit

In other words, when one has stammered for even a brief period of time, the habit of stammering becomes so firmly fixed that even if we could by some magic or other means remove once for all the original cause of the affection, the stammering would probably continue at least until the psychophysical habit was corrected by some kind of educational measures.

Dr. Browning's report, however, emphasizes the importance of making a thorough examination of all cases of stammering with a view to detecting physical abnormalities.

And when the last word is said with reference to the causation of stammering, it will probably be found that there is no one cause operative in all cases but that there are many causes for the affection.

Complex Causes

We can only say with some degree of reasonableness that there is an irritable condition of the psychomotor areas of speech and that the affection known as stammering may be due to any one of the many things that may disturb these sensitive cerebral areas.

A lenticular lesion, for example, has been suggested by Dr. James Hendrie Lloyd as a possible cause in some cases, and Dr. Charles K. Mills believes that the difficulty may exist in the tonectic series of figures. He says that the cerebral tonectic apparatus is a mechanism intercalated between the afferent or sensory pathway and the motor projection system, and that its function is to adjust or correlate sensory stimuli and motor discharges, giving to the latter rhythm or tone. He furthermore thinks that tone is primarily dependent upon sensation and only secondarily upon idea, and therefore the cause of stammering is more likely to be found in a disturbance of the sensory pathway or of the pyramidal motor apparatus than in a transient auditory amnesia, although this latter condition may exist in some instances.

Another neurologist claims that the defective inhibition found in stammerers may best be explained in terms of the tics, and that stammerers are for the most part neurasthenic and psychasthenic; and it is well known that many stammerers belong to this class, although it is also well known that comparatively few neurasthenics and psychasthenics are stammerers, and many of those having various forms of tics show no disturbance of speech whatsoever.

The problem of finding a casual factor which is common to all stammerers, therefore, still remains unsolved.

At this time, when the world is on fire, it is important that every doctor keep his head cool and his hand steady. No one knows how many may be needed. You may be. So come down to the practical essentials now. Fancy technic, speculative systems and pathies, prejudices and mere trimmings should be dropped. Get busy on the definite and essential things we know, not those a few extremists *think* they know.

Struma and Goiter.

By A. SIEBERT, Ph.D., M.D.,
Suite 423-24 Frisco Bldg.,
ST. LOUIS, MO.

The subject of goiter is manifold. Laymen and physicians are often in mystery about it; superstition, ranging from the wearing of a chain of amber beads or the heroic deed of winding a live snake around the neck, to the use of so-called specific medicines, is common.

When we are told by Sattler that of one hundred cases treated by surgery, only eleven are cured, and when Kocher, the nestor of the goiter surgeons, states that 33% are not benefited, remaining uncured by the operation, 27% improved, and that the mortality is 28%, we certainly are inclined to place surgery on not a much better plane than superstition.

A large number of names are given to that condition of the neck, ugly to look upon and bringing about a great number of distressing symptoms, to the one who is unfortunate enough to have it.

To get order in the chaos of views, I distinguish two groups: first, Struma; second, Goiter.

Struma

Now these groups are not always abstractly separated from each other. There are very many strumas which are goiters, and very few goiters which are strumas. The old-time, but still for the older medical man, well-sounding term "struma," has this intrinsic value; that it indicates *praeter propter*, the position a physician must take towards goiters, which is the common name of today. With the word "struma" we recollect that there is a condition of scrofulosis. Modern views reject this term, but he who has to deal much with just this problem of goiters, sees every day that there is such a condition as scrofulosis of which changeable tendencies of medicine can not afford to lose sight. With the word scrofulosis we *are*, or better said, we *were*, used to combine the idea of an end-station of a toxic process in the lymphatic glands, more suspected than actually known.

Tubercular Over-statement

Now-a-days everything must be tubercular; and if it is tuberculosis, the *Bacillus tuberculosis* must be present, of course. Now that is not the case in goiter as far as I know. I have seen no tubercle bacilli in the thyroid glands and neither do I find any mention of them in any one of the works on goiters to which I have had access,

including the latest work by Falta, "The Ductless Glandular Diseases." But on page 55 of this work, we find the remark: "Malignant altered thyroid gland tissue may not only affect the normal function, but when proliferation is rapid, may even lead to hyperfunction." That is to what I refer when I speak of struma—the hyperfunction of the gland, that is, the form of reproduction or multiplication of the cells and of course with that also their function. Now we have a better knowledge of that end-station, struma, as it was formerly for us, and our suspicion has materialized.

Chance or fate, as we please, assigns this multiplication of cells to different parts of the glands. We meet them affecting one or more of the accessory thyroid glands and then speak of struma aberrata.

Various Forms of Struma

We meet a condition which has terminated, or is terminating, into a suppuration of a glue-like mass, and call it "struma colloides." We meet cancerous strumas and call them malignant, that kind of which the multiplication is due to follicular hyperplasia and then call it "struma parenchymatosa" and we meet a condition when the thyroids have degenerated to a stone-hard mass and call it "colloidal struma" (from callus, the stone.)

But being generous with our titles to the trouble, the word "struma" will lead us to other glands the thyroids reciprocate with, and we find struma thyroiditis combined with struma pituitaria, struma thyroiditis combined with struma suprarenalis, struma thyroiditis combined with struma pancreatilis, and struma thyroiditis combined with thymus struma, a condition surprisingly often found, and it precludes of course the persistence of the thymus gland beyond the time when it is supposed to have atrophied.

All of these conditions may exist singly or in multiple or in general connections.

Goiter

Turning over to goiter, in contrast to struma, we confine this condition to local manifestations. Both are, of course, perversions; but while a struma is a more or less general perversion, a goiter is a local perversion. When in struma, the effects of conditions of the system reflect on the thyroids, in the goiter the system receives its peculiar reflexes from the thyroids. When in struma the picture is one of suppression (in the potential form ending in myxedema), in goiter it is one of exaltation (in its potential form ending in the exophthalmic goiter). Both are perversions; both are rightly to be called dysthyroidisme, but manifest in opposite directions.

Goiter Classification

First, Cystic goiter, sometimes found in connection with thyroiditis; rarely found in other connection; very often a traumatic cyst.

Second, Perivascular goiter, one which is caused by a large blood vessel taking often the shape of an aneurism.

Third, Retrovascular goiter, one which sends one or more processes behind an important blood vessel.

Fourth, Exophthalmic goiter, characterized by enlarged thyroids with exophthalmos, anemia, over-action of heart, mental irritability, tumors, muscular weakness, mental languidness, and general organic disturbances. Other names are: Flajani's, Graves' and Basedow's disease (bronchocele).

As in struma, we can speak of goiter aberrant, and of colloidal goiter and parenchymatous goiters.

The General State

A person with a goiter can appear to be, but often is not, healthy otherwise; perhaps due to the action of the thyroid glands, which have absorbed and transformed stored-up toxins of the body; but a person with a struma is as a rule sick constitutionally.

Diagnosis

Diagnostic difficulties occur only in incomplete cases or in those with symptoms of affections with other glands, which we have seen can be very multiple. In this relation, I keep in mind the fact that, as in diabetes, to look for dyspnoea; in derangements of the thyroids, I look out for the troubles incident in albumen and phosphorus metabolism. I have to look to the thyroids in increased elimination of calcium, as manifested by the different bone diseases, and I look for the persistent existence of the thymus, or what is a remarkable but not yet explained observation, that of a co-hesion of the two thyroids at their base, in other words, the absence of the isthmus.

Treatment

Here a warning word must be said, that whereas every case of goiter may be cured, not every patient can be cured. Who does not see at once that what we might say about one case may not apply to another? Attention must be paid to the goiter in itself, its connection and relation to other parts or organs of the body, yea, to the entire system. It is my routine in every case to examine the entire body, to make sure whether I find a struma or a goiter. Struma demands, of course, symptomatic and systematic treatment which is always absolutely individual.

Also goiter treatment is very difficult to gen-

eralize upon; yet the nature of the trouble offers general rules for the therapeutic attack. When I know my patient has a goiter, I start with the examination of the air passages—the nose in its entire structure, the mouth and its entire contents, the throat, the very important tonsils, whose presence I always welcome. Where the tonsils have been removed, I am on my guard to have a goiter caused by the necessity of the thyroids performing the function of the tonsils.

Then, I see what has to be done to the liver, the spleen, the pancreas, the kidneys, the gastrointestinal tract, the arterial and venous circulation, briefly, everything. Then we look to the goiter:

An easy outlet for the evacuation of the necrotic debris is, of course, the most desired step. But it is not good to be in a hurry with that. Wait until the condition of the body has changed for the better. It is astonishing how easy it becomes to make this step; it comes by itself, so to speak, and proves a splendid result is obtained by a most simple method; usually a trocar is all that is needed. It is also astonishing, and surprises many, how often hard masses get soft and really invite one to open a little door to let them out.

Special Medication

Sometimes we may support the process by giving liberal doses (from 10 to 20 grains) of calcium-chloride. It is of great value as an internal remedy to bring re-solution to hard masses. Preceding this method we may be in need of another: an intestinal antiseptic may be called for. I do not know how many goiters are caused by perverted intestinal fermentation, but there are very many. In these cases I give thymol, in coarse crystals in 10-grain doses, one at bed-time and one early in the morning; the patient must not take anything oily or acid for three hours before or after taking thymol. Some doctors prefer blue mass, but I do not. I have had my experience with that!

External Treatment

The desired process of necrotic debris removal must be aided by external applications. I have my patient wear over night a Priessnitz bandage saturated in a demulcent decoction, and I apply locally the vacuum electrode, not alone for its specific but also for its constitutional effect. Furthermore, I pay especial attention to the ganglionic or vegetative system.

Now disinfect, after the necrotic debris is let out, the cavity thoroughly. It might become necessary to stop the flow of blood before disinfection with coagulose.

I have at present forty-seven cases of goiter

under care, and I never had occasion to treat one case just like another one. What I will have to do with the next one, I do not know. I only know that I have these *GENERAL PRINCIPLES*, and as medicine is an *ART* and nothing but an *ART*, I must leave it to sound judgment, good will and hard work to do the right thing with and for any goiter case.

I have the same wish for my professional brothers, I appeal to them not to try to imitate my (or anybody else's) methods, as they can not be imitated; it is entirely an *INDIVIDUAL ART*; but an art which is not connected with a mortality of 28%, as the most noted goiter surgeon has confessed; this art of curing goiters without the knife has no mortality whatsoever; therefore, it is worth your while to try it.

The Stomach Tube and Its Uses.

By D. W. REED, M.D.,
GREELEY, COLO.

Many manufacturers of stomach tubes would do well to consult physicians who use the tube daily or at least frequently. By so doing the tube might be greatly improved and the distress to the patients diminished.

What are some of the faults of the ordinary stomach tube? First, it is entirely too small. The opening in the tube should be large enough to permit the passage of poorly masticated food without clogging. This can not be done with a tube the opening in which is only one-fourth of an inch in diameter, and a tube the opening in which is one-half inch in diameter is too large to pass the esophagus without giving the patient considerable discomfort unless the manufacturer takes care to have the walls of the tube thin and rather soft and flexible.

I have just received one of the latter size. The opening is one-half inch in diameter and the outside diameter is three-fourths inch. This probably would have been satisfactory if the walls of the tube had been thinner and more flexible, but as it is one-eighth inch thick and rather inflexible, it is very distressing to the patient. So I have concluded to have one made with an outside diameter of one-half or five-eighths inch and have the walls thin and flexible in order to allow as large an opening as possible. In passing a tube of small size the patient will retch and "gag" far more than if the tube is as large as comfort will permit.

Second, I do not approve of having an opening in the *end* of the tube. There should be two

openings in the opposite sides of the tube *near* the end but not *in* the end.

Difficulties.

A little experience that gave me some uneasiness taught me this idea. I was endeavoring to take out a test meal that the patient had eaten an hour previously. The opening *in* the end of the tube was evidently in contact with the mucous membrane of the stomach. On using the bulb for the purpose of producing a tendency to a vacuum to withdraw the test meal, the patch of membrane in contact with the tube was drawn so tightly into the tube that it was removed and left a little patch denuded of mucous membrane just the size of the lumen of the tube.

I have no criticism to offer to the ordinary bulb and funnel.

Uses.

Most physicians use the stomach tube only in cases of accidental or intentional poisoning. This is, of course, one of its chief uses. It is also useful in the treatment of chronic gastric catarrh or chronic gastritis. No treatment that the writer has employed has given the satisfaction to both the patient and physician that has followed the use of the tube in gastric lavage. Not more than a pint of water should flow into the stomach at once, and the first pint should be a solution of bicarbonate of soda. When it is in the stomach, before allowing it to syphon out, the stomach should be agitated briskly with the hand of the physician over the gastric region. After the soda solution has syphoned out the stomach should be rinsed two or three times with plain water.

Occasionally I am called to relieve the distress of a patient who has an undigested and indigestible meal in the stomach. The tube will remove this, if it is a large tube, far more satisfactorily than any emetic with which I am familiar.

In hypo- and hyper-acidity of the stomach the tube can do very much toward giving relief.

Restoring the Thermometer Scale.

Take a little of the black asphaltum liquid stove-pipe enamel and smear it over the thermometer. Before it dries, rub it off with tissue or toilet paper. The remnant remains in the depressions. Then lay aside to dry.

F. A. PALMER, M.D.

Mechanicsville, N. Y.

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OUR OPEN FORUM

Peritonitis: Recovery of a Desperate Case.

I will report a case that came under my care to once more prove the wondrous healing power of Nature, when assisted along the right and conservative lines.

Male, colored, 35 years old, always healthy with exception of several spells in the past 5 years of "gripping attacks," as he puts it. Was taken with present illness Sunday morning; pain in the abdomen coming on by spells, pain seemed to him to be all over, but would radiate mostly to lower part. He went visiting, riding in a buggy, in spite of the pain, and was up all day. He took salts Sunday morning, with good effect Sunday night, after which he felt better and rested very well. He went to his work Monday morning, but had to return home about 11 o'clock on account of the pain. Monday afternoon vomiting set in, while the pain was more constant and severe. I was passing his house about 4 p. m.; his wife called me in; on examination I found him suffering with general abdominal pain, some tenderness, not increased on right side; vomiting everything he took; tongue bad; pulse and temperature normal; some rigidity, but slight distention.

I gave him a ¼-gr. morphia hypo. and left two ¼-gr. tablets to be taken every two hours until easy. Ordered hot applications to abdomen, frequent sipping of hot water, with quiet, and no food; and instructions to let me hear from him Tuesday morning. I did not hear from him again until Wednesday at 6 a. m., when I received an urgent call to see him. His general appearance from Monday until now was most striking. He looked almost moribund; features all pinched; extremities cold and clammy; pulse 150, small and weak; abdomen enormously distended with gas and fluid, vomiting every few minutes; air-hunger alternating with fainting spells; kidneys had not acted for 18 hours.

The Treatment.

I recognized at once a case of general peritonitis. I gave him morphin, ¼ gr.; atropin, 1/100 gr.; strychnin, 1/30 gr., and hurried him to my hospital, 6 miles away. I introduced a catheter and got only a few drops of urine. We placed him in the high Fowler position, gave him a quart of saline under the skin, gave the Murphy drop method continuously. He was also given 1/50 gr. digitalin intramuscularly, with 1/100 gr. atropin, until his skin became warm and dry, when the atropin was discontinued. The vomiting continued except for slight remissions for a few hours after stomach washing, which was done as often as his condition would admit. His kidneys resumed their function

after a period of 48 hours' suppression. He was given nothing by mouth except sips of hot water, until about Saturday, when he was able to take egg albumen, predigested beef and water freely.

On Friday the vomiting was distinctly fecal; the rectal tube was left open occasionally for the escape of gas; on Friday night and Saturday morning much gas and dark fluid escaped through the tube, relieving the distention very much. The dullness on Saturday afternoon was confined to the lower abdomen and more prominent on the right side. His pulse, kidneys and general condition were considerably improved, although he was delirious and running a septic temperature now.

Surgical Intervention.

He was taken to the operating room Saturday night and the abdomen opened as far outward as possible on the right side under a local anesthetic and a small amount of ether. The tension in the abdomen, though much reduced, was great. As soon as I got through the tissues, gas and a mixture of pus and fecal matter escaped and went halfway across the room. The opening was made very carefully, using the finger mostly after getting through the muscle; the intestine was not wounded.

The discharge showed unmistakable evidence of perforation somewhere, which had occurred four days previously, but why he was not dead was the puzzle. In mopping out the opening very gently with gauze sponges passed with long forceps, I found pus had burrowed up behind the ascending colon as well as to the floor of the pelvic cavity; consequently two drains were inserted. The tubes were removed the twelfth day and iodoform gauze drains substituted; after removing the lower tube while mopping out the cavity, I noticed a piece of gangrenous tissue in sight. I lifted it out and found it to be the appendix. It was intact enough to show that it had sloughed from the cecum in the shape of an inverted funnel, which caused the leak from the bowel. It was about 6 inches long and the original perforation about 2 inches from the tip could be plainly seen; a probe could be passed through this along the lumen the entire length.

Drainage.

This case drained a mixture of pus and fecal matter for three weeks, when the discharge was only purulent. He drained altogether for about 7 weeks. In two and one-half months from his illness he was walking around, and in four months he was doing some work; at this time, about 12 months from his illness, he is doing the work of any farm hand, looks strong and well, and so far as I know he has no inconvenience whatever.

Comments.

This case clearly taught me that paresis of the bowel with enormous distention can produce a condition which amounts to intestinal obstruction for a time; also that the late surgical

intervention with as little surgery as possible, along with the valuable aids that Dr. Fowler gave us in his position, and Dr. Murphy in the use of saline solution, in assisting Nature in dealing with sudden and virulent infections of the peritoneal cavity, certainly offers the greatest number of recoveries. I also believe that the distention, while interfering with the heart and respiration, is a conservative process to coffer-dam the lymphatics, preventing a too rapid and overwhelming absorption of toxins. It has also been a surprise to me how this case healed without showing evidence of extensive adhesions, and indeed he may have them yet, but so far I feel very proud of the result obtained.

Kenbridge, Va.

T. C. HARRIS, M.D.

Intracapsular Fracture of Femur.

I have heard of four cases of intracapsular fracture of the femur dying this winter. They ought not to die. How shall we manage this class of cases, occurring, as they do, in old people?

Without hospital facilities it is hard to nail the fragments together, and some of the aged persons are not suitable cases for an anesthetic.

I use the method of Dr. C. E. Ruth, of Des Moines. It consists of extension from above the knee, similar to Buck's extension, also of lateral extension from the upper part of thigh. Place a piece of binder's board six inches long and wide enough to reach two-thirds around the thigh, on the inner aspect of thigh; then bandage the limb from foot to body over adhesive two inches wide and over binder's board well padded with cotton. Over this place a 2-inch strip of adhesive plaster long enough to tie to. Arrange counter-extension with weight and pulley, as illustrated in text-books, using 15 pounds weight, and blocks under bed posts, one side being higher than the other, as recommended by Ruth.

This amount of extension continues for four weeks, when the weight is reduced one-half. I raise the patient almost to a sitting position to eat his meals, and bend the knee every three or four days. Sand-bags are used when necessary, and the foot of the bed is kept elevated.

It takes quite a little time for these patients to learn to walk again. Put them through exercises and avoid crutches as much as possible, as the patient gets to depend upon them.

These patients should not die. Ruth's method, with lateral traction and longitudinal extension and counter-extension and raising one side of the bed a few inches as its characteristics, as described in detail in Preston's work on "Fractures and Dislocations" (C. V. Mosby Company), keeps them comfortable and relatively free from pain. Then feed the patient well and keep him cheerful.

Hopkins, Mo.

D. A. SARGENT, M.D.

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Announcements for October.

"The Professional Side of Dispensing" and "Can There Be a Vegetable Antitoxin?" will be the leading editorials, the first one showing how to make dispensing worth while in several directions, and the second very carefully analyzing some recent claims in therapy.

This month carries the Quarterly Supplement, and therefore the papers on "Cancer," by Dr. Fisher, and "Milk and Its Relation to Infant Mortality," that we hoped to publish will go over to October. Both are exceptionally fine papers and will interest every reader.

ORIGINAL ARTICLES

"The Management of Fractures," by Jas. A. Foltz, M.D., F.A.C.S., presents sensible and helpful views in an analysis of recent methods in fracture management. An able paper from a sane angle and one the general practitioner will keenly appreciate.

"Scientific Studies of the Present Status of Appendicitis," by Dr. Joseph Shanks, is a very clear and concise paper, and his points are well taken. It will pay every physician to read this able paper

"Epilepsy Neither a Germ Disease Nor Communicable," by Dr. Wm. Held, presents the other side in a contention recently raised by Dr. C. A. L. Reed. Doctor, this paper will interest you if you treat epilepsy at all—and who does not?

"Obstetrics in General Practice," by Dr. A. J. Farrell, is one of his characteristically practical papers.

"Erroneous Conclusions from Psychical Manifestations," by Dr. J. G. B. Bulloch; "The Auditory Canal," by Dr. John C. Warbrick, and some previously announced papers crowded out from September, we hope to get into the October issue.

The Editor hopes contributors who have honored THE MEDICAL COUNCIL with their papers will bear with us a little, for everything accepted will be published soon as at all possible. Some material not seasonable for summer publication will now begin to appear and will be announced for the November issue.

THE BUSINESS SIDE

"What is to Become of the General Practitioner?" by Dr. Frederick D. Keppel, is a very clever paper that will "find you at home" when you read it, for it hits you just right there.

Medical Council always tries to tell the truth, not the half-truth, by presenting both sides in any reasonable contention; but we won't print pseudo-science, the shop-worn and moth-eaten; and we don't know it all.

<p><i>While we, as physicians, desire to be scientific students and practitioners of medicine, and that is the primary purpose for which this journal is published;</i></p>	<h2 style="margin: 0;"><u>THE BUSINESS SIDE</u></h2> <p style="margin: 0;"><i>of Medical Practice</i></p> <p style="margin: 0;">"The laborer is worthy of his hire."</p>	<p><i>yet, for the welfare of our dependent ones and our standing in the community, we must secure a fair compensation for the services we render our fellowmen.</i></p>
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Are We the Cause of Present Conditions.

By J. HENRY DOWD, M.D.,
Genito-Urinary Surgeon Sister's, Mercy and
Contagious Hospitals; Consulting Surgeon
at the Emergency Hospital.
9 N. Pearl Street,
BUFFALO, N. Y.

When the cool-headed general practitioner reads his medical journals, especially the testimony appearing in the leading publications of this country, and testimony by those considered authorities, can he be blamed for thinking that possibly he is not such a bad diagnostician; and as to drug knowledge, even the great can, and do, err.

It is a hard morsel to swallow but nevertheless diagnoses have been shown at post-mortem to have been wrong in about 50% of cases, and these in the largest medical centers (Cabot).

True, there must be a valid cause for such a statement, and especially as regards cases occurring in the hands of men having every facility for arriving at the facts.

Many Mild Cases

The writer has contended for years that if fully 75% of individuals who complain of illness were to receive no medical attention whatever, they would recover. It will not be denied they would undergo some inconvenience, some amount of suffering, which the doctor might relieve, but they would recover just the same if Nature was allowed to take her course uninterrupted.

But this 75% of cases, what are they? Surely no medical man could believe for a moment that an inflamed lung, intestinal tract, typhoid, appendix, kidney or other specific inflammatory process should be included among this 75% and should be left to itself. Therefore the 75% of cases must include conditions where there is no apparent pathological condition of any organ or part of the body present; in other words, this 75% must be classed as functional ones.

Functional conditions have generally been regarded as having no pathological or diseased condition present, although at times they are

accompanied by most aggravating symptoms.

One sect tells us that they are conditions of the mind; in fact, their troubles are imaginary.

As to there being no pathological or abnormal condition present, we know this to be an error: there *is* an abnormal condition, pathological if you wish to so designate it; it is in the brain cells.

Functional Neuroses

Space will not admit of going deeply into this subject; it could be but a repetition of the original articles of the writer (*N. Y. Med. Record*, 1909) and which subject, later, has been brought more forcibly to the attention of the profession by Crile.

That we cannot see, or even ascertain, by questioning, the abnormal condition present in functional cases, is true; but we can be positively certain of one thing: it is either an irritated condition of, or due to, insufficient nourishment of the brain cells; these occur about 20% of the former to 80% of the latter.

Specific Nutrition

In the articles cited the writer called attention to some conditions that time has proven to be facts, viz.:

The brain and nervous system controls and operates every organ, every function of the human body, in health or disease, asleep or awake. The nervous system has a food element exactly the same as has muscle, bone, blood, etc. This food element, as all which nourishes us, is selected from the food values we eat; but, in contradistinction to other specific food elements, an excess is taken, which is stored for emergencies. An individual is ill; sufficient food cannot be taken by mouth. The result is shown by anemia, muscular atrophy, etc., yet systemic functions must be maintained, at or as near normal as possible; the reserve comes to the rescue at this time.

The above may be considered theory; but have we not two eyes, two ears, two lungs, kidneys, hands, etc.? One of each is all that is absolutely

necessary; the second can be considered as the reserve.

The man who works but four or five hours at his desk is tired; as tired, if not more so, than the man who has performed eight to ten hours of labor in the field; one is mental work, the other physical work. The physical laborer sleeps the sleep of the just, arising next morning refreshed: how different with the office man; he carries his work and cares to bed with him; sleep is unsatisfactory; he arises as tired as when he went to bed.

One man allows the battery to become recharged, if the residuum has been overdrawn; the other does not; he simply continues withdrawal from the reserve, and sooner or later depletion is the inevitable result and we have an individual with neurasthenia, with all its distressing symptoms.

Temporary Medication

Of the 75% of individuals who can be classed under the condition mentioned—functional—the great majority will visit the doctor for advice. Some, of course, will medicate themselves; and they will get results, at least they think so. But quite a number who seek medical advice do not get results, and if they do they are but temporary. Of course they become discouraged. Reading some alluring newspaper advertisement, or being informed by a friend of a marvelous cure of a similar case, they drop the doctor and consult the druggist.

Useless Medication

It is estimated that nearly half a billion dollars is spent every year, in the United States, for medical advice and medicine; but only one-fifth of this amount reaches the hands of the physicians; the other four-fifths is spent over the counter for "patents," or goes to a class that has no moral right to prescribe or advise as to illness. Surely something is decidedly wrong.

The writer does not wish to be considered too opinionated, nor would he humiliate his chosen profession; but physicians are to blame to a great extent because, when they are consulted they *simply treat symptoms*, leaving the cause unsought for, untouched, which means but one thing, relief while under the influence of the drug supplied.

Managing Cases vs. Dosing Symptoms

As an example: An individual consults his physician for a gastro-intestinal complaint—dyspepsia, "belching of gas," or the like. An artificial digestant is ordered for the symptoms, but not one moment is lost in ascertaining the cause, of which the symptoms are only an indication. They are relieved, but it is temporary; sooner or later the same symptoms will again present them-

selves. The average American is sufficiently bright to learn that pepsin or the like, very likely some proprietary, was ordered. What is more natural, than when the former symptoms return he should buy the remedy advised by the doctor, or some advertised one for his condition; and that is just what a goodly portion of the people do.

Such may be seemingly far-fetched, but it is a fact nevertheless; for they not only commence medicating themselves at every symptom that may arise, but they act as advertising mediums in helping to dispose of the many dollars' worth of "patents" sold every day in America. The doctors, to a great extent, are the ones to blame for the patent medicine evil.

Losing Faith in Medicine

The laity are fast losing faith in us by reading in the public press that 50% of diagnoses are wrong. We must try and rectify this. There certainly is a remedy, at least to a degree, whereby the profession may not entirely lose caste. Let me suggest one covering many of these functional cases. Of these 75% of ailing individuals, the cause is often located in their brain cells and may be due to specific food starvation or to irritation.

Both of these conditions are easily and quickly ascertainable, and with appropriate medication and a little advice, the improvement will be permanent.

The Phosphatic Index

Physiology tells us that the alkaline phosphates found in the urine are altered in amount by food, disease and conditions involving the nervous system. Any irritation of the nervous system will double the excretion of alkaline phosphate within a few hours. Found in the urine, they may be considered as an index of nervous metabolism, the same as urea content is an indicator of muscular metabolism.

Taking the phosphatic index with the phosphometer takes but ten minutes, using the second urine passed in the morning. A plus index shows nerve cell irritation; the reserve is being drawn upon to the degree indicated, which if allowed to continue will surely end in depletion; whereas, on the other hand, a low index shows the amount of depletion already present, and both conditions will give symptoms according to the degree found in the reading.

In case of irritation (high index), sedatives are called for, in connection with advice as to the condition responsible. If the nerve cells are hungry (minus index), a condition similar to anemia, feed them artificially until the system reaches a point where it can do so itself.

Ethics and Other Things.

It is a pretty well known fact that most doctors are supposed to belong to that class of humans of whom "one is born every minute." At any rate "sucker lists" are said to contain more than the normal proportion of names of physicians. Even aside from this, however, many other indications point to the same fact.

One would think that men with the education necessary to a physician in these days would be able to think and act for themselves, but apparently most of them are not able. As a class we do not only allow most of the medical legislation to be instituted by the druggists, and for the druggists, but we fall all over ourselves in the effort to help them do it. We are eager to protect the dear public even at our own expense, which is a lot more than the druggists are, you will note.

The writer has long believed in what has been called the nationalization of the practice of medicine. Since, apparently, neither the physicians nor the public are likely to be ready for this, probably in this generation, he believes that if physicians are to play the game of life at all they must play it according to the same rules as the others. As a matter of fact we are trying, at least, to play it by rules laid down by Hippocrates. The basic idea of the present stage of civilization is competition. If doctors really practiced medical ethics there would be no competition in medical practice at all.

Keen Competition.

As matters are, we all know that there is the keenest sort of competition among medical men. Owing to our system of ethics, however, it is not honest and open competition, but the mean, underhanded sort. As a result it is not the best men, but the worst, ethically, who reap the big rewards. The ethical doctor must not advertise, must not split fees, must not take commissions from druggists, and the like; but the unethical man can and does do all these, openly or secretly, and the rest of us can do absolutely nothing to prevent it, no matter how much we may talk.

The laws which we get passed, or help the druggists to pass, hinder the ethical physicians, but do not hinder the unethical men in the least, and may even help them. Take, for example, the "pure food and drugs act." To say nothing about the rest of it, we know that the guarantee label was actually a help in the sale of the so-called "patent medicines." Any one who will take the trouble to investigate the medical advertising in the so-called mail order papers will learn, perhaps to his surprise, that there is far more of it now than there was before the passage of the pure food and drugs act, which was supposed to put this sort of competition out of the running. The same is true of daily newspaper

advertising, in all papers which will accept such ads.

As a matter of fact almost any one can get a law passed to help him and his class except the ethical regular physician. None of the medical laws help him any; none of them even pretend to do so. At the most they are supposed to inhibit quackery. As a fact they merely inhibit ethical medical practice.

What Shall We Do?

Physicians, then, ought to be sensible enough to do one of two things. Either we should cooperate as fully as medical practice ought to be cooperated, or else we should open our eyes to the fact that under present conditions medicine is not a profession, but a business, and, as such, ought to be carried on along exactly the same lines and with exactly the same methods that prove successful in other lines of business.

Mind you, the writer is not a believer in the idea that business is the final word in the evolution of humanity. He believes it is merely a stage in evolution—one which will, possibly very shortly, pass away and be forgotten. If this happens soon, cooperation in medicine may soon be a possibility. The chances are that the present war has either advanced the date at which destructive competition will perish or it has postponed it for a generation or two. No man can even guess which. All that we know is that competition is still with us and that we can see no immediate probability that it will cease. The relative returns from the practice of medicine, ethical practice, get beautifully less each year. To use slang, "what's the answer?"

ERNEST F. ROBINSON, M.D.

Auburndale, Mass.

The Abuse of Pituitary Extract.

Dr. Nathaniel G. Price, Newark, N. J., in *Jour. Med. Soc. of N. J.*, April, 1916, believing pituitary extract to be invaluable in obstetrics, expresses some warnings.

Use the drug in the second stage of labor, where all that retards is insufficient uterine action, and all will be well; but don't precipitate labor with it; don't hurry a case beyond what is normal; don't use it to force the soft parts; don't use it EVER because *you* are in a hurry and Nature is not; don't use it until sure of conditions; don't induce asphyxia neonatorum with it; don't forget its use may be followed by uterine atony and post-partum hemorrhage; don't forget you may rupture the uterus; don't jump from one make to another, but get accustomed to one; don't give 1 cc. for an initial dose, but begin with 1/3 cc.; and don't do any fancy stunts with pituitary extract.

Best
CURRENT MEDICAL THOUGHT

Surgical Scissors

As wielded by Douglas H. Stewart, M.D.,
F.A.C.S.

*The scissors of an editorial office are bright, keen,
polished and practical. May this space imitate
them and its quality be helpful.*

The Axillary Sup.

The name originated with Foster and was published in *Surg. Gyn. and Obstets.*, Vol. XIX, p. 248, but the technic originated in Lane's service at Guy's Hospital. The hypo-needle should be inserted through the outer portion of the pectoralis major, the fluid delivered as slowly as possible and both sides should be employed (*i. e.*, both axillæ). Men who have used it claim splendid recoveries from operations, with little or no discomfort. Pain, thirst, nausea and vomiting are all minimized.

Scissors tried it in the removal of tuberculous kidney, in a pan-hysterectomy, and liked it well enough to plan its third trial in a mighty mean adherent fibroid plus some other things, which he will tend to in a few days.

If the anesthetist has served a term as house surgeon, he can easily manage both apparatus and technic, especially with the assistance of a good nurse.

The claim that the danger of shock, or that all danger of shock, is eliminated is made. This seems a very strong statement, but it is made by men who do not speak lightly.

It is not a technic for any short-handed operation, but is quite simple with ample assistance. One advantage over intra-venous injection is the impossibility of drowning the patient by pulmonary edema.

The Treatment of Fractures.

W. P. Carr, M.D., F.A.C.S., Washington, D. C., *Lancet-Clinic*, May 27, 1916. This contributed article is based upon over seven thousand fractures treated at the Emergency Hospital in Washington. And the results of that treatment, when confirmed by the X-ray and by non-interference with function, have convinced the author that the profession has retrograded rather than

advanced, and that there is now more difference and confusion of opinions than ever before; so far as the management of fractures is concerned. As to compound, comminuted, mangled and infected fractures; proper cleansing, suitable fixation; absolute rest, morphin, wet antiseptic dressings, appropriate vaccines, anti-tetanus serum and skin grafting have prevented infections and amputations.

In one year fifty-four Lane plates were applied, and in consequence thirty of them had to be removed. The author has never used such a plate, but he has noticed that when both bones of forearm or leg are broken and to one of them a Lane plate is applied, then that bone will often fail to unite, while good union occurs in the one not damaged by iron work (screws and plates). In wiring, run the loop at right angles to the shaft of the bone, not going deeply into the medullary canal, because a wire loop run at right angles to an oblique fracture will swing around and insure failure by loosening the fragments.

A Picayune But Curious Accident.

A certain boy nine years of age had a boil incised on Thursday. On Saturday he came into Scissors' clinic. As both nurse and assistant were very busy, and as the boy's long hair was matted into the incision, it was thought best to soften hair and matted secretions with H₂O₂ and shave away a space about the trifling incision, which was located at about the division of the superficial temporal artery into its anterior and posterior branches.

After cleansing wound, the usual dead (necrosed) gland was seen within the crater. There had been no bleeding, but suddenly came a spurt of considerable size from the anterior branch, followed immediately by a second ¼ of an inch behind this and apparently from the posterior branch. Firm pressure with both thumbs pressing upon a wipe controlled the hemorrhage but rendered the pressure inefficient. The assistant surgeon, Dr. Frascolla, was called from another room and caught one of the arteries with a hemostat, while Scissors caught the other with a second instrument. Dr. F. ligated the first one, but the ligature would not hold in the rotten (necrosed) tissue. There was nothing to do but purse-string both arteries through sound tissue.

It was rather a novel experience to find that a boil could erode an artery so that the latter would give way under the slight strain of tissue due to shaving the part in its immediate neighborhood.

An Unusual Case of Intestinal Obstruction.

J. C. Roper, M.D., New York *Med. Record*.—The doctor presented this history with specimen of stone and gall-bladder. (Practitioner's Society):

Patient aged 60; severe typhoid twenty years before. Two slight attacks biliary colic, in 1913; mild jaundice. In 1914, severe attack gall-stone colic, with fever and jaundice. Confined to bed for three weeks. Since that no jaundice or urobilinuria. Subject to asthma, presumably due to reflex irritation from gall-bladder. March 25, 1916, pain and tenderness lower right quadrant. Sixteen hours later, vomited; this became fecal in twelve hours. Operation thirty-six hours after onset. Biliary calculus, size of English walnut, was found at ileo-cecal valve. Could not be forced through valve, so it was removed through incision. Bowels failed to move and patient died thirty-six hours later.

Autopsy: An opening (1.5 x 1 cm., oval in shape) was found, between gall-bladder and duodenum, four inches beyond pylorus. Atrophic gall-bladder contained a second calculus almost as large as the one removed from the bowel.

In this connection it might prove interesting to emphasize that gall-stones, such as the aforesaid, are too large to pass through the bile-duct but enter the bowel through some such fistula as was found in this case and mentioned under the heading of "Autopsy."

Epistaxis.

Dr. Max Lubman, in *The Medical Times*, December, 1915, charges that most cases are so treated as to result in not reaching the bleeding point, as packing the post-nasal space seldom does reach it, and even this packing is usually done without following text-book instructions. Anterior packing seldom is effective.

The proper way is to locate the bleeding point and then cauterize it, proceeding as follows:

The patient must be calmed and assured that there is no special danger, as excitability is a vaso-dilator. Good illumination is requisite. Push pledgets of cotton loosely wound upon a probe up into the nose and leave there for a few seconds. In the interim wind up another piece of cotton and immediately insert upon removing the one in the nose. This changing process should be kept up for a few minutes. Invariably this will control the bleeding sufficiently to allow a thorough examination of the nose and to locate the bleeding area. Then take a piece of cotton, shape it in the form of a square, and saturate it with cocain 10 per cent. and adrenalin 1:1000. Squeeze out the excess: this is important, for should a few drops of cocain dribble down the throat the patient will begin to cough, because a sensation will be

produced that will lead the patient to think that something lies in his throat. Put the cotton into the nose, stretching it out on the septum, and leave it thus for 5 to 10 minutes. At the same time put a crystal of chromic acid upon the glass table, or on a clean piece of paper, heat an applicator upon an alcohol lamp, and make a bead of that crystal on the edge of the probe. Cool it off. Take the cotton out gently from the nose and touch up the bleeding area with the chromic acid. This done a shrinkage of the mucous membrane is immediately observed, indicating that the hemorrhage is controlled. Require the patient to remain under your observation for at least an hour. The patient may then go home, where he should submit to a perfect rest, his head slightly elevated, taking precaution not to blow or spray the nose. The patient after undergoing this treatment is able to breathe through the nose with no danger of bleeding, or of the ear being complicated.

Bandages.

Bandages should afford protection from external contamination and have a cushion-like effect in warding off knocks and other possible traumatism. They should also limit movements. Biddle's *Minor Surgery* puts it thus: "Nothing, with the exception of sepsis, delays healing so much as movement. On the arm a firm bandage may be sufficient to effect the necessary rest, but in the case of a wound in the neighborhood of the knee a splint is essential for rapid healing."

When an antiseptic gauze pad is held in place solely by a bandage, shifting or even actual wound exposure is possible. Biddle fastened cyanide gauze with pyroloxin, 5 parts; oil of cloves, 2 parts; acetate of amyl, 25 parts; benzol, 20 parts, and acetone, 100 parts. It acts like a first-class collodion, and when applied with a spoon or a brush to the edges of a gauze pad it holds the latter firmly to the skin; but blood, pus, etc., escape easily through the unpainted center of the dressing. In place of sutures, Michel clips or plaster strips, a piece of bandage may be fastened with this collodion mixture at, or on, a spot one inch from either side of the wound's edge. When well dried the gauze strips will adhere strongly, can be tied together and the edges of the wound may be thus brought into apposition. This process makes a beautiful scar, with no stitch cicatrices. A common cause of fungoid or exuberant granulations is the friction furnished by the slip and slide of the dressing actually in contact with the wound. Both castor oil and liquid vaseline have a value as friction-mitigators or lubricants, hence their use on such dressings. Fixing the edges of the gauze cover prevents rubbing, and if a motionless dressing

be itself covered with a firm bandage it may be left unchanged for days without interfering with the continuous progress of healing processes; unless, indeed, sepsis or other positive indication for change complicates matters.

Should the outside bandage become soiled, or be too tight or uncomfortable from any cause, then it may be removed and replaced at will, but the fixed and non-sliding or motionless portions of the dressing should not be touched, because non-interference is a distinct and evident advantage not to be neglected. By a contrary course many conscientious but meddling surgeons harvest abundant crops of "proud flesh." Such men always remind one of children who pull up plants to see if they are growing. Very conscientious children will even wash the roots, "cause they are dirty." Wiping or washing away healthy granulations is much the same process; possibly it may be equally helpful to growth. Not quite though since healthy granulations are often replaced by unhealthy ones.

Answers to Questions.

The questions are omitted for brevity's sake.

PASTEURIZATION is the arrest of fermentation. Living bacteria are killed by a temperature of 155° and an exposure to it of one-half hour. The development of spores is arrested by keeping the pasteurized liquid (originally wine) at a temperature below 50°.

STERILIZATION is the destruction of germ growth. Boiling is supposed to accomplish it; but does not. Scissors boiled water from noon one Saturday until noon seven days later. It was not sterile, though some bacteriologists were stupid enough to beg the question by giving the excuse that the germ-growths were not pathogenic. On the addition of washing soda the cell walls of germs and spores were torn to pieces. Sterility was found after one minute of the boiling process and was absolute and invariable after one-half hour.

THE TEMPERATURE OF BOILING WATER does not vary at different depths (bottom or top) of the vessel in which instruments are boiled. If said vessel is covered the junction of steam and water is the hottest part. With an ordinary cover it is about 1½° F. above the temperature of the liquid. Any variation from this is a question of pressure (100 lb. = 300°).

RUBBER GLOVES are not boiled with instruments because the washing soda of the instrument solution destroys them and the whole liquid then blackens the instruments.

SURGEON'S TEA. Ante- and post-operation, this old decoction has possibly never been surpassed as a laxative diuretic. The same is true of obstetrical work. It has been forgotten because it was, and is, either superlatively valuable or worthless, hence it may be prescribed with an almost certain expectation of its failure. On the other hand, if the surgeon prepares it himself from first-class materials, he may

obtain almost incredible results; if the apothecary makes it, disappointment is obtained.

It is composed of equal parts of buckthorn and uva-ursa, the bark of the first and the leaves of the second. A tablespoonful is put into a pint of water, this boiled down one-half, filtered or strained and then drunk. It matters not at all whether it is taken hot or cold, or with or without sugar, but it must be taken at bedtime every night for one week before operation or delivery. It puts the intestinal and the genito-urinary tract in the best possible order. As to its effects in warding off threatening troubles from nephritis (convulsions, oliguria, eclampsia, etc.) these are just what anyone would anticipate; if he knew the two drugs and imagined them mixed in equal parts.

The decoction must be freshly made and its ingredients obtained from reliable sources. The old German doctors always prepared it personally and trusted no one.

IF THE MATERNAL PART OF THE UMBILICAL CORD is not tied, nothing happens. The mother will not bleed to death. With animals neither the maternal nor the child's end is tied; at least not in the wild state of existence. Dewees' Midwifery, 1853, page 167, says the evacuation, from the open (maternal, unligated) extremity of the cord, yields two or three ounces of blood, the vessels of the placenta empty themselves, diminish its bulk, promote contraction of the uterus which acts upon the placenta, disengaging it from the uterine surface, that it may be expelled soon after the child is born. * * * Experience of more than forty years has not furnished me with an instance in which inconvenience has resulted where only one ligature has been applied. (One ligature is contrasted with two and a cut between them.)

Dewees was professor of midwifery in the University of Pennsylvania. His idea is endorsed by Leishman Regius, professor, University of Glasgow, Leishman's Midwifery, 1879.

It works well even though practically every teacher in the United States teaches the double ligature method and Scissors has been sharply criticized for using the single one. Consequently, in deference to public opinion, he snaps an artery forceps upon the maternal end of the cord. Some forceps only have teeth on the ends and do not appear to interfere with nature's method of emptying the placenta and omitting the Crèdè.

Clinical Diagnosis

*Gleanings on diagnosis from current medicine.
Points you can use in your practice tomorrow.*

The Early Diagnosis of Whooping Cough.

Dr. H. W. Jacob, of Malvern, in *British Med. Jour.*, April 22, 1916, says that every case of suspicious cough, during an epidemic of pertussis, which showed marked conjunctival congestion in the region of the external canthus subsequently developed into whooping cough. In examining for the sign, one directs the patient to look toward the nasal side of the eye under examination, when, on separating the lids at the external canthus, a tumid, congested mass somewhat resembling a large phlyctenule may appear on the

bulbar conjunctiva, just within the external canthus. This swelling may or may not be accompanied by injection of the palpebral conjunctiva, but it is a further indication in doubtful cases.

Auscultation in Vascular Injuries.

Makins, in *The Lancet*, April 15, 1916, emphasizes the value of auscultation in the diagnosis of injuries to the peripheral blood vessels. An arteriovenous aneurysm of traumatic origin may have a continuous murmur audible near the site of the injury, which may be transmitted to the cardiac region, especially in the case of large vessels. Systolic murmurs are less likely to be transmitted. All transmitted murmurs soon disappear, owing to the heart compensating. So, then, unexpected and transient apex murmurs may be due to vascular injuries and not to valvular lesions.

The Diagnosis of Extra-uterine Pregnancy.

In *The Journal-Lancet*, May 15, 1916, Dr. D. L. Scanlan, Volga, S. Dak., states that this condition is more frequent than is commonly supposed and is becoming even more common, probably due to a greater prevalence of gonorrhoea in women.

Some cases of tubal rupture occur before a period is missed, and if it ceases it is usually re-established, irregular as to time and quantity, and of a tarry, sticky, smeary nature.

The pain suggests that of abortion of a normal pregnancy, though it is of different character, being a boring, cramp-like pain, and is followed by a dark sanguineous discharge.

The cervix is soft; the os slightly open; the uterus larger and perhaps displaced laterally. The tumor is doughy, tender and very slightly movable.

On rupture, severe abdominal pain, causing faintness, comes on suddenly; the pulse is rapid and feeble; the face is blanched and covered with a cold clammy perspiration; there is subnormal temperature and excessive thirst. Some cases do not present all of these symptoms. In tubal abortion without rupture, the symptoms are less marked, but the hemorrhage may be as dangerous, with possible infection.

In view of the warning symptoms, physicians should not be caught off guard in considering a possible extra-uterine pregnancy.

Diagnosis in Pediatrics.

Dr. F. S. Clarke, Omaha, in *Western Med. Rev.*, May, 1916, calls the attention of the general practitioner to his deficiencies in pediatric diagnosis; and he raises some good points.

Always take babies' temperature by rectum; that is the only way to be sure of the findings.

Keep a watch on visible peristalsis of the stomach; it is diagnostic of pylorospasm.

Don't forget the needle puncture in the diagnosis of pneumonia; empyema or an effusion may look like pneumonia. Better be sure.

Be on the lookout for scurvy, and don't conflict with so-called "rheumatism." Often swollen joints mean scurvy.

We don't use the Von Pirquet test and the X-ray often enough.

Don't forget that cretins do not sweat, and don't confuse cretinism with mongolism.

Don't forget that a chill in a baby has different symptoms from one in an adult; but is manifested by blueness about the lips, followed by paleness, sweating and finally a rise in temperature.

Get familiar with the appearance of the normal ear drum in children. Otherwise unexplainable high fever may be due to suppurative middle ear inflammation.

Practical Therapeutics

Giving in concise usable form the therapeutic points from current medicine that are really of value to the busy practitioner.

Intra-spinal Injections of Mercury Bichloride.

In *Boston M. and S. Jour.*, June 1, 1916, Dr. Edward Livingston Hunt, of New York, reports twelve cases of the intra-spinal injection of bichloride of mercury in spinal syphilis, using the following technic:

Weigh out one gram of Merck's bichloride of mercury; dissolve this in 770 cc. of distilled water; sterilize the whole. One cubic centimeter of this solution contains .0013 gram of bichloride of mercury, which is equal to 1/50 of a grain. Draw off 15 cc. of spinal fluid. Discard 5 cc., and to the remaining 10 cc. add 1 cc. of the bichloride solution previously prepared. Then re-inject directly into the spinal canal, very slowly, the whole 15 cc. The time consumed in performing this re-injection should be about four minutes. To minimize the handling of the solution and so decrease the chances of infection, it is best to draw the 1 cc. of the bichloride solution directly into the syringe, and mix the two solutions there in the hypodermic. Then re-inject the entire 15 cc. The patient should then be put back to bed, and for the first five or six hours, the foot of the bed should be elevated. This precaution is taken in order to diminish the tendency of the patient to acquire a headache.

The injections were given at intervals of two weeks, and at the same time "mixed treatment" was continued. There was some reaction and some patients had after-vomiting. Sphincter trouble occurred in one case.

The results were the same as those secured from the administration of mercurialized serum. The advantage is a simpler technic with less opportunity for infection. The initial dose should be small—1/64 grain.

Autoserotherapy.

Dr. Francis Huber, New York, in *N. Y. Med. Jour.*, July 1, 1916, discussing the management of serous pleurisy, calls attention to the rapid recoveries noted after exploratory puncture in which a small amount of fluid is withdrawn. He explains this on the basis of autoserotherapy, a method first advanced by Gilbert, in 1894, and elaborated upon by Marcon and Tchigoeff (*N. Y. M. Jour.*, November 6, 1909).

As may be recalled, Gilbert advocated re-injecting the fluid directly into the subcutaneous tissue without entirely withdrawing the needle or making a second puncture. The method is not advocated when the fluid is turbid (purulent). In purulent cases serious infection may occur.

Dr. Huber advances the theory that autoserotherapy is often unwittingly employed in making exploratory punctures. He cites cases of serous fluids escaping into the tissues in empyema, lumbar-puncture cases, and the older treatment of hydrocele, in support of his view.

No reference is made in the article to the extension of the Gilbert treatment and in which it is proposed to incubate the pathological secretion and, later, inject a dilution of a bacillus-free filtrate thereof.

The Chemical Treatment of Cerebro-Spinal Meningitis.

It is notorious that the curative treatment of cerebro-spinal meningitis is at present very unsatisfactory. In certain hands the use of antimeningococcal serum has proved satisfactory up to a certain point; many, however, of the practitioners who had to deal with epidemics of the disease in this country in 1915 came to the conclusion that treatment by repeated lumbar puncture was as good as treatment by lumbar puncture combined with the injection of antimeningococcal serum. Perhaps the serums available were not homologous with the types or strains of meningococci that were being met with. The possibilities of the treatment of the disease by intrathecal injections of chemical antiseptic

drugs have recently been brought once more to the front in America. In 1902 Seager reported very favorably on the use of lysol in this way, on the strength of his experience of an epidemic of cerebro-spinal fever at Lisbon. The first results were not confirmed by later observations, and the treatment was dropped. Subsequently protargol was employed in the same way, in place of lysol. Drs. Flexner and Amoss have studied the effects of these drugs in the treatment of experimental infections in monkeys and young guinea-pigs with meningococci. Neither protargol nor lysol proved to have any curative action on the experimental peritoneal infection of young guinea-pigs with young cultures of the meningococcus, and protargol was without curative action in subarachnoid meningococcal infections in the monkey. On the contrary, these authors point out that both drugs are antileucotactic and antiphagocytic in their influence on the leucocytes, and are potent protoplasmic poisons. Recovery from meningococcal infections in both man and experimental animals is accomplished chiefly through the process of phagocytosis. The specific antiserum acts curatively by increasing the emigration of leucocytes, by directly promoting phagocytosis, by agglutinating the meningococci, and also by neutralizing the bacterial endotoxin; lysol and protargol have none of these actions to their credit. Hence, whatever the theoretical bactericidal advantages drugs possess, it is more than offset by the harmful effects they cause. What is wanted in the treatment of cerebro-spinal meningitis is an antiserum that represents the several types and many strains of meningococci. The authors say that this problem is now in a fair way to being solved; there is nothing to show that treatment by chemicals or antiseptics has any future before it.—*The British Med. Jour.*

Santonin in the Treatment of Pellagra.

In *Southern Med. Jour.*, May, 1916, Dr. W. F. Cole, Waco, Texas, reports cases of pellagra, the treatment being 3 grains each of calomel and soda with one grain santonin, given at night and followed by castor oil in the morning. Results were strikingly good, and they lead the doctor to believe it probable that pellagra is a protozoan disease of the intestinal tract. He believes the disease is carried by flies from unscreened closets.

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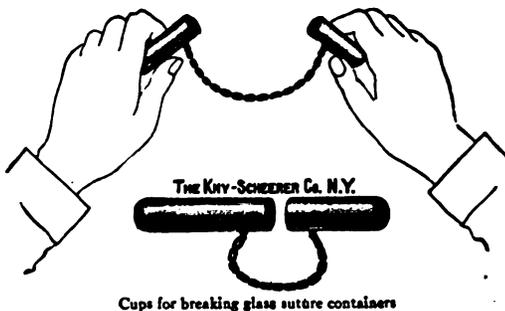
THE NEWER MATERIA MEDICA

AND

ARMAMENTARIUM.

Breaking Glass Tubes Containing Suture Material.

Eugene H. Pool, M.D., *Medical Record*, although catgut and other suture materials put up in sealed glass tubes are used extensively, an efficient means of breaking these tubes has been lacking. The usual practice is to cover a tube with gauze and break it with gloved hands. By this method not infrequently gloves and hands are cut by broken glass and in the course of a year considerable gauze is wasted. To obviate these disadvantages we have adopted at the New York Hospital a simple and cheap device. Two metal cups, connected with a chain, as shown in the illustration, are used for breaking the glass.



The success of the device depends upon the fact that the glass tubes of most, if not all, supply houses have a standard distance between one end and the filed line or fracture line near the center; the distance between the filed line and the other end is somewhat variable. *The shorter cup is made the same length as the fixed distance between the file mark and the end.*

Application. Holding the short cup in the left hand, that end of the glass tube which is of uniform length (this is usually the shorter end) is introduced into it. *The filed line is placed away from the person holding the tube.* The other cup is then placed over the other end of the tube and with a sudden sharp bending motion the tube is readily broken.

Milk of Immunized Cows in the Treatment of Tuberculosis.

Early in 1915, at the request of Dr. Emerson, then Deputy Commissioner, Doctors Henry Koplik, J. A. Miller, Philip Van Ingen, William

H. Park, and Prof. H. Zinsser met to consider the theories of Dr. Julius Rosenberg, who believed that the milk from cows which had received a number of injections of tubercle bacilli contained antibodies. Dr. Rosenberg further believed that if such milk, presumably containing antibodies, were absorbed by the human intestines, it would immunize the user against infection with tubercle bacilli, and even aid in the cure of tuberculosis. The members of this committee unanimously agreed that there was no proof known to them of the arguments which Dr. Rosenberg presented. A search of the literature showed one experiment in which there was some possible gain from calves fed with the milk of tuberculinized cows. It was agreed, therefore, as there was some possibility that such milk might be of value, that it was suitable for the Department of Health to undertake some test in the matter.

It was evident that there were two points requiring investigation, namely, the degree to which antibodies taken in milk by the mouth are absorbed as such and appear later in the blood, and the possibility of production of antibodies in cows by vaccination with the tubercle bacilli, with the further question as to whether such antibodies, if produced, are absorbed in sufficient amount through the intestinal tract in man to be of value in the prevention or treatment of tuberculosis. The established fact that antibodies pass readily through the intestinal mucous membrane during the first few weeks after birth was recognized by the committee, but they did not consider it proved that such was the case after the first two or three months of life.

Inasmuch as antibodies would be more easily produced and more readily detected if the immunization of the cow was carried out with typhoid bacilli, it was decided to make the first test with typhoid bacilli. A cow was immunized with typhoid bacilli and, after the serum had developed a large amount of agglutinins, a calf several months old was fed upon this milk. The blood of this calf showed a slight power to agglutinate typhoid bacilli. It has been further shown that agglutinins continue to appear in the milk of a cow thus immunized against typhoid bacilli for a considerable period, the exact duration of which has not yet been determined, and

to this end observations are still being made.

A group of ten patients suffering from tuberculosis was fed upon the milk from a number of cows which reacted to the tuberculin test, but which were in good physical condition and did not show physical signs or clinical symptoms of tuberculosis, either generalized or localized. Two of these patients did badly; the other eight gained in weight, but did not change so far as the extent of the disease was concerned.

Up to the present time, we have no evidence that the milk from cattle immunized against tuberculosis, as suggested by Dr. Rosenberg, is of any advantage to those having tuberculosis, beyond the advantages derived from the use of any other fresh cow's milk. It is possible that a slight amount of benefit might result from the use of such milk by tuberculous patients, but the proof offered in the literature and from our own investigations fails to justify our giving a favorable opinion in this matter. The whole matter we consider as in the experimental stage, and do not believe that any reliance can be placed on such milk as a therapeutic agent in tuberculosis.

Further observations, to be carried out along the lines suggested in the work of Castelli of Genoa, and reported on in Seattle at the June meeting of the National Association for the Study and Prevention of Tuberculosis, are desirable, and it is understood that such observations are likely to be undertaken at no distant date.—*Weekly Bulletin, Dep't. of Health, City of New York.*

The Rational Use of Mineral Oil as an Intestinal Lubricant.

Mineral oil, like the Agar products, acts purely mechanically; it has no physiological action, is not digested or absorbed, and passes out of the body unchanged. Nevertheless, it is an excellent intestinal lubricant and is useful in many cases of constipation. It is not a culture medium and, in fact, its presence in the intestinal tract tends toward bacterial inhibition by virtue of the oil mechanically coating material that might proliferate the intestinal flora.

Russian mineral oil undoubtedly is a good product, but American firms have developed a number of mineral oil products in every sense as admirable and useful.

Like all new things, it has required time to determine dosage and indications. Unwise use of these products has developed an unjustified prejudice against them in the minds of some physicians.

Just remember that mineral oil is used purely mechanically and as a lubricant. Doctor, you know the disadvantage of flushing the cylinders of your automobile continuously with lubricating oil; and you also know the advantage of using lubricant wisely and properly. Simply apply the same tactics in using mineral oil therapeutically, using a heavy or a lighter oil, as the case seems to demand, and using just enough and no more, and trouble will cease.

Liquid Petrolatum (Squibb) is a heavy California oil with a high natural viscosity. Interol (Van Horn & Sawtelle), Liquid Alboline (McKesson & Robbins), Nujol (Standard Oil Co. of N. J.), Olo (Amer. Olo Co.), Stanolind (Standard Oil Co. of Ind.), Usoline (Oil Products Co.), and Vaseline White Mineral Oil (Chesebrough Mfg. Co.), and others, are medium heavy, conforming to the U. S. P. standards, but varying more or less from each other in specific gravity. Very light oils suit some cases—those with dry stools, since these light oils spread, mix and penetrate better, a feature of Russian oil.

New Salts of Emetine.

Two new salts of emetine, the mercuric iodide and the bismuthous iodide, are described by A. G. Du Mez in the *Philippine Journal of Science* for January. Emetine mercuric iodide is prepared by the precipitation of a solution of the hydrochloride with Mayer's reagent; the bismuth compound is made in the same manner with Dragendorff's reagent. These compounds are believed to be almost insoluble in the stomach, but to be decomposed, with liberation respectively of mercury and bismuth salts together with emetine, in the intestine. Should these promises be fulfilled, the problem of the oral administration of emetine will be solved. Both compounds can be given in doses of 0.03 gm. ($\frac{1}{2}$ grain) without producing either nausea or vomiting; but vomiting occurs when larger doses are given of either of them.

Trimethol, a New Intestinal Antiseptic.

In our Supplement for June, page 64, an abstract from *The British Medical Journal* described this new product, devised by Dr. J. T. Ainslie Walker. It appears to be a rather remarkable intestinal antiseptic, and we would urge our readers to turn back to the June issue and read what was said of it.

It is a pleasure to state that Thos. Leeming & Co., Woolworth Building, New York City, are preparing this product in the form of capsules and a syrup.

The New Antiseptic, Chlorazene.

In our June Supplement, titled "Tolamine (Chloramine-T)," was described a product evolved by Dakin, Cohen and Kenyon, as announced in *The British Medical Journal*, Jan. 29, 1916. The Abbott Laboratories, Chicago, by whose enterprise the new product is made available to American physicians, under the name of Chlorazene, will supply reprints of the original paper.

Possessing the antiseptic properties of chlorinated lime in a stable, soluble and non-corrosive form, the new product neither coagulates nor precipitates the proteins of serum and tissue. Practically non-toxic, possessing a germicidal action four times that of sodium hypochlorite—and it may be freely used five times as strong as solutions of hypochlorite—and keeping well in solution for months, it may be confidently and safely used in the treatment of infected wounds, as an antiseptic wash (even in the mouth), and for irrigating the bladder, uterus, etc. The product seems peculiarly available because it liberates chlorine in contact with proteins and cell constituents. Chlorazene is guaranteed to be identical with chloramine and is supplied in 2-ounce bottles of the powder and in bottles of 100 tablets each containing 4.6 grains.

Ajowan.

It is already too well known to need any introduction. Thymol is largely used by one and all in everyday practice, and the exorbitant prices at which it is now sold must encourage us to see if any more easily available thing to take its place is known to us. Ptychotis oil (Ajowan-ka-tel) or ptychotis water are best substitutes for thymol. Ajowan is largely cultivated in Eastern India. The oil is distilled from the fruits. It is used for disguising the nauseous taste of drugs and correcting the griping of purgatives. The fruit is often chewed with *pan* or with little rock salt to correct indigestion. Aqua ptychotis conc., which is now largely manufactured by Bengal chemical companies is a valuable carminative and antispasmodic in colic, flatulent dyspepsia and tympanitis. It checks chronic discharges and is given to lessen the sputum in bronchitis with profuse expectoration. The oil (1 to 2 drops) locally applied to painful parts in rheumatism and neuralgia is said to relieve the pain. The seeds made hot are used as dry fomentations to the chest in asthma, and to the feet and hands in cholera, fainting and syncope. Applied externally in alcoholic solution, it is useful in allaying nervous pains. If the fruit are taken daily with treacle,

they are said to cure urticaria within a week.—*Practical Medicine*, Delhi, India.

A Soap Paste for Surgeons.

The nicest soap to carry in a satchel is Colgate's Mechanics Soap Paste. It does away with a wet cake of soap, with a wet nail brush and will clean off pus, tar, lubricating grease, vaseline, ink or almost any contamination with equal facility. Scissors learned this from two sources: the first an artist who cleaned paint off her hands. The second, a chauffeur, who showed me that ordinary soap would not touch the oily mud on his hands, while this removed it at once. It comes in a round tin box and may be obtained in any hardware or auto shop.—D. H. S.

The Action of Benzol and its Homologues.

In 1897 Santesson noted among the symptoms of benzol poisoning in workers exposed to the vapors of this substance a pronounced diminution in white blood cells. Thirteen years later Selling, of the Johns Hopkins Hospital, reported three cases of benzol poisoning in young girls in whom a marked purpura hemorrhagica was associated with a considerable degree of leucopenia. Two of these patients died and the principal autopsy finding was an intense atrophy of all of the hematopoietic organs. On the basis of the above observations, Koranyi essayed with success the use of benzol as a therapeutic agent in severe cases of leucemia. This experience has been confirmed by a host of others, although a number equally as great have reported failures.

Recently Guiberto Bianchi (*Archivio per le Scienze Mediche*, April 1, 1915) has studied the effects upon the blood of benzol and its homologues, toluol, xylol, and cumol. He finds that benzol produces in man as well as in animals a definite leucopenia as well as an almost total atrophy of the leucopoietic apparatus. On the other hand, the other hydrocarbons belonging to the same group and having a saturated side chain, namely, toluol, xylol, and cumol, produce in the rabbit a distinct leucocytosis and a hyperplasia of the leucopoietic elements, more especially of the bone marrow. As regards the effect upon the red blood cells, benzol as well as its homologues causes a moderate diminution amounting to about 20 per cent. The blood platelets behave in a different manner. Under the influence of benzol they disappear almost entirely from the circulation; whereas under the influence of toluol, xylol and cumol they show a relative and persistent increase in number.

The outstanding feature of the above investi-

gation is the fact that benzol and its homologues have a similar action upon the white blood cells, the leucoblastic elements, and the blood platelets; whereas they have little or no influence upon the red blood cells or erythroblasts. Indirect evidence is also furnished in opposition to the view that the blood platelets are derived genetically from the red blood cells.—*Medical Record*.

The New Type B Pulmotor.

All physicians know of the use in mines, at the seaside resorts, and wherever victims of drowning, electric shock, collapse, and asphyxiation by poisonous gases are frequent, of the Pulmotor made by The Draeger Oxygen Apparatus Co., 422 First avenue, Pittsburgh, Pa.

But all physicians do not know that the new Type B Pulmotor weighs only 12 pounds in its carrying case, thus rendering it an immensely serviceable emergency apparatus—a real lifesaver—to the doctor in private practice. The large hospital and mine types were too bulky for the physician to carry around readily; but this new type is especially devised for his use.

With this device any bystander may operate the pump; but the physician in charge has under absolute control the inhalation and exhalation pressures, an ingenious valve device making physiological use of the forces at command readily ascertainable and as readily applied. An indicator shows just when to throw the valve; and, if the physician carefully watches his task and remembers that hurry is not necessary, he will be rewarded by saving many lives that, by ordinary means of maintaining artificial respiration, would be lost.

The Treatment of Malignant Growths With Colloidal Glyco-Sulphur-Seleno Preparations.

Post-Graduate, May, 1914, Chas. H. Walker, M.D., New York. Ante- or post-operative treatment of malignant growths is a bothersome question to many surgeons, but good work has been done in New York with colloidal glyco-sulphur seleno preparations. Whether Coley's mixed toxins, or any other mode of treatment, is employed, a stable preparation of selenium is a valuable adjunct; this, of course, includes preparation for and recovery from an operation. The subject is too big for abstract purposes, but Dr. Walker, 124 W. Seventy-third Street; Frederick Klein, Ph.D., a consulting chemist, well known in our city; Dr. Emil Roller, also a chemist, are working together, and would undoubtedly furnish reprints upon request.

These men are doing a lot of research work in urinary tests. Some of which appear in the

Post-Graduate for September, 1914. Some in *Am. Medicine* for September, 1915. It is enough for Scissors to point out the source whence information may be obtained, and Mr. Roller who has been working earnestly to make a stable sulpho-selenium, says that he will mail the reprints to any applicant. Address Emil Roller, 574 Amsterdam Avenue, New York. He is also working upon the new urinary test for syphilis, which threatens to supersede the Wassermann. Whether it will or not remains to be seen. All reports are favorable thus far.—D. H. S.

Pituitrin as an Inciter of Fecundity.

In addition to the usual uses of pituitrin, the product has an amazing influence as an augmentor of fecundity. It is essential that the product be obtained from growing calves, as that from adult and mature animals appears to be quite inert.

This is inserted in answer to a question, and the correspondent is referred to Lewis Neilson Clark, Oldham Farm, Port Hope, Ontario, Canada. To *Mulford's Veterinary Bulletin*, and to the *Journal of Biological Chemistry*, for details of experimentation. It is sufficient to state in this place that, using chicken eggs and poultry as trial examples, a great increase in egg production and in their hatchability was procured. Naturally, both eugenists and gynecologists are as much interested as are animal breeders and obstetricians.

The Simpson Light.

Rather frequent reference is being made in medical literature to the Simpson light, and we are being asked about it. Simpson was making researches into the affinity of rare metals for each other, and he noted that the combustion of certain ores in the electric arc gave rise to the emission of ultra-violet rays in excess. So he devised electrodes of tungstate of iron and manganese. The electric arc formed between two such electrodes is the Simpson light. Molten slag forms at the incandescent points and interferes with steady burning. An effort is being made to improve the electrodes.

The device produces the ultra-violet ray in clinically useful quantities for the treatment of superficial ulcerations, such as lupus and rodent ulcer. It would be less apt to produce a burn than is the X-ray.

Some day a device of this nature will be perfected, and it should be most useful as well as vastly safer than is the X-ray or radium in the hands of those not especially trained in the technic of radiant-energy therapeutics.

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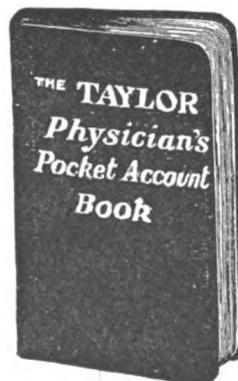
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“Can there be a Vegetable Antitoxin?”

HAY-FEVER doubts and difficulties seem to center upon the questions of the pollen-protein anaphylaxis and the solutions of pollen-protein used as a treatment and known as pollen vaccines; and physicians, who read of some botanic drugs being “vegetable antitoxins,” are asking us if this is possible.

No, gentlemen, it is not possible. As the question seems to perturb some very capable men, it is in order to do some straight thinking.

There is no doubt that certain vegetable proteins produce anaphylactic shock in certain susceptible persons. Chappell has noted terrific reactions follow the injection subcutaneously of one minim of apple-protein extract of a 1:60,000 strength in persons anaphylactic to apples. Strawberry and tomato protein were toxic to other persons. None of these is toxic to the normal individual. Fagopyrism, or buckwheat poisoning, is, probably, another form of anaphylactic shock, also due to a protein.

There are many peculiar proteins readily separated from various seeds. For instance, globulin is found in wheat and cotton-seed, amadin in almonds, corylin in hazel nuts, excelsin in Brazil-nuts, edestin in hemp-seed, vignin in cow-peas, and hordein in barley. None of these is poisonous, though it may be possible for an abnormal individual to become sensitized to any one of them, or a normal person were the protein substance to enter his circulation.

Proteins and Hay-Fever.

Now it is pretty definitely proven that the proteins of certain pollens induce anaphylactic shock in the form known as hay-fever in certain persons who have become sensitized to these protein substances, just as some other people become anaphylactic to horse-serum. The proteins of seeds are not apt to enter the circulation; but the proteins of pollens may enter the eye, abrasions in the nasal cavity, or be deeply inhaled. Sensitization to a certain protein is largely a matter of accident, and is, even though in a microscopic way,

traumatic, and just as one may be sensitized to horse-serum by the injection of repeated small doses of antitoxin for diphtheria.

A vegetable protein may be a toxin, even in exceedingly minute amount, to some persons, even as egg albumen is to others. Sensitization to one protein tends to make one sensitive to others, as is shown in hay-fever; and Vaughan's studies in the split-proteins leads one to think there may be, after all, but one fundamental protein poison.

Dunbar's Serum.

Some physicians achieved the idea that Dunbar's serum for hay-fever, pollantin, is a vegetable antitoxin. Not so. It is developed in the blood-serum of horses treated with pollen derived from ragweed. Any form of foreign protein parenterally introduced gives rise to the formation of antibodies. This is what Dunbar accomplishes in the making of his serum; and it contains an amboceptor, as some claim, or an antitoxin, as is stated by others. It makes little difference which it contains, and it may contain both amboceptor and antitoxin; but the fact remains that it is *not a vegetable substance*, but one developed in the blood-serum of the horse, that is prophylactic or curative.

Pollen vaccine is a solution of pollen protein, and it is used much as is tuberculin; it is not an antitoxin in any sense of the word, valuable as it may be. Antitoxins and vaccines, we must remember, are vastly different things.

So, then, hay-fever serum or vaccine gives no support to the theory that any vegetable substance is an antitoxin of itself. A pollen may be a toxin, but not an antitoxin.

The Tox-albumins.

The endosperm and embryo of the castor bean yield ricin, an intensely toxic substance analogous to the bacterial toxins but stable in the alimentary tract; but the lethal subcutaneous dose for man is 0.003 gm. By injection of infinitesimal doses antiricin is gradually formed in the body. Now antiricin is an antitoxin to ricin,

but to nothing else. Antiricin is not a vegetable substance; it is an antibody developed in the body. Toxins are also found in jequirity (abrin), in the seeds of *Croton tiglium* (croton), and in poisonous mushrooms; and it is probable the body would develop antitoxins against these protein poisons. This is not like the physiological antagonism between atropine and pilocarpine, as an instance of many alkaloidal physiological antagonisms; but it is a specific relationship between a toxin and an antitoxin, the toxin coming from without and the antitoxin being developed within. One develops a *tolerance* to morphine, for instance, or to other alkaloidal medicines; but it is only to the tox-albumins that one's body develops an antitoxin. This is as far as "vegetable antitoxins" may be said to exist.

Some Possibilities.

There are many seeds and nuts used in medicine—wormseed, castor-bean, ignatia bean, nux vomica bean, lobelia seed, Calabar bean, kola-nut, kombe-seed, tonka-bean, and many others. It is possible their proteins each would have some defined action if injected into the circulation, most of them acting very slightly, though some might be quite toxic.

Let us suppose some one of these proteins produce a series of phenomena or symptom-complex similar to, let us say, spasmodic bronchial asthma, if injected into the circulation. Now it is theoretically possible that such a series of symptoms would be a form of anaphylactic shock, an asthma-like-anaphylaxis; and it is also theoretically possible that the asthma-like-anaphylaxis produced by the injection of the protein poison of the plant would antagonize the real asthma of true spasmodic nature. No one knows; but it is possible. But even this remarkable relationship would not be an instance of a vegetable antitoxin; it would be an instance of homeopathy "making good."

Thus far, no such relationship has been demonstrated except that hay-fever anaphylaxis produced by certain pollens bears a certain resemblance to asthma. But that pollen proteins injected into the tissues will cure spasmodic bronchial asthma is not at all probable.

Hypodermic Botanic Extracts.

It is possible that the chromoproteins, or the tox-albumins, or even the stearoptenes of plants, injected hypodermatically, may be active in ways that we know not of today, but may know of in the future. Sufficient data exists to make us believe it possible; but that these agents may be specifically antitoxic to biologic pathology in man or other animal is hardly thinkable. It certainly does not seem in the nature of things.

The Professional Side in Dispensing.

If the professional side of dispensing were upon a better basis the business difficulties thereof would solve themselves.

It is not wise to make the public think we are drug-obsessed. Many patients who have been treated in hospital wards and observed that few and simple drugs were supplied to the inmates, when they employ a physician who proceeds upon the assumption that case-management consists alone in giving drugs and then more drugs, go the next time either to the hospital or to an Osteopath.

And don't forget, Doctor, that there is nothing in the laws governing the practice of medicine to prevent the Osteopath, say in a case of acute gastroenteritis, from placing three or four hot-water bags where they give comfort, giving a mustard emetic, administering an enema, or having it done, feeding mineral water with shaved ice and a dash of champagne, or perhaps a little orange juice, washing out the stomach, followed by salt-solution enemata by rectal seepage or hypodermoclysis if the case is serious, resorting to rectal feeding, giving boiled green tea for its tannin content or lime-water as an alkali.

Do you do these things? They are just as important as the medicines you give. A hospital would also probably give one-drop doses tincture iodine, a dose of calomel if it was really needed, a few doses of one of the newer tasteless tannic acid derivatives, and perhaps one or two small doses of morphine.

Modern Dispensing.

In modern case-management, the drug dispensing portion of the work is simple and involves little trouble or expense to the physician. It seems to us that the great ado made in some medical journals over the question of medical dispensing must be written with the view that the modern physician is a wholesale dealer in drugs and chemicals and depends upon a narrow margin of profit on a large turn-over to make his living. Nothing of the sort is true if a physician practices medicine *as it is taught*. He uses exact and definite agents skillfully fabricated by the modern pharmaceutical chemist, or serum and vaccine maker, and the dispensing of these is a relatively simple matter compared to what dispensing used to be.

But treating the patient—managing the case—may involve a whole lot of trouble. Giving diphtheria antitoxin to the sick child and immunizing doses to all the well members of the family is dispensing, in a sense; but the material

is charged for at cost and the physician charges fifteen dollars to twenty-five dollars for *professional services*. And that is lucky for the patron—much cheaper than four cases of drug-treated diphtheria with a trained nurse for six weeks and possibly two funerals.

Some So-called Dispensing

Some time since we were in a town in a mining district where all the practice was on a contract basis and all drugs were supplied by the contract doctors. There was one poor little dried-up drug store in the town. The druggist never carried any biologicals, modern chemicals and almost no U. S. P. drugs. Neither did the physicians. They could not afford to use any but a few of the cheapest drugs, but they dispensed great quantities of them. Actually, there was no tincture of digitalis to be had in the town. The druggist had none; neither did any of the doctors. They had "heart- tonic" tablets, with powdered digitalis as one ingredient; but tincture of digitalis cost too much when coal miners paid one or two dollars a month when there was no strike on—to the contract doctor. The three doctors in the place were having a hard time to get along.

And yet, not fifty miles away was another mining town. In it were two up-to-date and thriving drug stores almost metropolitan in type. There were four doctors there, all prosperous and practicing medicine in the most modern manner. They were *not* contract doctors, and what dispensing they did was merely incidental. True, they dispensed to quite an extent, using the most modern and up-to-date products; but they did not live by dispensing, or by doing it cheaply. They charged for their *services*—also for the drugs.

The first town's population was very much dissatisfied with their physicians; the second town's people appreciated theirs fully.

True Dispensing

Put dispensing on a true professional basis in your office and in your town, Doctor, and dispense logically, and there will be no need for a lot of medical journal articles upon how to make one's living at fifty cents a throw, including medicine. Put some diagnostic instruments, apparatus for various lines of therapeutic technic, modern assayed and physiologically standardized fluids, the very best tablets, pills, alkaloids and modern chemical specialties in your bag; then set your face like a flint against all cheap-John contract and mere-selling-medicine practice, and the business problems of dispensing will solve themselves.

It is not true that pharmacologic study is doing away with ordinary drugs. On the contrary,

it is making some erstwhile "ordinary drugs" quite extraordinary. But it is *making utterly foolish and puerile* the kind of dispensing we used to do and the kind of prescriptions we used to write. The therapist who dispenses as he did ten years ago is just as far behind in his profession as is the surgeon who uses the technic of ten years ago.

Discrediting Drugs

A great effort has been made to discredit drugs; but all of the anti-drug propagandas together have not had one-tenth the bad effect that has careless and incompetent dispensing and prescribing by doctors. The worst of it is a large proportion of the guilty men are up-to-date in other branches, such as gynecology, obstetrics, minor surgery, etc., but are years behind the times when it comes to the practical use of drugs. This is a serious situation; it is hurting medicine all along the line.

We don't wish to hurt the feelings of any physician; but we don't want any physician to hurt the whole profession. The simple truth of the matter is we *must* mend our ways in dispensing modernizing them by dropping all our old prejudices and trust-to-luck methods.

"In Honor Preferring One Another."

IT GRIEVES US, and it should make the angels weep, to see some leading medical teachers depreciate the General Practitioner and general medical practice, and to print these bilious and hypercritical views in lay magazines; to see some hospital men advance the view that modern medicine may not be practiced except within the walls of a hospital; and, on the other hand, to note that some physicians who are young hold in light esteem their elder brethren, and some disappointed older physicians feel unkindly to the young man of recent view and academic tendencies.

Are there half a dozen medical professions, or is there only one? "A house divided against itself cannot stand." Gentlemen, we will get old, in time; and we can't help it if we are young. we pass through this world but once; so let us do so with kindness and mutual consideration each of the other. Each Age in Civilization needs *its own* men and women, each Era in Medicine its own type of doctors.

And medicine is a Brotherhood, a Brotherhood of Service. A kind Providence is well aware of our deficiencies, and He does not judge us by the past age or by the tenets of the coming one. If we do our duty *now*, according to the light within

us, we are approved of God and man. And is it not just a little cruel to hold each other up to public scorn because we think we "are not as other men are?" Remember that the very public to which the critic appeals sides with the Publican as against the Pharisee—does it every time; and that it was the humble Publican who was "justified" of God.

How short-sighted we are! Why should we tell the layman how little we know, or how much less our fellows know? Will such tactics advance the cause we represent? Will they help the public any? No; they will help the quack and the self-sufficient incompetent.

Gentlemen, let us uphold the dignity of our great profession; and let us be "kindly affectioned one to another, in honor preferring one another." And is it not time to cease telling the people that we don't know this and that the other doctor does not know that? Remember that we are educated, gentlemen, and that our fellows in the profession are nearly all in the same class, whether they are young or old, live in the city or the country, are specialists or general practitioners. The time has come to unite.

Doctor, Are You Making Money: and If Not, Why Are You Not?

You are vitally interested in this question, as applied to yourself; and this journal is interested in it, as applied to you and to the profession at large. Far from wishing to commercialize the profession, and strenuously upholding the ethics of the true healer of the ills of the body by effective and modern methods, nevertheless we are keenly aware of the trying economic conditions confronting us as physicians. There is real need for a broad-gauge discussion of the business situation of the doctor.

In this issue, under the title "The Medical Side of Business," a discussion is begun to which we wish to direct your attention. Later numbers will present other phases of an admittedly difficult situation.

THE MEDICAL COUNCIL has no apologies to offer for exploiting, in a proper way, the business side of medicine. Indeed, we feel that we are doing a necessary work; for *the people are never adequately served by any half-paid class of men.* We have advanced the professional side of medicine; but *the business side is retrograding.* Why is it? That is what we wish to tell you. While you may disagree with some of our conclusions, we feel sure you will be interested in the series of articles upon the subject. Keep your eyes on our business pages for something interesting: the present article is only a beginning. We are interested in making medical practice pay.

Therapeutic Notes.

No drug is both a uterine sedative and stimulant.

Caulophyllum, blue cohosh, is a uterine stimulant less active than ergot.

Pulsatilla, Jamaica dogwood, valerian and aletris are mild uterine sedatives.

Dioscorea, senecio, scutellaria and cypripedium are *very* mild uterine sedatives.

Mitchella, the viburnums, chamaelirium, passiflora, cnicus and leonurus, whatever else they may do, do not influence the uterus.

The above is a fair estimate of the findings of the pharmacologists. Clinical experience in many cases makes us agree, in the main, with these findings.

Quite aside from the action on the uterus, a number of these botanic drugs have a definite range of clinical utility, more especially pulsatilla, valerian and passiflora.

Furthermore, the oils of pennyroyal, savine, tansy, rue, thyme, turpentine, and apiol, have no directly stimulating action on the uterine muscle; in fact, they inhibit such action except in dangerous or poisonous doses.

Apiol *does* have an influence upon the ovary and may aid in amenorrhea when the ovary is functionally inactive, if given *before* the expected period; but it is not abortifacient. So far as that is concerned, ergot is not apt to be abortifacient except in doses toxic to the mother and fatal to the fetus.

The combination of apiol and ergot is wholly irrational: so is the combination of caulophyllum and pulsatilla, and many other combinations of like character. Indeed, few drugs reach the womb in sufficient concentration to influence it at all. One might expect pituitrin to be abortifacient; but it is not. Pituitrin, as well as ergot and caulophyllum, stimulate *physiological* uterine contraction.

And the time has come for us to stop bluffing ourselves or our women patients when the women want contractions that are *not* physiological. We know perfectly well that drugs rarely induce such without very dangerous side-effects as well. No sensible physician gives such large doses; and it is a fine thing for the race that Nature wisely ignores small and safe doses when a woman is pregnant and all is normal.

In the new U. S. P., mil displaces Cc., but it means practically the same.

The following papers are contributed exclusively to this journal. Republication is permitted if credited as follows: MEDICAL COUNCIL, Philadelphia.

ORIGINAL ARTICLES

Sentences, like sunbeams, burn deepest when most condensed.

We are not responsible for the views expressed by contributors: but every effort is made to eliminate errors by careful editing, thus helping the reader.

Dementia Praecox Studies.

The Relation of Asphyxia and Difficult Labor to Dementia Praecox.

By BAYARD HOLMES, M.D.,
30 North Michigan Avenue,
CHICAGO, ILL.

One would naturally expect that the blue baby and the baby delivered by instruments would be more susceptible to mental disease, to epilepsy and to the various spasmodic conditions than those with spontaneous deliveries at term, those with no circulatory or placental complications, and those with no need of instrumental assistance.

It is well recognized that intra-cranial hemorrhage at birth is frequently followed by idiocy and, in less severe cases, by epilepsy. It is, moreover, a fact that injuries of the vault in adults, both simple and compound, infected and non-infected, seem to be followed by mental disturbances and epilepsy more frequently than these conditions occur in the uninjured. After shell-shock the cerebration is much disturbed and paralysis, mutism and other grave, but unexplained, phenomena persist for months or even years.

Ceni¹ has shown in a recent communication involving both experimental concussion of the brain in animals and clinical research upon men that even such trifling injuries of the brain as defy microscopic recognition, but produce brief concussion, profoundly affect the glands of internal secretion, and especially the function of the testicles. These organs show no trace of living spermatozoa for many weeks following concussion of the brain of so trifling a nature as to produce no massive lesions recognizable by histologic methods.

The Trauma of Delivery.

It would seem highly probably, then, that difficult labor and instrumental delivery would leave some deficiency in the remote alimentary and glandular systems which might contribute to the breakdown known as dementia praecox.

It has been impossible to find in the recent literature any contribution to this aspect of the

subject, and a review of the literature previous to the last ten years would not be profitable. A few facts bearing upon the subject are, however, suggestive and indicate the direction for research.

Effect of Disease of Mother.

It is obvious that any disease of the mother, such as syphilis, nephritis of pregnancy, eclampsia, acute infections such as appendicitis, salpingitis, pneumonia, tonsillitis, middle-ear infection or other febrile condition, may prove fatal or, falling short of a lethal end, prove hurtful to the unborn child. The fact that every physician has known such threatened children to live and grow into healthy manhood or womanhood is no more significant and is no more to be remembered than the fact that some such babies have remained blue for a few days and died with no morphologic findings at the autopsy that would explain the fatal end.

There is a smaller number of children born to healthy mothers with contracted or deformed pelvic exits, increasing the duration of the birth, promoting detachment of the placenta, or requiring instrumental assistance. Even such conditions as eventuate in presentations unfavorable to rapid delivery are productive of risk to the child. These risks are reckoned by Weingeroff,² in her study of the causes of death during the first few years of life, to be as high as one to three. The three babies that live, out of the four endangered, have done so after passing through severe injuries, deformities of the skull, *caput succedaneum*, luxations and partial luxations and crushing injuries of internal organs. These injuries can be repaired, but the new individual is as imperfect as the repairs are short of complete restoration.

Uterine Motor Inefficiency.

In a certain proportion of all births, the motor efficiency of the uterus is inadequate to propel a perfectly normal fetus at full term through a perfectly normal pelvis in a perfectly normal time. This inefficiency may be due to the gen-

eral muscular deficiency of modern women, to local defects in the muscular portion of the uterus, or to a deficiency of the pituitary secretion which arouses the uterus to contraction. The early loss of the amniotic fluid is another cause of inefficiency in dilating the cervix, promoting the engagement and rotation of the head and advancing the delivery. Any and all of these conditions lead inevitably to protracted labor and slow delivery and the attendant risks to the integrity of the child. In his studies of apparent death of the new-born, Wicke⁸ computed that the average mortality in these conditions was one to nine. But we must remember that the nine that survived had suffered injuries from the delay only less than fatal in their extent.

In these three conditions some few infants are born, others are so irremediably injured that they survive only a few days, others still are afflicted with bodily injuries of such obvious nature as to need no comment, while others still are so afflicted that they are idiots or feeble-minded, or what seems the case in a still larger portion of children, they are, by their patched condition of brain, of glandular system, and of alimentary and excretory apparatus, doomed to be handicapped in subsequent life in their struggles against the common enemies of man.

Injuries at Birth.

Little's disease is one of the conditions which more or less tardily follows injuries at birth, accompanied by asphyxia neonatorum. In his book, "The Deformities of the Human Frame,"⁴ published in 1853, Little has given a description of the disease which was later named after him, and that has not been improved upon since that time. I quote it almost in full:

"In many instances the spasmodic affection is produced at the moment of birth, or within a few hours or days of that event. In the majority of the cases of universal contracture of the upper and lower extremities which have fallen under my observation, the subjects were born at the seventh month, or prior to the eighth month of utero-gestation. In two cases the birth occurred at the full period of gestation, but owing to the difficulty and slowness of parturition the individuals were born in a state of asphyxia (asphyxia neonatorum), resuscitation having been obtained at the expiration of two and four hours through the persevering efforts of the accoucheurs. The fact of the greater liability to universal spasmodic contraction of infants prematurely born is susceptible of two explanations. I have ascertained that the premature labors in question were rarely induced by mechanical injury or sudden application of other causes, but were consequent on derangement of the health of the parent of some duration. One explanation, therefore, sug-

gests itself, that the deteriorated health of the parent had directly impaired the nutrition of the fetus, and both directly and indirectly the healthy development of the nervous system of the fetus, creating a susceptibility to disease.

Premature Birth.

"The second explanation that I may offer you, and one especially applicable to those cases of contracture concerning which doubt exists whether the spasmodic affection originated prior or subsequently to birth, is based upon the proposition, that an infant prematurely born is, although in a normal stage of development, inadequately prepared to contend against the operation of external agents. The respiratory and circulatory organs of an infant under these circumstances are ill-suited to the proper aëration of the blood, and its due transmission throughout the frame; the alimentary organs cannot yet be perfected for the elaboration of chyle, and the incomplete development of the nervous system must interfere with the assimilation of nutritive matter for the wants of the economy. It cannot occasion surprise that altered function, congestion, or disease of the most susceptible of the infant's organs, those of the nervous system, should occur. Hence the production in some cases of transient muscular contraction, convulsions, and death; and in others of permanent spastic contractions in various parts of the body, succeeded by the forms of contracture under consideration.

"Of twenty-four more recent cases of general spastic rigidity of limbs occurring amongst private patients, of which the author has preserved notes, there were:

Reputed to be congenital.....	7
Reputed to be non-congenital.....	5
Doubtful, or not observed until period of ordinary walking.....	11
Reported to have been born at seventh month of gestation.....	8
Reported to have been born at eighth month of gestation.....	4
Labor difficult, protracted, or having required instrumental aid in.....	7
Asphyxiated, or semi-asphyxiated, from half an hour to two days: convulsions usually accompanying or succeeding.....	7
Attributed to difficult dentition.....	3
Numbers equally divided between the sexes."	

Spasmodic Manifestations.

Little's disease is the most exaggerated of the spasmodic conditions. Spasmophilia is observed in diminishing severity, but in increasing frequency through spasm of the pylorus to the cramp. Our immediate interest in this condition depends upon the fact that in dementia precox there appears to be a spasm of the colonic sphincter, resulting in cecal stasis and decomposition in the cecum of the amino acids, with the production of toxic amines, especially the decomposition of histidin by the *Bacillus amin-*

ophiulus intestinalis with the production of betaminazolyethylamine.

Dementia Precox.

In my own clinical observations of dementia precox patients I have been struck with the frequency of a history of a dry birth. This condition is not at all the same as saying there was a slow delivery. Even a dry birth may be rapid, other things being equal. In one history the mother declared the labor was only six hours long, there was no water, the child was all wrinkled up as if he had been larger, he was covered with the vernix caseosa and cried at once. This baby grew into a tall young man. At twenty he went to Alaska, where he did well for two years. He returned home with two thousand dollars to his credit, but on the way overland he became lost with two other men. Six months after arriving at Chicago he was committed, and deteriorated very rapidly and died within two years.

Another patient was catatonic. When a child he had the croup for three years at frequent intervals each winter. His mother said he was born after a labor of two days and was blue for more than a week. No instruments were used, but there was an enormous *caput succedaneum*. For weeks before delivery the mother had been quite miserable and unable to eat or digest, though there had been no albumin in the urine, or other symptoms of eclampsia. Labor had come on spontaneously without rupture of the bag of waters.

The Influence of Defective Birth.

In the anamnesis taken many years after the birth of a child who is subsequently overtaken with dementia precox, it is difficult to get prenatal, natal or post-natal history from the mother. The unusual and isolated incidents are forgotten. Unless leading questions are asked, unusual events are not thought of by the mother or by the father. Leading questions produce unreliable results. Still there must be here and there a mother who could give some account of the incident of delivery, and we may depend upon it that some country doctor has hidden away in his notebook valuable data connected with the birth of unfortunate dementia precox patients now in the institutions for the insane.

In 1911 Walther Hannes⁵ discussed the relation between asphyxia and difficult birth and subsequent nervous and mental disease. He examined 315 cases, which he divided into three unequal groups. In Group A were ninety-seven children who had been asphyxiated and resuscitated at birth. In Group B were one hundred and seven children who had been delivered with the aid of instruments. In Group C were one

hundred and eleven children spontaneously delivered. All of these cases were studied after the children had reached school age.

In Group A Hannes found that forty-two per cent. of the children had died, many of them during the first year, principally from intestinal and lung troubles. Of the surviving children *two were mentally defective*. In Group B twenty-three per cent. had died. The deaths were chiefly due to intestinal disorder and acute lung affections. Of the remaining children *one was an idiot, one an epileptic and a third suffered with a contraction of the left arm*. In Group C twenty-six per cent. had died, principally from intestinal and lung troubles. Of the eighty-two remaining, two were unusually backward at school, and *a third presents, in her sixteenth year, the picture of idiocy*.

From these carefully conducted researches Hannes concludes that asphyxiation at birth and extractions do not affect the nervous system or the mentality of the child, nor do they have much influence upon infant mortality. We leave the reader to draw his own conclusions.

Complicated Labors.

Another writer, Adolph Beatus,⁶ gave a careful study of 221 obstetric cases in which there were prolonged, instrumental or other complicated labor or labors with asphyxiated children. Fifty-three of these cases could not be found, fourteen did not make available reports, but 134 were consulted personally and the children examined, namely:

- I. 23 asphyxiated children resuscitated.
- II. 29 extractions or versions and extractions, not asphyxiated.
- III. 35 instrumental deliveries, not asphyxiated.
- IV. 47 spontaneous, unassisted protracted labors, not asphyxiated.

Of the twenty-three asphyxiated, eight (34 per cent.) have died. Nearly all of these eight died of some acute children's disease. Two had intestinal catarrh, two had whooping cough, one had gastric catarrh, two had some lung trouble, and one died at the end of five days' inanition. Fifteen are still living.

None of these children are idiots or imbecile. One of them, a girl ten years old who was resuscitated after thirty minutes, had been in the sixth grade two years, unable to pass into the next. She was permitted to remain away from school for one year. She had headaches and is forgetful. The mother, however, thinks she is improving. She was paralyzed for a few months after birth, but is now able to use her left hand. She learned to walk and talk when two years old. She was instrumentally delivered. No Binet-Simon tests were noted.

One other girl was still paralyzed at four and a half years with a permanent contracture of her right arm. Otherwise she was well and strong, but reflexes in both arms were increased. Her mental condition was normal.

In the second group (II) of twenty-nine versions and extractions two died during the first ten weeks and five died during the first year. Another died during the next year—20.7 per cent.

There were no idiots and no cases of spastic paralysis in the twenty-three that lived. One girl of nine was still in the fourth grade; she was learning satisfactorily, but was very quiet and calm. This girl's father was insane and her mother had had repeated abortions.

None of the living children were considered to have psychic or nervous diseases.

The following table exhibits at a glance the principal facts developed by Beatus in percentages:

	Mortality Two Years	Mortality of the First Ten Weeks	Abnormal Children	Children Learned to Walk			Children Learned to Talk		
				1st Year	2d Year	3d Year	1st Year	2d Year	3d Year
GROUP I. Asphyxia.	34.6	13	4.3	53.3	46.7	0	40	60	0
GROUP II. Version and Extraction.	20.7	7	0	54.1	45.9	0	50	45.8	4.2
GROUP III. Instrumental.	28.5	6	3.4	50.3	49.7	0	48.3	51.7	0
GROUP IV. Spontaneous.	31.9	12.7	4.25	52.8	44.4	2.8	47.2	52.8	0

If we consider this meager study alone, we see plainly that asphyxia and delayed delivery are serious matters for the child's future. In the report of the British Parliamentary Committee we find that the proportion of defective children is 2.5 per cent. of those living under fifteen years. In Groups I, III and IV the proportion in these 134 protracted deliveries of deficient children was nearly twice as great.

Conclusions.

So far as I know the anamneses of cases of dementia precox have not been studied to determine any relation between asphyxia neonatorum, instrumental delivery, version and extraction, prolonged labor, absence of amniotic fluid, and detachment of the placenta and the predisposition to this disease. The evidence is of an abnormally large increment in the direction of spastic paralysis, spasmophilia and psychic deterioration among infants born asphyxiated or

after prolonged labor. Our notion of the origin of dementia precox looks toward a close relationship to spasmophilia. This relationship may not be direct, but it certainly is parallel. We shall hope, therefore, to have some large contribution from the anamneses of young dementia precox patients in our State hospitals with special reference to the following points:

1. Did the mother ever have fits, convulsions, spasms, cramps (especially gastric cramps), or any other condition indicating tetany or spasmophilia? Did any brothers or sisters of the mother have these symptoms?

2. Did the mother follow any particular diet during the time she carried the child? What sicknesses did she have?

3. What was the term of pregnancy when the labor began; and what were its characters, duration and complications?

4. What was the presentation, the condition

of the amnion, the placenta and the condition of the child at birth, especially as to asphyxia, convulsions, spasms, deglutition and urination?

5. What sickness did the patient have after birth? Especially did the patient have croup, convulsions, constipation, summer diarrhea or infectious processes?

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A Study of Cancers, Not Cancer.

By E. E. FISHER, M.D.,
Room 412 U. S. Nat'l Bank Bldg.,
SALEM, OREGON.

It seems to me that at no time in the world's history, has that ancient, ubiquitous and most dreaded enemy of mankind, cancer, been studied so generally and so systematically as at the present period; and if the study and investigations have not proven entirely fruitful, no one can say that it has been fruitless. Much has been revealed concerning the history, pathology and treatment of cancer, even though the direct cause still remains one of the greatest of unsolved problems of today.

And it is unfortunate, too, that so little additional information has been given to the clinician which will enable him to detect, unerringly, in its first stages, this enemy which oftentimes gains complete victory over its victim before it is recognized, since a strictly local disease and therefore curable primarily has become through metastasis, a general constitutional and incurable one. Not only is this true of deep-seated internal carcinomata but is almost true of external lesions susceptible to either palpation, sight or both.

Too Many Inoperable Cases

Isn't it surprising that 90 per cent. of the cases of cancer of the cervix are inoperable when first seen by a surgeon; that 90 per cent. of gastric carcinomata are inoperable, 29 per cent. of cancer of the breast, and on account of its rapid course a still larger number of cancers of tongue and mouth? They are not unfavorable or fairly late ones but are actually inoperable without *one* chance of removing the disease. Fifteen thousand at least die of cancer of the stomach annually. The average duration of disease before death brings relief is not more than one year, so we could conservatively say that this means 15,000 years of suffering. The situation is about as bad in uterine cancer and not much better in cancer of the mouth and tongue. It was recently stated that, in Iowa, cancer ranked third in the causes of death in adults over forty.

Cause

I would like to present the opinions and conclusions of several leading medical men in regard to the cause of cancer:

E. H. Nichols remarks that cancer is a parasitic growth engrafted on a sound individual, this growth having been produced by the conjugation of sexual cells in a way analogous to the

conjugation of sexual cells which produce a normal individual.

Bland-Sutton says the cause of cancer is most probably a micro-parasite which stimulates the normal epithelial cells of adult individuals to multiply and produce cancer in the same way that the male gamete or spermatozoon initiates reproductive changes in the female gamete or ovum.

Klebs reached the conclusion that leucocytes present within the epithelial cells exert the spermatic property, by which they fertilize these cells, so awakening within them renewed activity of proliferation, conferring on them, in fact, the properties of fertilized ovum cells.

W. Roger Williams, in his splendid treatise on the "Natural Cause of Cancer," tells us "that pathologists have long been familiar with the conception which ascribed the initiation of malignant growth to the conjugation of the cell of a cancer germ with some adjacent somatic cell." Dr. Williams adds, too, that this doctrine has not carried much conviction.

The Embryonic Theory

Sir Alfred Gould, in his "Bradshaw Lecture on Cancer," reminds us that his predecessor, Sir William Savory, pronounced the cancer cell to be an embryonic or rudimentary form of cell possessing great powers of multiplication, but differing from true embryonic cells in its lack of power of differentiation. Dr. Gould, after a prolonged discussion, finally reaches the question: "What, then, is cancer?" Before answering, he says: "Think of a fertilized human ovum, picture its dividing into 2, 4, 8, 16, 32, cells, etc.," and so he proceeds to describe its development into a full-grown individual; then, in summarizing the facts of cancer, he concludes that cancer results from a breach of fundamental cell-law; a law, obedience to which results in the perfect development of an individual, but disobedience to which "slowly spells out all the terrible woes of cancer." In both instances, let us note, the process is regarded as one of embryonic development in one case, *normal* embryonic evolution producing a fœtus; in the other an abortive embryonic process producing cancer.

The Defensive Process

A. E. Rockey, in his thesis on the "Cause of Carcinoma," proposes that "cancer is caused by a defensive process of the tissue cells to a great variety of irritations and that there is no specific external cause for cancer. In carcinoma there

is a displacement of active cells of epithelial origin into the mesoblastic tissues. The cells are not of mature epithelial type but are embryonal in character and irregular in their development. By reason of their displacement, they can not attain the normal anatomic perfection and physiologic activity of mature cells. Their entire energy is expended in indirect nuclear division. This karyokinetic energy is developed in the cell as a defensive reaction to the original irritation, which, to produce cancer, must also destroy the basement membrane and produce a similar defensive reaction in the connective tissues."

The External Factor

Pathologists have searched so far in vain for some common cause of external origin for cancer. That the habits of man predispose to cancer can not be questioned. Eighty per cent. of cancers of the lip are in men who smoke. In the lip cancer we see a combination of traumatic, thermic and chemical irritations from the pressure of the hot stem, plus the irritation of the smoke.

The karyokinetic tissue defense is demonstrated in the smoker's cancer of the mouth, where the long-continued effects of creosote and other products of slow combustion and other irritants give first a leucoplakia and later a destructive ulceration which breaks down the basement membrane and gives ingress to the overstimulated epithelial cells that have been reduced to the embryonal type.

The betel nut chewers of Java mix lime with the leaves in forming their favorite quid. This is an irritant of an entirely different type, which produces the same resulting cancer. The cancer in the mouth of these chewers comprises more than 50 per cent. of all the cancers in certain parts of India.

Cancer of the groin in the chimney sweep from soot and in the sailor from riding on the rope sling in the course of his work are instances to be noted.

Chinese men are very subject to cancer of the posterior wall of the pharynx, due to the hot rice which they eat; women eat at the second table when the rice is cold and are not thus afflicted. The Kangri-burn cancer from which the natives of Kashmir suffer, and which is in excess of 50 per cent of the total number of cancers seen in Kashmir, is due to the skin irritation of the charcoal baskets filled with hot coals which they carry on the lower abdomen to keep the hands and body warm, much as the women of our country wear fur muffs.

Chronic Irritation

So it seems to me that the evidence as to the

relation of chronic irritation to the development of cancer is overwhelming. The woman with myomata of the uterus is many times more liable to cancer of the body of the uterus than those without those tumors. Fifty per cent. of the carcinomas of the pelvis and calyces of the kidney are associated with stone in the kidney. At least 20 per cent of carcinomas of the sigmoid have their origin in diverticulæ. Gall-stones are found in at least 85 per cent. of all cancers of the gall-bladder. Ulcer or some chronic irritation of the stomach occurs in half of all gastric carcinomas.

Williams, who has written extensively on this subject, believes that chronic irritation has no influence on the production of cancer. Other observers of equal standing believe that chronic or prolonged irritation is one of the important factors in the production of the disease. Cancers originating on the surface of the body never occur except at points subjected to continuous irritation over a considerable length of time.

All physicians are familiar with the type which develops on a crack or ulcer of the lip, about a mole, a sebaceous cyst, in an ulcer or the scars resulting from burns.

Internal Irritations

There is evidence to show that cancers inside the body always develop in tissues subjected to prolonged irritation.

The stomach with its acid contents and the continuous irritation which it receives from large coarse particles of food, as well as the fact that it is nearly always overworked, is one of the most frequent situations for cancer.

The large intestine, which also contains coarse dried particles of feces and in addition has a high bacterial content, is frequently the site of the primary lesion. The small intestine, which is always practically empty and when filled contains only liquids of a slightly alkaline or neutral reaction and a comparatively low bacterial content, is in direct contrast with the stomach and large intestine, relative to frequency of primary cancer. The one fact that seems to stand out above all others is that factors, such as tumors, ulcers, etc., which produce or aid irritation, are often the primary site of cancer.

Anthropologic Factors

Race, climate, geographical considerations, diet or habits, have little, if any, direct effect in the causation of cancer. Blows or injuries of various kinds are believed by many frequently to originate such growths. While they undoubtedly may do so in some instances, the probabilities are that more frequently than not they call at-

attention to something that was present previously but that had escaped notice.

The Blood and Cancer

The majority of people believe that cancer is a "blood disease." By this they express a vague notion of a general disease present in many parts of the body, and for this reason they naturally conclude that its removal from one place will have no effect on the disease in other parts.

The study of the pathology of cancer indicates that there must be a period in its growth when it is limited to an extremely small group of cells in some part of the body and while so confined can be cured by complete removal of this diseased area. We have also learned that cancer is disseminated throughout the body in almost every instance by metastasis along the lymphatic channels which drain the affected area, although there is evidence to show that dissemination may take place through the blood in certain cases. Cancer may also be engrafted from one part of a cancerous subject to another by direct transplantation of the cancer-cells, but no instances are on record of a cancer having been transplanted from one subject to another. In the abdomen cancer cells appear to become separated from the primary growth and transplanted to other parts of the peritoneal cavity. The early involvement in the pelvis in certain cases of cancer of the stomach can be explained in no other way. The diffuse involvement of the entire abdominal cavity following the rupture of an ovarian cyst is another example of this process. These facts, while important and an aid in curing cancer, do not teach us anything concerning its origin.

Heredity

William Mayo, in his thesis on "The Cancer Problem," says: "Perhaps one of the most unfortunate results of a logical inquiry into the influence of heredity on the causation of cancer has been the encouragement of a belief that cancer is an hereditary disease, and therefore carries a stigma with it. The person who has been successfully operated on for cancer conceals the nature of his malady with the same solicitude he would probably conceal the fact that he had 'done time' in the penitentiary." So far as he (Mayo) knows, he believes there is but little evidence that leads to a justification of the belief that cancer is hereditary. Then again the important studies in heredity of Dr. Maud Slye lead many to believe that besides the local predisposing or pre-cancerous conditions, there are predisposing factors of a more constitutional nature; that there is at least a transmissible predisposition to the development of cancer.

In a recent article on the etiology of cancer by Gaytors we find the belief that, be the underlying cause what it may, there are striking indications that the views of investigators of cancer in general are gradually coinciding. The views of those who have been opposed to one theory have been modified by the results of research to such a degree that there has been a steady drawing together of opinion as to the cause or causes of neoplasms.

Pre-cancerous Conditions

It is now generally recognized that there are well-defined agencies which work, at least locally, in a predisposing manner. These bring about what is called precancerous conditions of the tissues. They are mechanical, physical (thermic and actinic), chemical, infectious-inflammatory, and other agents. They are of such varied nature that we find generalizations being made that the cause of cancer is really the multiplex complication and activities of modern life. So far as they may be determined locally, they are well summed up as chronic irritation; but it has been shown in exceptional cases that the predisposing changes in the tissue are not of a chronic nature; that even a single traumatism may suffice; but such cases are exceptionally rare.

The time between the establishment of the so-called pre-cancerous condition and the advent of cancer may frequently be very long, many years in fact; but, by careful study of individual cases, the local predisposing features may be definitely determined in a high percentage of cases.

Superficial Cancer

Von Brun, who confined his study to the superficial skin cancers, which are most easily studied, was able in 368 cases to determine a predisposing irritant in all but 48. The relation of remote trauma and chronic irritation to malignant tumors is well known to all clinicians.

Is There a Cancer Parasite?

It seems to me that the local predisposing factors included under the head of chronic irritation are of the most varied sort. Since we have acquired a positive knowledge of certain neoplasms in animals in which the existence of neoplastic virus has been definitely established, it is not possible to believe that there is such a thing as a single cancer parasite. We are face to face with the probability that if the various types of cancer are to any great degree caused by such viruses, there are many of them and probably each has marked specificity for one type of tissue.

It has been well said by several writers that the time has come when we should study cancers and not cancer.

(To be continued next month.)

Poliomyelitis.

By J. S. RAUDENBUSH, M.D.,
3633 N. 15th St.,
PHILADELPHIA, PA.

Due to a filterable virus which invades the central nervous system, this disease occurs in epidemics and sporadically, especially during the warm months. Mills claims that it spreads through certain atmospheric influences as well as by direct contagion. The focus of infection appears to be the tissues adjacent to the point of invasion, the naso-pharyngeal surfaces; and the secretions and excretions are the distributing agents. The patient himself, the "carrier," filth, and possibly other factors aid in disseminating the disease. The period of incubation appears to be from two days to two weeks. Fever may or may not be present. Headache occurs at the onset, and pain is a feature in the acute attack, especially at the back of the neck. This is accompanied by more or less rigidity, resistance to flexion being an early symptom of some diagnostic value. Other symptoms are anorexia, vomiting (in the meningo-cerebral type), enlarged viscera, weakness of the muscles, and sometimes delirium.

Pathology.

The disease is an acute interstitial meningitis, the infiltration following the vessels, resulting in hemorrhagic exudation and pressure upon and anemia of the nerve cells; finally the cells degenerate. There are zones of hyperemia, exudation and edema; and they, in the early stage, interfere with the nerve mechanism. This pathology makes rational the intraspinal injection of adrenalin and the internal administration of iodides.

A Case Record.

W. R., aged 27 years; subject to headaches. Some years ago had typhoid, headache being a marked feature. Since then has had the usual run of sickness, inclusive of boils. Patient inclined to overwork himself.

Sep. 2 came to my office complaining of indigestion. Next day he went surf-bathing and contracted a cold. Sep. 4 he suffered from unendurable headache. Next day he had great pain in the muscles of the back and neck, but no tenderness; tongue coated, anorexia; temperature 101 F.

I gave him two 1-ounce doses magnesium sulphate and applied heat to painful areas. By afternoon the back was free from pain but the neck was rigid and painful and bending the neck forward was impossible. There was a headache,

a fixed stare and mental inertia. He was weak; temperature 101.2 F.; pulse 120; jaundiced. Diagnosis: meningeal type of poliomyelitis. Gave 10-grain doses sodium iodide every hour and continued hot applications to the neck. By 10 p. m. was better in every way except temp. was 102 and pulse 120. Began to doubt my diagnosis.

Sep. 6.—No sleep all night; very ill; rigidity continued but pain less severe though involving the legs; no change in temp. and pulse. Reported the case. Medical inspector reserved his diagnosis. By 3 p. m., condition aggravated; patient said "pain inside was awful." Applied ice-bag to neck and head; iodides continued in 5-grain doses every 2 hours, though the medicine disturbed the stomach; later full doses resumed. At night was delirious; twitching of legs; bowels sluggish; kidneys active; retraction lessened; temp. 102 F.; pulse 104.

Sep. 7.—Less pain; hungry; retraction and facial expression better; left arm weak; temp. 101.8 F.; pulse 100. Medical inspector removed him to hospital.

Sep. 11.—Paralysis of all extremities but not complete; temp. slightly subnormal. Gave serum. This history illustrates the progress of these cases.

Garlic in Whooping Cough.

Latimer and Bain, in two communications to the *British Med. Jour.*, recommend the use of garlic in whooping cough. Latimer comments on the rubbing into the back and chest of garlic stewed down in olive oil. Bain commends a fluidextract of garlic used in an inhalation.

Garlic is, just now, quite in vogue in England, being credited with marked antiseptic powers.

The cry now is "When the Pharmacopeia forsakes thee, then the National Formulary will take thee up;" but it doesn't always work. A lot of deleted U. S. P. left-overs are not in the new National Formulary.

There is now no longer an elixir of iron, quinine and strychnine, no stable and satisfactory formula being available. *Cactus grandiflorus* has won a place in the National Formulary, a tincture of the fresh drug being official. And, remember, Doctor, the N. F. is now official *by law*, just as is the Pharmacopeia.

Aconite, digitalis, strophanthus, squills, dried suprarenals, and cannabis, according to the new U. S. P., are now given a standard on the basis of biologic assay. *Cannabis indica* *must* be biologically assayed. Now we will know what we are doing with cannabis.

Appendicitis: Scientific Studies of Its Present Status.

By JOSEPH SHANKS, M.D.,
1058 North Robey Street,
CHICAGO, ILL.

The relationship between appendicitis and lesions of the tonsils and gall-bladder is now clearly understood. In his essay, "Etiology of Appendicitis as a Result of Blood Infection, With Particular Reference to the Tonsils as the Primary Seat of Infection," F. J. Paynton describes the case of a young girl who was suffering from a first attack of appendicitis. The illness was a very definite, but not unusually severe one, and the diagnosis was particularly easy because, in addition to the ordinary signs of the disease, the enlarged and tender appendix could be easily felt through the abdominal wall. The duration of the attack was forty-eight hours. The right tonsil was inflamed, and in some of the crypts a follicular deposit was evident. No complaint of a sore throat had been made by the patient, who was no doubt suffering far more from abdominal pain. A large and swollen appendix covered with fibrinoplastic exudation was removed. There was neither gangrene nor perforation, and there was no concretion. The patient made an uninterrupted recovery. There was no previous history of any serious illness.

While under the anesthetic a culture was taken from the right tonsil, and the appendix was placed in a sterile tube. (a) The bouillon culture from the throat showed mainly streptodiplococci, but also a few staphylococci. There was no difficulty in isolating the diplococcus from the culture. (b) Cultures from the appendix made by smearing the exudate on agar showed mainly the *Bacillus coli*, but also some colonies of strepto-diplococci. (c) Some of the sanious fluid inoculated on agar and into bouillon showed strepto-diplococci, but a predominance of the *Bacillus coli*. The diplococci from the throat and from the sanious fluid appeared morphologically and in cultural characters identical.

Bacillus Coli Infection.

It should also be remembered that in the majority of instances gallstones are dependent on a *Bacillus coli* infection of the alimentary canal, and frequently the appendicitis may initiate one or other lesion, or may even be the cause of it. Recently it has been demonstrated that there is a close relationship between appendicitis and

stomach troubles. In many cases of dyspepsia no lesion of the stomach, duodenum or colon could be found, but they were explained by the discovery of some lesion of the appendix.

A well-known authority claims that there was a lesion of the appendix in sixty-six per cent. of the cases in which duodenal ulcer was present at operation, suggesting that appendicitis was a cause of duodenal ulcer as well as ulcer of the stomach. This can be explained by the condition of hyperchlorhydria. A continuous flow of hyperacid gastric juice is likely to produce an inflammatory change in the stomach or of the duodenum.

Traumatic Appendicitis.

The importance of trauma as a cause of appendicitis is now also understood and admitted. A careful study of the anatomy and topography of the appendix vermiformis will show that unusual activity of the muscles of the cecum, or any bruises of these muscles through external traumatism, may produce edema, congestion and, therefore, appendicitis. It should not be forgotten that in the normally developed individual the location of the appendix is subject to great variation. Its displacement cannot be called errors of development, but are the result of pathologic processes and trauma.

Anatomical Deviations.

The appendix has been found in the following displacements:

- (a) Iliacolic fossa.
- (b) Attached to omentum.
- (c) Attached to gall-bladder.
- (d) Attached to fundus of stomach.
- (e) Attached to transverse and descending colon.
- (f) Attached to sigmoid flexure.
- (g) Attached to rectum.
- (h) Attached to urinary bladder.
- (i) Attached to fallopian tubes and ovaries.
- (j) Attached to uterus.
- (k) Found in hernial sac.

C. N. Dowd (*Medical News*, September 23, 1905) believes that the percentage of more severe grades of appendicitis is greater in children than in adults. This proves that children are more subject to external traumatism (fall, kick, blow, etc.), and symptoms more difficult to interpret until too late.

Appendicitis in Pregnancy.

Another important condition worth mentioning is appendicitis in pregnant women. We all know that pregnancy has probably no influence in inducing a primary attack, but we may be sure that women who have had appendicitis prior to pregnancy will, in 50 or 60 per cent. of cases, have more or less trouble. As the condition tends to be especially destructive and dangerous in pregnant women, the earlier the operation is performed the better. Findley reports fifteen cases in which this complication was present. In all but one of these there had been previous attacks. Six of the cases were mild attacks in which the patients recovered without interruption of pregnancy. Of the others, six recovered and three died. Five cases occurring in the puerperium were unusually severe. Two of the fatalities were from septic peritonitis, and one was from bronchopneumonia. One of these cases was not operated on. In the majority the attacks recurred in the early months of pregnancy. In no case was pregnancy interrupted after the removal of the appendix.

According to Wagner, the mortality of non-operated severe cases is seventy-seven per cent., as against a mortality of six per cent. in all cases, severe or otherwise, in which operation is done within the first forty-eight hours, a record not exceeded in operating for appendicitis uncomplicated by pregnancy. Doubtless this percentage of maternal mortality would be still further reduced were the patients operated on within the first twenty-four hours.

A Case in Point.

I will report a recent case that seems to typify a condition herein quoted:

The patient was a woman of thirty, who had been married about five years. Within two years she had had several recurring attacks of appendicitis of varying severity, none, however, requiring rest in bed for more than a day or two. Has been troubled frequently from tonsillitis, particularly the right tonsil. She consulted a physician who made a diagnosis of chronic appendicitis and perhaps ovarian trouble. When I was called several weeks later I found the woman in a pregnant condition, pain and marked tenderness in McBurney's point, rigidity in right rectus abdominis and Blumberg's sign.

I therefore made a diagnosis of appendicitis and strongly insisted on operating. Twenty-four hours after my visit the patient was brought to the Park Avenue Hospital. The following day I removed the appendix and found it three inches long and buried behind the cecum and

slightly adhered. A median line incision was made. The ovaries were found normal. The appearance of the organ was very reddish, thickened and filled with pus. On the morning of the sixth day one of the stitches was removed and a drain inserted, as I found a small extra-peritoneal infection. The patient recovered.

Dyspeptic Type of Appendicitis.

To illustrate the uncertainty which surrounds the diagnosis in a so-called dyspeptic type of appendicitis, I will briefly relate the case of a young man twenty years of age; had suffered for two and a half years from severe cardialgia, eructations and various dyspeptic phenomena. He had lost fifteen pounds in weight and looked pale and depressed. He had consulted a physician, who made an immediate diagnosis of nervous dyspepsia and neurasthenia. In March, 1916, I was consulted, and I found a perfectly normal heart and perfectly normal respiratory apparatus. Going back and forth over the right inguinal region, I found tenderness in McBurney's point, pressure on which produced distressing pain. He had never to his knowledge had appendicitis, and was astonished when I told him that he undoubtedly suffered from chronic appendicitis, and advised an operation. He consulted me again in April and told me that he decided on operation.

He was brought to the Park Avenue Hospital April 23, 1916. I removed the appendix the following morning and found it five inches long and buried in old, dense adhesions. He rapidly improved thereafter, gained twenty pounds during the following eight weeks and has been well since.

Danger of Delay.

I could quote a number of authors who have made remarkable cures by the removal of the appendix, and I have been led to consider the diagnosis "nervous dyspepsia" with a good deal of distrust (?).

Davis (*Boston Medical and Surgical Journal*, May 20, 1915) analyzes his experience in the treatment of 260 cases of appendicitis at the Massachusetts General Hospital. The study of this number of cases has brought out nothing new, but cannot be too often repeated. The great factor in the mortality of appendicitis is delay; delay in making a diagnosis; also, to a less degree, delay after the diagnosis is made. Another factor is the practice of giving a purge during the acute attack. There is still need of preaching these doctrines to the laity and profession.

Adhesions.

The frequency of adhesion of the vermiform appendix to neighboring structures and organs

has been studied by A. P. Heineck, who observed the post-mortem records of autopsies held in the Cook County Hospital (Chicago).

The appendix was found adherent to neighboring structures 486 times. It was not possible to determine accurately in what proportion of cases the condition of "adherent appendix" was due to a previous inflammatory process extending to the appendix, or to a previous inflammatory process extending to the appendix from adjacent structures, in which it originated. He believes that these adhesions are frequently the cause of obscure abdominal pains, obscure as to correct interpretation, due to adhesions to colon, to small intestines and to the abdominal wall; of digestive disturbances, due to adhesions to stomach, liver, gall-bladder. They may be the cause of vesical or rectal tenesmus, due to adhesions of the urinary bladder, to the sigmoid flexure of the colon or to the rectum.

Adhesions.

Adhesions may be the cause of obstruction, or may lead to kinking, to interference with its circulation; they may be the means of extension of an inflammatory process from the appendix to the structure, or the organ to which the appendix is adherent; they may make the appendix serve the office of a band over which a loop of intestines may become kinked or beneath which a coil of gut may become looped; in either case intestinal obstruction or strangulation results. The appendix may be buried in a mass of adhesions. He further cites 145 cases of chronic adhesive appendicitis examined and analyzed at the Boston City Hospital; 118 showed no evidence of any abdominal condition to which adhesion could be referred other than a prior inflammation of the appendix. Hence they can be considered cases of primary chronic adhesive appendicitis.

In twenty-seven cases other sources for the adhesions could be ascertained, causing secondary chronic adhesive appendicitis, as salpingitis, hydrosalpinx or myoma of uterus; in three cases carcinoma of the uterus, with other pelvic structures; in three cases disease of the gall-bladder; in two tubercular peritonitis, etc.

Age.

The question of the age of appendicitis patients has been investigated by R. De Bovis. He was able to collect a series of 2,781 cases, and found the age incidence to be as follows:

11 to 20 years.....	31.8 per cent.
21 to 30 years.....	37.3 per cent.
31 to 40 years.....	16.8 per cent.
41 to 50 years.....	8.7 per cent.
51 to 60 years.....	1.6 per cent.

Statistics.

On an analysis of the statistics of some operators in appendicitis, though the methods of operation and the minor details of technique may vary, the results are found to be approximately the same. There are several methods of incision (McBurney, gridiron, etc.), but in every instance it passes through the skin over McBurney's point. I am accustomed to use the incision which is made parallel with the outer border of the right rectus abdominis.

Complications.

In the discussion of complications, most authorities agree that general peritonitis is the most dreaded. Murphy believes that saline irrigation should not be the employment in general peritonitis of several days' duration, but is indicated in recently diffused processes, particularly if the previously unirritated peritoneal cavity has been suddenly infected through rupture of an abscess.

After saline irrigation the danger of increased absorption is best prevented by a cigarette drain to the bottom of the pelvis, or, in women, vaginal drainage (posterior cul-de-sac), with exaggerated Fowler's position for twenty-four to thirty-six hours.

Post-operative Treatment.

In the post-operative treatment of these cases it seems that practically entire attention has been given to the condition of the bowels. When the small intestines are paralyzed cathartics by mouth are practically ineffectual; calomel may be dangerous. Enemata or the rectal tube may be of some use in relieving the large bowel of flatus. Ochsner's routine with turpentine stupes to the abdomen is the best treatment for the first 48 hours after operation (Murphy). When the small intestine assumes its natural function, indicated by intestinal sounds, cathartics may be given and will be found efficient.

Tuberculous Appendicitis.

Tuberculous appendicitis has been studied by Lejars, who reports a number of cases of acute tuberculous processes in the appendix with or without tuberculous or ordinary peritonitis. The patients were between 20 and 32 and the feature common to all was the distention of the abdomen ushering in and persisting after the acute symptoms. In other cases the appendicitis was an ordinary inflammation but was embedded in a focus of tuberculous peritonitis. In another group of cases an acute tuberculous peritonitis simulated ordinary appendicitis. In one such case the incision in the iliac fossa showed that the omentum, cecum and appendix were studded

with miliary granulations, but there was no ascites or abscess, and he sutured the abdomen without removing anything but a scrap of omentum for microscopic examination. Contrary to expectations, this exploratory laparotomy seemed to usher in a turn for the better. In the 3,550 autopsies reported by A. P. Heineck, the appendix was the seat of tubercular lesions ten times. He claimed that in each and every one of these ten cases the tubercular lesions in the appendix coexisted with tubercular lesions elsewhere in the organism; that in all of these cases tuberculous pneumonitis of one or the other variety was invariably present. Not one of these ten cases of tuberculous appendicitis was primary. They were all secondary, either by continuity of tissue, as extension from tuberculosis of neighboring coils of intestine, or by vascular transplantation.

Appendicitis Abnormally Situated.

Lejars has studied appendicitis in abnormal situations. He refers to conditions such as so-called pelvic appendicitis and appendicitis with a left iliac abscess. These abscesses may be situated in the perirenal region, above or below the liver, and even behind the liver; they may be subphrenic, subhepatic, intrahepatic. Amongst these accumulations, some are in direct continuity with the original appendicular focus, of which they represent a more or less elongated diverticulum; a close examination of the walls of the cavity, after the iliac incision, will reveal their presence, and, by means of a sufficient enlargement of the primary wound, they may be emptied and drained by the same route.

Abscesses.

In pelvic appendicitis, the abscess will be accessible by way of the iliac fossæ, or it may be entirely contained within the pelvis, and fail to show itself above Poupart's ligament by any swelling or hypertrophy; the incision, even when placed very low, then necessarily opens the general peritoneal cavity. The abscesses which are exclusively confined to the pelvic cavity lie in contact with the anterior wall of the rectum or the roof of the posterior vaginal cul-de-sac. Lejars also recommends the rectal incision and drainage, especially in the male, but the iliac incision constitutes the method of choice.

If the pelvic swelling approaches Poupart's ligament at all, it should be dealt with by the abdominal route; by the abdominal incision the work can be more satisfactorily completed, any diverticulæ or secondary pockets can be opened. Lastly, very free drainage must be provided by means of two large tubes placed right to the bottom of the pelvic pocket.

Periappendicular abscesses may dissect into distant parts of the body, and produce cicatricial contractions and deformities which seem most remote.

Adhesions—Pain.

Adhesions between the omentum and small intestines, between the colon and intestines, between the stomach and colon, give rise to most unexplainable attacks of abdominal pain and to paroxysms which resemble colic of gall-stones, the colic of stones in the ureter and gastric crises. When an operation is performed under such circumstances, nothing is discovered except insignificant adhesions between viscera, and the removal of the adhesions is followed by relief from pain.

Roll (*Norsk Magazine for Lægeviden-Skaben*, Christiana, Norway) describes a series of eleven cases in which the symptoms were those commonly explained as due to chronic appendicitis, but the trouble proved to be more due to adhesions. The adhesions may form attachments to the cecum and appendix, or in the neighborhood of the hepatocolic ligament, spreading thence in various directions. He is convinced that these adhesions may develop from mechanical causes alone, when the ascending colon is unusually short.

The peristaltic movements drag on the short colon until the weakest attachment yields, with resulting downward displacement of the parts. With stout muscular walls the intestine may be held in place for a time, but if the abdominal wall grows flabby, or the muscles relax from fatigue, the intestine suspended by its adhesions drags on the peritoneum, entailing symptoms interpreted variously as nervous dyspepsia or neurasthenia; the function of the bowel becomes irregular when the feces are passing the points of internal derangement, nausea, colic or other symptoms may be felt. An actual cure is generally possible from operative measures alone.

Transposed Viscera.

Mühsam (*Deutsche Medizinische Wochenschrift*, May 16, 1912) reports a case of appendicitis in a case of transposed viscera before the Hufeland Society, of Berlin. That it escaped the attention of the profession seems from the fact that Hollenbach reported a personal case with no allusion to the author's or indeed to any previous case. At least 200 cases of transposed viscera are upon record, but up to a few years ago but one case of associated appendicitis was mentioned in standard works.

He operated on a young man for acute appendicitis, the diagnosis of inverted viscera hav-

ing previously been made. In Hollenbach's case, on the contrary, the condition in the female patient had not been surmised by several surgeons who had done in succession an operation for a left floating kidney, a ventrofixation, and a right-sided ovariectomy. After appendicitis had developed, an X-ray readily revealed the transposition.

Diverticulæ.

The study of diverticulæ associated with appendicitis is of special importance from a surgical standpoint. Diverticulum of the intestine, which has been considered and described for more than 100 years as an anatomic rarity, is now recognized as an occasional cause of serious trouble and danger. In his essay "Diverticulæ of the Gastro-Intestinal Tract; Their Surgical Importance," Charles H. Mayo says that diverticulæ of the large bowel are common. Even the appendix may have one of its own—a diverticulum within a diverticulum. Seventeen diverticulæ have been discovered in appendices removed at operation in the Mayo clinic. He claims that the jejunum and ileum are both subject to the formation of diverticulæ, which are found along the mesenteric line of the intestine. He further states that in a series of twenty-seven cases of diverticulitis of the large intestine he had two in the rectum and one in the anal ring. Five additional cases were observed in operating for other conditions, but no pathologic specimens were obtained. One case was observed in operating for the removal of a large, double intraligamentary cyst. This was a diverticulum of the cecum, located on the outer side $1\frac{1}{2}$ inches from the base of the appendix. It was $1\frac{1}{2}$ inches long and about the size of the little finger. In the one case of non-malignant diverticulitis of the rectum the true diagnosis was made when the tumor was dissected after removal.

Cancer and Appendicitis.

In seven cases he found cancer grafted on diverticulitis of the large bowel. This was also the case in the diverticulum of the stomach and in several cases of diverticulæ at the base of the bladder, associated with gall-stones. He points out that McCarty and McGrath have shown from a study of 5,000 appendectomies that cancer of the appendix appears once in every 225 cases of chronic appendicitis.

Some authorities consider diverticulæ of the large intestine the result of pressure, especially in those possessing all the coats of the bowel at their origin. Diverticulum of the large intestine may be differentiated from cancer, tuberculosis, left-sided appendicitis (Mayo), as well as failure

of the colon to rotate. No cases have been reported as giving typical symptoms of this condition during life.

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The Management of Fractures.

By JAS. A. FOLTZ, M.D., F.A.C.S.,
 FORT SMITH, ARK.

More than half a century ago Duncan Eves made the following observation: "A thorough knowledge of anatomical relation of structures, a wide experience, a practical common sense, calm judgment and constant vigilance are the characteristics a surgeon who is called upon to treat fractures stands most in need of." That observation is as good today as it was fifty years ago.

In 1913, S. Adolphus Komph created a new name when he wrote his paper on "Phthisiophobia" (tuberculosis fear); some one of equal ability today ought to create a new term and write a paper on "Laparotomy Madness."

The first thing the surgeon-in-embryo does when he graduates from college is to supply himself with a couple of bright retractors, a set of Murphy buttons, a complete outfit for gastro-enterostomy, appendectomy, etc., and massing his surgical artillery with the mouths of all cannons pointing to the abdominal cavity, he awaits the opportune moment to strike. He does not even use the standard precautions laid down by our military strategists, that while preparing an attack on one point to see that all other points are strengthened, not weakened; but he proceeds in his laparotomy madness as if this were all there was to surgery.

Hospital Records

One of the most neglected of these side-issues of surgery is the question pertaining to the management of fractures. Records of the great hospitals in Europe and in this country show that from one-fifth to one-seventh of all accidental injuries admitted to these institutions are frac-

tures, and that the court records show that very close to 75 per cent. of all suits for damages against physicians and surgeons, as well as railroads and other corporations, are for poor functional results following the treatment of fractures.

Bad Personal Records

About the poorest advertisement a doctor can have in a community is a post-operative fracture result leaving a crooked or powerless limb; no argument can offset this damaging evidence; but this is not the worst; it is the permanent disability produced, the damage done the patient, that is the most important consideration. When a man comes to a surgeon with a broken arm or leg, he has the right to expect of that surgeon the possession and application of such knowledge and care as will give him the best functional results compatible with the conditions involved and, as set forth in Duncan Eves' remarks, this often requires the highest degree of skill and anatomical knowledge, coupled with a modern surgical experience, and with practical common sense.

There can, of course, be no set rule laid down for the management of fractures because the location, extent and condition of the fracture is different in almost every case and requires individual mastering.

The most important points in the management of fractures are first, *DIAGNOSIS*; second, *TREATMENT*.

Diagnosis

The most valuable aid which modern surgery has in the diagnosis and also in the treatment of fractures is the X-ray. The X-ray is valuable from two standpoints; first and most important, it is valuable to the patient by enabling the surgeon to secure an accurate knowledge of the position of the bones, and from which knowledge the patient reaps the benefit; and second, to the doctor, because it renders much more difficult the task of the malingerer, should he sue for malpractice, claiming the presence of conditions which do not and did not exist.

I may say a word here of the method which I usually employ in the use of the X-ray. Unless I am uncertain as to whether or not there is a fracture at all, I usually do not use the X-ray until after I have accomplished, to the best of my ability, the reduction of the fracture which I know exists and after the immobilizing of the parts in some form of a cast; then I have an X-ray picture made. I always take several pictures from different angles. If then the X-ray reveals the fact that the bones are in good apposition, well and good; but if it shows that my

reduction has not been sufficiently accomplished and that the alignment is not sufficiently accurate to render a union that will give good functional results, then I anesthetize my patient again and attempt to correct the mal-position which the X-ray shows to be present.

After this has been done and another cast applied I again take an X-ray picture for the same reason as before. I have often taken three or four sets of pictures of the same injury before I considered the alignment satisfactory.

Perfect Alignment Not Necessary

I may say here that one very important lesson the X-ray has taught us is that perfect alignment is not necessary for good functional results and, in fact, that perfect apposition and alignment is a condition which, far from being general, is indeed an exception even in the work of our most experienced and competent surgeons. This point has its value, particularly in those cases where the doctor will be sued for malpractice, and the X-ray is used to demonstrate some slight mal-position or imperfect alignment.

In the reduction of simple fractures one of the most important guides is comparison with the opposite side. All fractures should be reduced under anesthesia; the parts should be freely exposed, both the injured member and its fellow of the opposite side; the reduction should be done thoroughly, painstakingly and carefully along the lines laid down by modern authorities for the reduction of the particular fracture involved. The contour should be made to correspond (unless there is too much swelling) exactly with the contour of the opposite member.

Immobilization

Once having secured a satisfactory reduction and after having satisfied oneself by careful inspection and comparison with the opposite side that you have a satisfactory alignment, then great care is necessary on the part of the surgeon and his assistants to see that this arrangement is not disturbed in the subsequent manipulation necessary in the application of the cast or splint or whatever other retentive apparatus is decided upon.

The Open Treatment

What about the open treatment of fractures? I do not use the Lane's plates or resort to any of the different open methods of treatment unless the fracture proves to be rebellious, in which case the Lane's plates or wiring have given me excellent results.

In regard to the management of compound fractures, it is never permissible to plate these fractures until after ten days or two weeks has

passed and Nature has had a chance to throw a protecting wall around the injury; as Murphy expresses it, "to coffer dam the tissues."

I think the Lane's plates and several of the very excellent substitutes that have been recently introduced as substitutes bear about the same relation to the treatment of fractures as salvarsan does to the treatment of syphilis; both are more or less of fads. Both are extremely valuable in certain types of cases, but neither are specific and neither are a panacea for all ills involved. And while it is quite true, as stated above, that there are certain types of fractures in which the Lane's plates and the direct wiring will prove a god-send, still the old methods of careful reduction and proper retention must remain the sheet anchor in the treatment of fractures for the mass of the profession, just as mercury still remains the sheet anchor in the treatment of syphilis.

Conclusions

In conclusion I want to make a plea for the following points:

Always be deliberate in your treatment of

fractures; wait until you have the patient in the proper place and until you have assembled the things which you know you will need, or think you will need, before you attempt reduction.

Always make your reduction under anesthesia; this is considered a very important rule, admitting of practically no exceptions.

In case of great swelling and where there has been considerable traumatism, do not bother about the immediate reduction of the fracture but make your patient comfortable by the use of sand-bags or soft pillow splints for several days until after the swelling has reduced and after the blebs which usually form in such cases have opened or dried up, and then proceed with your reduction and immobilization.

Always make it a point to use some form of cast that will permit you to frequently, or at least occasionally, inspect your fracture, thus enabling you to intelligently observe what is going on; and then, if things have gone wrong, you can make your correction before bony union becomes too firm to safely interfere.

The Treatment of Infantile Paralysis: With Special Reference to Second Stage.

By S. H. MONELL, M.D.,
216 W. 105th St.,
NEW YORK CITY.

A recent article by Dr. Robert W. Lovett, Professor of Orthopedic Surgery, Harvard University, and Surgeon to the Children's Hospital, Boston, on this disease, has been given such wide publicity by the State Department of Health and by the *Bulletin of the Health Department of New York City*, that his views seem to call for discussion, lest too ready acceptance of them *en masse* mislead the profession and work injury to the prospects of patients.

When the acute condition subsides and treatment for the convalescent period is vitally important to the prognosis, Dr. Lovett discusses four measures, to wit: Massage, heat, muscle training and electricity. Out of his great opportunities for observation he concludes that massage "does not promote the transmission of impulses from brain to muscle, and its action seems wholly local." He accords it a minor value. Heat promotes the circulation. Muscle training is the treatment of election. Dr. Lovett praises it highly, nor do we differ from him in the conclusions stated in respect to these three measures of treatment of the convalescing case.

But when he speaks of electricity it is necessary to consider the basis of his personal views. Many years ago the elder Sayre, under whose teachings it was our privilege to sit, was always positive, insistent and urgent of the benefits of proper electrical treatment, patiently and cautiously applied and long continued if the muscles gave any response at all. He was particularly impressive on this subject, and although the writer was but little interested at the time the impression made by Dr. Sayre's clinics has outlived many other features of our college course. On the other hand Dr. Lovett declares: "The use of faradic electricity gives such a mild form of muscular exercise as will cause muscles to contract which will not do so voluntarily, and apparently does nothing more; and galvanic electricity and the newer currents are supposed in some mysterious way to do good, but in experience of many years with and without electricity used in all forms and under many conditions of control, the writer has never been able to satisfy himself that it was of any use whatever in any given case. There is no possible objection to its use if strong currents are not used, provided the other measures of proved usefulness are also employed. But electricity has done an indefinite

amount of harm in this disease because it has deluded the parents, and often the physician, into thinking that the patient was being adequately treated by that alone, while serious deformities were developing and valuable time being lost."

A Difference of Opinion.

Here is a difference of opinion so great as to call for explanation, if there is one; for science seeks the truth. Would so candid a man as Dr. Lewis A. Sayre teach his class for years to use electricity in the paralysis of poliomyelitis if he had not seen results? With equal honesty we have the statement of Dr. Lovett in absolute contradiction. In the hope of rendering a service to Dr. Lovett himself and to the numerous following who will take his word without question, we shall attempt to show why both these men were right, according to their "experience." The lesson can be taken home by every reader of this journal. What we must say to throw light on the disputed point is not said in carping criticism, but in a spirit of help to colleagues who want the facts for guidance. So here we relate what has met our own eyes in just such clinics as those under Dr. Lovett.

Shocking Lack of Knowledge.

A child was put on a table. The clinic nurse was supposed to apply a combined galvanic-faradic current to set up muscular contractions. She took two disc electrodes, wrapped a layer of fresh gauze over each, dipped them in plain cold water, turned on the current, put the electrodes somewhere on the leg and looked into space. On inspection we noted that the galvanic meter was broken and that the faradic vibrator was not in action, and the nurse did not know which pole was positive or which negative. At an indifferent time she casually took up an electrode and put it down somewhere else. A second nurse in the same large orthopedic clinic was doing the same thing.

In another large clinic the nurse was using a galvanic current on a child's arm. The electrodes were wet with plain cold water. The palm of the child's hand was laid on a wet pad electrode and a disc electrode wrapped with two layers of gauze was stroked up and down the arm with no reference to contact, dosage of current or action set up. A child was next treated with a faradic current. The electrode was stroked up and down, often a mere edge contact, no pressure exerted, no regard to dosage, yet the child was supposed to be getting the benefit of scientific treatment under a specialist of standing in charge of the clinic.

Bluffing at Treatment.

In still another clinic of the highest class in

this city a patient was having a sinusoidal current applied to paralyzed muscles of the leg. The current used was a maximum tolerance with the entire area of the electrode in flat contact. Then, without in any way altering the current strength, the electrode was lifted, stroked, and moved over the surface while muscles were being "jerked" far beyond their elastic contractility.

Hurt by Such Treatment.

It is not necessary to say more of the work done daily in leading clinics and perhaps in many private offices following the same examples. If Dr. Lovett has suffered from similar methods in the clinics under his observation, we believe that he has never seen good result from methods so wholly unfortunate and bad. Moreover, these patients were being hurt by the treatment—it caused decided pain. We have in the past pointed out the relation of pressure, resistance, and rate of change to the art of electrical technique and the production of results by treatment. We have taught the importance of even and full contact, of correct dosage, of proper manipulation of the movable electrode, and have over and over again emphasized the cardinal rule—never to hurt a patient. A current that is unregulated in action is no part of scientific therapeutics. Enforced jerks that disregard the law of elastic muscular contractions will not benefit the paralytic patient. Nor is a thin layer of gauze wet in cold water and a carelessly held disc and a nurse gazing absentmindedly into space a combination that makes for the child's recovery.

Skilled Methods.

With due courtesy, may we ask what methods of treatment form the basis of Dr. Lovett's experience before we accept his conclusion that "electricity in all forms and under many conditions of control is of no use whatever in any given case"? It would be grievous if that were true; but fortunately for the vast army of new sufferers from paralysis, there are quite different methods known and practiced by those who know them. For our personal experience agrees with that of Dr. Sayre, that if the cold limb be warmed, the nutrition of the parts promoted and the muscles given the elastic contractions that leave them rested and refreshed, not only will benefit result from the use of electricity, but the patient will not be hurt by the administration. While every measure that will aid nature must be used in treatment, we look in vain for any efficient substitute for "skilfully" employed electric currents, and hope that in due time no methods save *skilled* methods will be employed anywhere—*really* skilled methods.

Epilepsy: Neither a Germ Disease Nor Communicable.

By WM. HELD, M.D.,
Marshall Field Annex,
CHICAGO, ILL.

The purpose of this paper is to relieve the minds of those who, interested in epileptics, have been alarmed by the statements of a Cincinnati physician, Dr. C. A. L. Reed, to the effect that epilepsy is due to a germ (which he discovered, or thought he did) and that the disease is communicable by contact with the patient's blood.

Dangerous Suggestion.

If the belief in the communicability of epilepsy were allowed to continue, people would witness an attack with still greater horror and terror than is the case now; epileptics would be shunned like lepers and left to their own misery without anyone daring to extend a helping hand. It is a most dangerous suggestion, which thus was instilled into the minds of the many thousands who either directly or indirectly are concerned with epileptics, and the more deplorable as it is without scientific basis. Those who have a clear insight into the unhappy conditions existing in the home where an epileptic lives will hardly believe it possible that any new woe could be added to the cup of sorrow already overflowing. Closer examination of the facts underlying the epileptic problem should be helpful.

The epileptic is more unfortunate, more pitiable, more tragic, if possible, than even the madman. His condition is of more urgent general interest, inasmuch as he is at large and frequently seen in the convulsive attacks. The epileptic, occupying as he does an intermediate place between the sane and the insane, realizes keenly his hopeless condition, whereas the man who is really insane is spared the mental agony of this realization.

The Life of the Epileptic.

The epileptic lives a life of fear and apprehension, knowing that he may be seized with an attack at any moment. So, while he is often apparently well and capable of performing work, nevertheless he is in reality barred from enjoying a normal life. His friends and family do not trust him, nor does he trust himself.

It is a most difficult task to secure attendants who are willing to live with an epileptic for any length of time and no high wages can procure

loyal and loving service for the patient. The only unselfish and devoted attention to an epileptic is given by his mother. Only a mother is willing, year in and year out, to enslave herself, to regulate her household, and to subordinate her interest and convenience to the needs of an epileptic child.

This devotion of the mother, however, is too often unappreciated. This ingratitude is due, of course, to the abnormal mental condition of the patient, which gives rise to all sorts of whims, idiosyncrasies and peculiarities. He receives all kindness and accepts all sacrifices in a domineering spirit; he resents close surveillance, and is often abusive.

Sedatives and Epilepsy.

Sedatives, used in the so-called "treatment" of epilepsy, are greatly responsible for the transformation in the patient's behavior, the estrangement and abnormalities. I have, in former articles on the subject of epilepsy, suggested that those who doubt this statement visit asylums for the insane throughout the country and behold the thousands of epileptic insane. Investigate their history and it will be found that bromide brutalization has played the heavy rôle in their tragedy.

Look over the legion of the lost, and you wonder where are the doctors who have treated these creatures, who have encouraged them with worthless pet theories, new methods, with pathies, with drugs, fads and surgery.

I should like to see the array of medical men who have fed bromide to these patients; the bulk of bromide consumed, the amount of money wasted, the tears and heartaches, and the trepidation of those who loved the patients; I should like to see all these elements represented in some way, and then put them in opposition to the results obtained—the insane epileptic behind the walls of the asylum—the living dead. Then I would ask the bromide-prescribing physician of today to view and behold his work, and I should ask him whether such abundant, such crying proof of failure were not reason enough to persuade him to discard his "remedy."

Communicability.

The communicability of epilepsy by contact with the patient's blood is a myth; it has been positively disproved by the exact methods of the laboratory.

The germ theory heralded by the Cincinnati doctor as a new discovery and widely published by the lay press is a matter of history and recognized by epileptographers as an old acquaintance of about twenty years ago.

To be more explicit: In 1902 the French investigator Bra described a germ which he isolated from the blood of some epileptics. Bra was fair enough to give credit to a co-worker, who five years previous to his own work had called attention to this germ theory. The germ described by the Cincinnati doctor is in every respect the identical organism isolated, depicted and described by Bra these many years ago.

Epileptographers who for many years prior to Bra have ardently studied the problem of epilepsy and who have kept a steady finger on the pulse of epileptic research, when learning of Bra's work, did not fail to thoroughly investigate the apparent discovery, taking up every phase of the subject in an attempt to connect their own experience with the findings of Bra and perhaps therefrom to deduce some practicable value. Years of labor on the part of the most experienced laboratory talent has utterly failed to adduce any therapeutic value from the germ findings, and further research established the non-existence of a specific germ of epilepsy.

A Re-discovered Germ.

But here is the germ, and what are you going to do about it? I hear some ask. Our knowledge of the nature of epilepsy has been gained through actual experience with epileptics and laboratory research of many years' duration.

Based upon these qualifications (to which I could add others), let me explain, we have stated in various medical journals that epilepsy is a toxemia, the toxins circulating in the patient's blood, bathing the brain centers until they produce the epileptic convulsions. The blood of the epileptic absorbs and stores up toxic material until sufficient to produce the well-known symptoms. The first essential condition of epilepsy is a unique characteristic of the epileptic's blood whereby it absorbs toxins derived from food and waste products and from other sources of infection present in the patient.

In the normal, non-epileptic individual this peculiar pathological characteristic does not exist, and the blood eliminates foreign matter. The mechanism incidental to a normal metabolism causes unhealthy material to be finally disposed of as waste. The perverted metabolism upon which the toxin-attractive, storing, and retaining faculties of the epileptic's blood depend, can not be engrafted, hence epilepsy is not communicated to others.

The blood of the healthy animal possesses protective faculties in the presence of which epilepsy can not permanently be engrafted.

The Blood of the Epileptic.

When the blood serum of an epileptic is injected into a healthy rabbit, and more of such serum subdurally injected, the rabbit will develop convulsions which, while due to the injected material, are nevertheless not true epileptic seizures, but *only epileptoid*, the distinguishing feature being the fact that the convulsions are the bringing out of an artificially produced condition. The animal does not acquire epilepsy and the attack will not last beyond the degree of toxicity of the injected material, another injection being necessary to repeat the attack. Failure to permanently engraft epilepsy on the animal is due to the absence of the blood's characteristic affinity for toxins. This affinity, which we have termed "epilepto-attractive principle," endows the epileptic's blood with a ferment which we have isolated.

The Ferment.

Contrary to germ-induced disease, this ferment has no harmful influence upon the non-epileptic and does not possess the power to multiply and establish itself in the system of the non-epileptic, from whence it is promptly eliminated.

In order to prove that epilepsy is caused by the presence of this ferment in the patient's blood, and not by a germ, we performed countless laboratory experiments for the past sixteen years. The results are clear and may be epitomized as follows:

The intestines are known to be laden with millions of germs, most of them harmless (perhaps due to acquired tolerance on our part), of which Metchnikoff, I believe, has isolated several thousand varieties.

The germs which have been found in the blood of some epileptics and erroneously taken for the specific germ of epilepsy, appear to be one of the thousand varieties of intestinal bacilli always present in the alimentary canal.

Due to the mentioned "epilepto-attractive principle" of the blood, a principle which exercises no discrimination in selecting filthy material, germs may be seized upon in the same manner as other toxic material and thus appear in the blood stream. They are not the cause of epilepsy but are an incident therein.

Bacteria in the Blood.

A fair illustration of the manner and the effect of germs gaining entrance into the blood under the influence of a disturbed metabolism, is afforded by the history of typhoid fever. Ordinarily this germ has its habitat in the intestines,

where it, as a colon bacillus, is most abundantly present. But when these germs to any appreciable extent find access to the blood, we meet the well-known "epileptic state" of typhoid. Here we have epileptic convulsions in a non-epileptic patient who, true to the principles championed by us, does not acquire epilepsy but recovers with the elimination of the toxic matter. Who would call the typhoid germ the specific cause of epilepsy merely because of the co-existence of attacks and the presence of the typhoid germ? And no better is the justification with which other germs have been credited with being the specific cause of epilepsy; thus far no such organism having been isolated. We have still other proof:

Bacteria and Toxins.

It is universally known that disease germs, in their active state, that is, alive and viable, are capable of producing the disease for which such germs are responsible. For instance, would the injection of live tubercle bacilli in man under favorable conditions produce tuberculosis? If, however, a solution of inactivated, dead, bacilli

were injected, the disease will not be communicated.

Proceeding upon these elementary principles of bacteriology, we have treated solutions of epileptic's blood-serum, producing an absolutely germ-free, sterile solution, one which contained no germs capable of producing epilepsy or any other disease. Nevertheless, this fluid contained the *toxic ferment* which produces epilepsy. Upon injection of this fluid into properly prepared animals we were able to induce epileptoid attacks at will—thereby proving that the responsible element of epilepsy is not a specific germ, but a toxin derived from the uneliminated poisons of the patient's economy. Similarly prepared serum from blood of non-epileptic persons failed to cause the convulsive symptoms.

In the hope that the foregoing material will suffice to enable the alarmed epileptics and their friends to emerge from the cloud of fear that has been cast over them by the announcement of the communicability of epilepsy, these lines are presented.

Milk and Its Relation to Infant Mortality.

By E. L. PEDERSEN,

From the Department of Chemistry, Colgate University, Hamilton, N. Y.

The awakening of the world to a consciousness of the immense sacrifice of infant life is recent; most of this awakening has come during the past twenty years. Two babes of every ten die in our great cities, and the world, filled with the rush of our modern age, scarcely gives a thought to this fearful winnowing. Infant deaths under one year at the present time amount to 20 to 25 per cent. of the total deaths in all civilized nations, and it is estimated that from 50 to 75 per cent. of these deaths are preventable.

The Source of Danger.

Diseases of the digestive system cause 4 per cent. of the deaths in many cities. Not only that, but deaths from other causes are rated as complicated by diseases of this class. No small number of these might well be added to the direct column wherein occur the greatest percentage of mortality. That points to one thing as a source of danger, the food supply. Cow's milk is the exclusive food of a great majority of our children up to the time that they are one year old. It is the chief food of practically all children from the age of one to the age of five. The

inference is obvious. Milk is responsible for more sickness and deaths than perhaps all other foods combined. There are several reasons for this: (1) bacteria thrive well in milk, in fact milk is one of the best culture mediums obtainable, therefore a very slight infection may produce widespread and serious results; (2) of all food-stuffs milk is the most difficult to obtain, handle, transport, and deliver in a clean, fresh, and satisfactory condition; (3) it is the most readily decomposable of all our foods; (4) finally, milk is the only standard article of diet obtained from the animal sources consumed in its raw state. If it were possible to supply the infants directly from clean, healthy animals, in which the milk would be practically sterile, these dangers would become practically nil. But the danger from milk increases every hour after it leaves the creature which produces it, unless preventive measures are taken to turn it over to the consumer in the same state in which it comes from the healthy animal.

The Bacterial Content

We may divide the bacteria existing in milk into three great classes: (1) the acid-producing bacteria, (2) the putrefactive bacteria, and (3) the disease germs proper, or the pathogenic bacteria.

Under the first class, the acid-producing bacteria, we have those which cause the souring of milk. In this case the lactic acid bacteria have worked upon some of the constituents of the milk and have changed a part of them over into lactic acid. This type of bacillus is commonly harmless but it indicates that the other types of bacteria, which are perhaps productive of disease, are also growing.

The putrefactive bacteria do not as a class belong in milk, but to be present must be introduced there from filth or outside refuse. This is the class of bacteria most dangerous to the child, since certain members of the group are the immediate cause of many of the serious digestive troubles of children. Once entered into the intestines, these bacteria produce putrefaction there with grave accompanying disturbances. Cholera infantum, long recognized as an acute milk-poisoning, comes from these dangerous visitors. Putrefactive bacteria, breaking up the constituents of the milk, may produce harmful end-products.

Pathogenic Organisms

The third class, the pathogenic bacteria, come in a way which is entirely preventable. They are the germs of contagious diseases, the bacilli which cause typhoid, diphtheria and cholera. They get into the milk from mothers who are ill, infected cattle, milkers or handlers who are suffering from mild forms of disease, from persons who have been in contact with sufferers from such troubles, or else from deliberate or careless adulteration with a germ-infected water supply.

Dilution and Adulteration

Responsible as man may be for carelessness which allows the growth of dangerous bacteria, he is even more directly responsible when he deliberately adds water for purposes of gain, or skims off cream from milk which is to be sold as whole milk. In either case the percentage of fat is cut down, and a constituent is removed which is needed not only for purposes of nutrition, but also for the energy which keeps our body-engine running. Thence comes a direct weakening of the resistant power and of the capacity of assimilation. Adulterated milk is so defective in fat and non-fatty solids that a child at six months, whose weight should increase four ounces weekly, suffers each week a loss in diet of three and one-half ounces of fat and non-fatty solids when its ration of fraudulently manipulated cow's milk is based on the supposition that the milk is of standard quality. Such low standard milk tends to produce marasmus and rickets. Marasmic children present a decided predisposition to bron-

chitis and summer diarrhea, and thus indirectly an increase of infant mortality is brought about by diluted or adulterated milk.

Causes of Infant Mortality

If we consider the causes of infant mortality we shall find that they are multiple and complex. The first and chief cause is infancy itself. This is the period in which the organism has the feeblest resistance, and in which all the energy of the body ought to be expended in the growth and upbuilding of the body. In general the fundamental causes of infant mortality are poverty, ignorance and neglect. As the direct result of poverty we have poor housing in overcrowded districts, vitiated air, the necessity for mothers to work late in their pregnancy and very soon after confinement, insufficient food for nursing mothers, improper food for children, deprivation of mother's milk, inability to escape from bad surroundings such as excessive heat in summer and cold in winter, and insufficient rest and recreation. Ignorance of the simple facts of hygiene and infant feeding is an immense factor which is quite as disastrous, if not more so in its consequences, than is the use of bad milk or improper food. Neglect may be due to intemperance or vice in the parent, but often is the result of poverty. The seeming carelessness among the wealthy classes when children are taken care of by nurses and do not come under the direct control of the mother may be considered as another factor.

Artificial Feeding

One of the overshadowing factors in infant mortality is artificial feeding. This is not successful unless carried out with intelligence and, at the same time, with a certain amount of money to secure reliable milk and skilled assistants to carry out the teachings of modern science. Breast feeding requires very little experience and may be done successfully by those who are of a low grade of intelligence and among the poor. Breast milk is the cheapest, cleanest, and freshest and best food for babies. An infant raised on cow's milk has from 4 to 10 chances to die to one of those fed on mother's milk. This is partly due to the composition of the cow's milk but mostly to the bacteria and the bacteria products. It is not the cow or the board of health, nor the milk inspector, nor the dairyman, who is most concerned, or who has the greatest power in preventing the great infant mortality, but the mother.

If we were to make a study of the differences between cow's milk and woman's milk, we might make the following table:

WOMAN'S MILK DIRECTLY FROM BREAST

Reaction, amphoteric (more alkaline than acid)
 Water, 87-88%
 Mineral matter, .2%
 Total solids, 13-12%
 Fats, 4% (relatively poor in volatile glycerids)
 Milk Sugar, 7%
 Proteids, 1.5%
 Caseinogen, 1/3-1/2 of total proteids
 Whey-products, 2/3-1/2
 Coagulable proteids, small proportionately
 Coagulation of proteids by acids and salts, with greater difficulty. Curds small and flocculent.
 Coagulation of proteids by rennet, does not coagulate readily.
 Action of gastric juice; proteids precipitated but easily dissolved in excess of gastric juice.

COW'S MILK, FRESHLY MILKED

Amphoteric (more acid than alkaline)
 86-87%
 .7%
 14-13%
 4% (relatively rich in volatile glycerids)
 4.75%
 3.5%
 2.66%
 .84%
 Large proportionately
 With less difficulty. Curds large and tenacious.
 Coagulates readily.
 Proteids precipitated but dissolved less readily.

Cow's vs. Mother's Milk

The differences between these two milks is greater than the table indicates. While cow's milk may be modified to approximate woman's milk in composition, it can never be just the same or just as good for infants.

Cow's milk is more opaque than woman's milk, although the latter may contain a larger percentage of fat. This is due to the opacity of the calcium-casein, which is present in greater proportion in cow's milk. Cow's milk is faintly acid or amphoteric when freshly drawn but ordinarily is distinctly acid in reaction when consumed. Woman's milk is amphoteric or alkaline.

There are three times as much protein in cow's milk as in woman's. The reason for this is obvious when we recall that the ratio of the growth of the calf to that of the infant is about as two to one. Furthermore, the protein in cow's milk consists chiefly of casein (3.02%) and a little lactalbumin (.53%), while woman's milk contains .59% casein and 1.23% lactalbumin. The sugar in the two milks varies greatly in the amount but not in the kind. Cow's milk contains almost four times the amount of inorganic salts compared with woman's milk. Of more importance, the salts in cow's milk consist of Ca and Mg, while those in woman's milk consist mainly of K and Na bases. These differences have an important bearing upon infant metabolism. There is no great difference in the average amount of fat in the two milks; however, in both the fat is the most variable constituent. The curd from the cow's milk is usually tougher and in larger masses than that in woman's milk. This would cause the infant's stomach to be overtaxed in the breaking up of these masses. There are also differences between cow's milk and wom-

an's milk in the antibodies, ferments or enzymes, and leukocytes present.

Figures on Breast-Feeding

In Norway and Scotland, where suckling of infants is the rule, out of 100 children born, 10.4 for Norway and 11.9 for Scotland die, whereas in Wurtemberg, where mothers as a rule are not in the habit of suckling their infants, 35.4% perish in the first year of life. It was found in Brighton, England, that, taking the whole of the first year of life, the number of deaths from epidemic diarrhea among breast-fed babies is not much more than 1/10 the number among artificially-fed infants. Where it is absolutely necessary to feed babies artificially, pasteurized or sterilized milk should be used, preferably the former.

One investigator, Harrington, points out that infant mortality is a class mortality, highest as a rule in cities and towns where women work in industrial establishments and put their children early to the bottle. When it comes to the battle for life the breast-fed infants have a far greater chance for victory than do the bottle-fed infants.

Causes of Mortality

From statistics showing the chief causes of death during the first year of life it has been found that diarrheal diseases are so important that they practically control the curve of infant mortality. These are all grouped under the familiar term "summer complaints." One of the most striking facts about the curve is its seasonal prevalence. The great bulk of the slaughter occurs during the heated term of the summer. The reasons for this are the depressing effect of the heat itself, the activity of the bacteria, and a complication of other factors which influence

the delicate mucous membrane of the baby's stomach and intestines.

Milk Preservatives

Sometimes preservatives, such as boron compounds, formalin, salicylic and benzoic acids, etc., are added to the milk, and such preservatives are harmful. It has been discovered that drugs given to the mother may be excreted through the milk which goes to the infant, and this may be a serious source of danger. Such drugs as aspirin, iodine, calomel, ether, bromids and a long list of others have been found in excreted milk. The flavor of cow's milk is readily affected by turnips, garlic, wild onions, moldy

hay and grain, and damaged ensilage. Fermented distillery waste gives a bad flavor and may also cause the secretion of small quantities of alcohol in the milk. Cows in pastures sometimes feed on poisonous weeds, and these poisons may pass into the milk. Certain substances, as ensilage, when fed to cows, cause a laxative property to appear in the milk, and thus it is possible to affect the baby through the feed of the cow.

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Report of a Recovery from Profound Morphine Poisoning.

By HENRY BEATES, Jr., M.D.
206 S. Sixteenth St.,
PHILADELPHIA, PA.

Master G. O., age twelve, suffered from hypertrophy of the tonsils and "adenoids." The condition had evidently existed from infancy, as the palatal processes of the superior maxillæ showed. The vault of the aural cavity was of the sharp, Gothic type of arch, the result of interference by the tonsils with the growth and development of the involved structures. The pharyngeal orifices of the eustachian tubes had been sufficiently occluded to seriously interfere with their functions. The caliber of the eustachian tubes being thus narrowed prevented the normal vibrations of the membrana tympani and in this manner subtracted from the movements of the articulations of the aural ossicles. This resulted in a moderately diminished acuteness of hearing.

The operation was performed under narco-anesthesia, which consisted in the hypodermic injection into the deltoid region of the arm of one-sixth of a grain of morphin and one-fiftieth of a grain of scopolamine hydrobromide. One-half hour after the first injection a second was administered, and at the same time an eight-ounce enema of water containing two ounces of whisky and one ounce of spiritus ætheris compositus. One-half hour later, the usual time required under this method of anesthesia to be able to operate or give a third injection, the lad was not sufficiently narcotized. A few whiffs of ether were resorted to in order to secure abolition of the pharyngeal reflexes and an hypodermic of an eighth of a grain of morphin sulphate ordered. The operation was completed with such delay as usually attends a hemorrhagic condition. It was necessary to ligate some tonsillar branches of the descending palatine, external maxillary, ascending pharyngeal and dorsalis linguæ arteries.

About the time the operation was completed

there was marked embarrassment of respiration. Recognizing that some blood might have gotten into the larynx, the latter structure was swabbed out and found to be free. It soon became evident from the characteristic respiration that we had profound morphine poisoning. Artificial respiration secured an inspiratory effect only after many seconds had elapsed. It was impossible to cause a sufficiently rapid respiratory movement to overcome the rapidly increasing cyanosis and the apparently impending death. It was found that changing the child from the left to the right, and vice versa, would result in an inspiratory effort being excited. Following the attempts at artificial respiration two or three imperfect inspirations would, under these conditions, occur and result in a temporary lessening of the intensity of the cyanosis.

The Use of the Pulmotor.

After battling for more than an hour in this manner, and facing evident death, a pulmotor was brought into requisition. It failed because of the impossibility to raise the epiglottis from the glottis, notwithstanding the tongue, with the use of the lingual forceps, was drawn out to its fullest extent. The air would pass down the esophagus instead of the trachea. The difficulty here encountered was that the genio-hyoglossus was relatively so much shorter than the lingualis that sufficient traction to raise the epiglottis was impossible. A rubber tube was passed through the glottis in the hope that by this means the mask of the pulmotor could be successfully operated. This failed. By this time the radial pulses, which had been of good quality and regular, gave evidence of failing circulation, the rate became slow and irregular and the pulse small. Strychnine was administered hypodermically with the view of increasing the reflex sensitiveness and thus enabling the efforts at artificial respiration more certain.

It became evident that death was near. The index finger was introduced into the larynx and search made for the epiglottis, which, under these conditions, had lost its rigidity and was reduced to a mere flabby membrane and was so non-resistant that it was only after considerable care that it could be recognized by the sense of touch.

The finger was finally approximated to the laryngeal surface of the epiglottis and the latter so manipulated as to compress it against the dorsum of the base of the tongue. This rendered the larynx free. The presence of the hand prevented approximation of the pulmotor face mask, for evident reasons. It was, therefore, necessary to retain the epiglottis in the position described and resort to such tidal respiration as compression of the chest would render practicable. After many seconds of this manner of performing artificial respiration, there would be an occasional inspiratory effort. The slight quantity of fresh air which this tidal wave resulted in introducing into the lungs maintained the spark of life, and for three hours the treatment was uninterruptedly continued.

The toxic symptoms developed about 1 P. M. and it was 7.15 P. M. before spontaneous respiration manifested itself. As the morphin administered was consumed and reaction took place, the glottis, epiglottis and aryepiglottic folds began to become tense and the finger which had been holding the epiglottis in position for hours detected the return of reflexes because of the tonicity manifested by these ligaments. Thus, an hour from the time the reflexes began to spontaneously manifest themselves, respiration was normal and the lad conscious.

From the hours of compression of the epiglottis against the tongue, the latter structure was intensely swollen from the physical compression due to the interference with the venous circulation. This swelling rapidly subsided and on the following morning, with the exception of a sore tongue due to the use of the lingual forceps, which is objectionable at best, and the laceration of the fraenum lingualis caused by the endeavor to draw the tongue sufficiently far forward to elevate the epiglottis, the patient was feeling well.

A Suggestion.

The practical and interesting factors in this case consist: First, in the impracticability, in some cases at least, of drawing the tongue sufficiently far forward to elevate the epiglottis from the glottis; second, that the pulmotor face mask as generally constructed cannot be used because the finger and hand of the physician prevents approximation of the mask, which is essential for the introduction of air into the lungs; third, that in profound narcosis, and it is reasonable that the same condition exists in drowning cases, the epiglottic ligaments, because of the musculature concerned in their functions, are so relaxed that the epiglottis closes the glottis and prevents the

ingress of air, and fourth, in these cases it is essential that the epiglottis be raised by the finger and a pulmotor face mask so constructed that it may be made to fit both the face of the patient and the hand of the operator and thus supply an airtight chamber, so to speak, and render practicable the restoration of the reflexes of respiration by the volume of air which this instrument forces into the lungs.

In addition to the strychnine, there was administered caffeine and digalen; the caffeine to antidote the morphin and the digalen to maintain the myocardial functional activity. Hypodermoclysis or intravenous administration of normal salt solution should, in these cases, be resorted to.

The Induction of Labor at Term.

I have read with interest your review and comments, in the last issue of *THE COUNCIL*, of Dr. Reed's paper in *Surgery, Gynecology and Obstetrics*, on "The Induction of Labor at Term." I am free to confess that I am "lost in amazement" at the wonderful astuteness of the author, who is able to draw any kind of definite conclusions from *one hundred consecutive cases of labor*.

My study of labor statistics has extended over a period of more than forty years, and includes a personal attendance on more than twenty-six hundred cases, as found in a general practice, among a mixed population, largely foreign.

My statistical studies have been with three definite ends in view, viz., how to secure the largest number of live babies, how to confine maternal mortality to the lowest point, and how to effect delivery with the least injury to the mother. These are the three things which constitute successful obstetric practice.

If Dr. Reed's methods, which are said to "work in strict harmony with the principles of modern science," do not compare favorably in these three points with the results obtained by the crudest of "back country" methods, then the sooner the principles of modern science are revised and adjusted to a basis of common sense, the better for humanity and the credit of the profession.

Twenty-three forceps cases and seven dead babies in one hundred consecutive confinements is not a record to be proud of, and would be reckoned in the experience of a back-woods New England doctor only as a matter to be apologized for.

ROGER M. GRISWOLD, M.D.

Kensington, Conn.

Antitoxin a Misnomer.

In your May issue you had an editorial advocating large doses of antitoxin in cases of diphtheria, and while there is much in the article that I agree with, yet the results of my experience tend to lead me to view the treatment of diphtheria from a different point of view.

Your advocacy of the large doses of antitoxin

in diphtheria is based on the generally accepted belief that it is true to its name, and has a powerful effect on the toxine after it has been absorbed into the system, while I believe it is primarily an atoxin; that its action is preventive and not curative.

That it is an atoxin has been practically demonstrated to my satisfaction time and again, but I cannot say the same regarding any antitoxic action.

Diphtheria, to begin with, is a local affection caused when the specific bacilli find a footing on some mucous surface and under favorable conditions rapidly develops, producing the false membrane as an evidence of their growth, and as a consequence the secretion or formation of a substance or toxin which is rapidly absorbed, resulting in the train of morbid changes with which we are familiar.

The (anti) atoxin when injected into the system at once either acts as a direct poison or it so changes and alters the fluids of the body as to inhibit or prevent the growth of the specific bacilli.

The ultimate results of the serum treatment of diphtheria will depend largely on whether the profession believe it has a powerful antitoxic action and which will tend to procrastination and delay in its administration, since they will naturally reason that the toxins can be neutralized at any time by the injection of (anti) atoxin, while if they believe it almost wholly prohibitive or atoxic in its action, immediate injection will follow.

My plan of action has been to administer at once an adequate dose in any case, even if only the least bit suspicious, and not to await the result of a culture or definite diagnosis, but to act on the "safety first" principle. If the report from the culture is positive, you will have aborted the attack, while if negative there will be absolutely no harm done.

If such a course were generally followed, complications and the mortality rate would be immensely reduced.

In the early days of the introduction of the diphtheria (anti) atoxin there were many skeptics amongst the profession, and maybe not a few yet exist; but if so, it is due to the failure to give (anti) atoxin early enough; otherwise the results would be so promptly convincing there could be no room for doubt. The complications and deaths resulting after late injections having very wrongfully been attributed to the (anti) atoxin instead of to the toxin allowed to be produced and absorbed.

As for dosage, I have never failed to immunize with 500 units and to abort or arrest the further progress of the attack with 1,000 and never to exceed 2,000 units if good, fresh (anti) atoxin is used.

A. B. CHAMBERS, M.B., C.M.

Black Creek, Ontario, Canada.

The Treatment of Pellagra.

I have argued for eight years that pellagra is an intestinal affection, and have used the following treatment without losing a case: Saturated solution potassium iodide, 3 ounces; mercury bichloride, 6 grains; syr. sarsaparilla, q. s. to make 4 ounces. Dissolve the bichloride in water and add gradually the solution of iodide, agitating the mixture, and finally adding the syrup. Dose: One-half teaspoonful in water after meals for the first two or three days, and then a full teaspoonful. I employ forced feeding, recommend moderate exercises and keep the patient in the fresh air. Keep the bowels open with Epsom salts.

Symptoms rapidly clear up under this treatment, and none who kept up the treatment during the spring months for the next two years have had a recurrence. But one patient was made ill by this large dose of bichloride.

J. SIDNEY EASON, M.D.

Coldwater, Miss.

As bichlorid is not very soluble in water, the Doctor probably means to add the 6 grains bichlorid to a fluidrachm or so of water, and cut it with the potassium iodide solution.—Ed.

Dr. Weaver and Pneumonia.

In the depressive stage of pneumonia a hot bath is contraindicated, as it increases the severity of the reactive stage. What we must do is control the heart and circulation. Venesection helps in a plethoric person because it at once relieves the congested lungs and improves blood aëration. Dr. Weaver recommends iron. True, iron may carry oxygen; but the percentage of oxygen in iron is poverty itself compared with the oxygen necessities of the blood, and giving it is trifling while the lungs are being choked and burned with fever. We have a grave *physical* condition that must be met, and stimulation does it no good. The blood is loaded with toxins; the natural sewers are closed, and there is a lack of oxygenated blood.

Aconite and gelsemium will relieve these conditions, if judiciously given in moderate dosage and stopped when they have done their work, which is to control the circulation, and it is accomplished in from four to six days and begins to be accomplished within twenty-hour hours. Relieve the vascular tension and reduce fever, and the whole secretory and excretory system resumes function, throwing off the toxins. Soon as relief appears, reduce dosage. Beyond an initial cleansing, leave the bowels alone, in the average case. Feeding the patient crushed ice will give relief to fever.

S. E. McCULLY, M.D.

Rock Island, Texas.

<p><i>While we, as physicians, desire to be scientific students and practitioners of medicine, and that is the primary purpose for which this journal is published;</i></p>	<h2 style="margin: 0;">THE BUSINESS SIDE</h2> <p style="margin: 0;"><i>of Medical Practice</i></p> <p style="margin: 0;">"The laborer is worthy of his hire."</p>	<p><i>yet, for the welfare of our dependent ones and our standing in the community, we must secure a fair compensation for the services we render our fellowmen.</i></p>
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The Medical Side of Business.

THE LAWYER has been frankly allied with business, and business is absorbing the legal profession. Medicine is being more and more allied with business. Will business absorb the medical profession?

Property, contract and commercial law formerly afforded much work for the lawyer in private practice; but industrial and commercial combinations have largely taken this business out of his hands. The national bankruptcy act has eliminated a large volume of general commercial legal business. Trust companies, title guaranty companies, banks, and corporations are administering estates, preparing wills, contracts, deeds of conveyance, and are acting as trustee, executor and guardian; and the erstwhile private attorney is now clerking for them. The dissatisfaction with existing law and its administration has led to distrust of the lawyer, and there is a very marked tendency to avoid litigation; and administrative and quasi-judicial tribunals and commissions—public utilities, workmen's compensation, interstate commerce, and trade commissions—are doing the work of the lawyer.

Tradition and Empiricism.

The reasons are apparent. Precedent and tradition in law are essentially the same as empiricism in medicine. Both have fallen down under modern conditions. Individualism is giving way to collectivism in civilization, business, law and medicine. The lawyer has legislated more than any other class of our citizenship, and he has played directly into the hands of the business interests in doing so; and now he finds he has acted against his individual interests. The political lawyer is a separate class in the legal fraternity, and his influence has been cast in favor of the business interests paying him and against his professional brothers in private practice. The bulk of lawyers have been poorly prepared, and the better educated and endowed men have gone into corporation law, have served as advisers to trust companies, public commissions, etc., and they are out of touch with private legal business, which no longer appeals to them.

And it must be admitted that modern tendencies in law are directly in the interest of the people at large. The lawyer, like the doctor, has been destroying his own business in the interest of a large constituency.

Conservation and Production.

Old Japanese civilization, next to the soldier, gave precedence first to the farmer, then to the artisan and skilled worker, and last of all to the non-producers, the merchant and professional and working class. We have reversed the order; but are rapidly accepting the oriental point of view, but with the difference that we are demanding that *all* classes be conservers and producers. "The foolishness of preaching" is becoming but a small part of the service of the clergyman, destructive litigation a minor portion of the work of the lawyer, and taking the edge off of pain the least important of the physician's duties. Conservation and production are the watchword of the hour, and a mere professionalism is no longer desired or promoted by the people. A profession that will not promote the conservation of the national and social interests; that will not do its part in production, is doomed to extinction. Business has learned this lesson first: that is why it is dominating law and *may* dominate medicine. In the United States our most keen and able men, the larger proportion of our educated class of young men and women, have entered business. These people have seen the tendencies of the age; and they are fully keyed up to conservation and production. They demand that the professions see the same tendencies and be governed thereby; and if they fail to see them, business is destined to take their prerogatives out of their hands and make the technically trained lawyer and doctor work for wages under business direction. The legal profession has been blind, and it will be years before a new and better class of lawyers will take the old place of private attorney at law.

Is Medicine Awake?

Yes, partly so. Our brightest men, the ones most trained in the conservation of national and

social interest by means of preventive medicine, the ones best serving society, business and productive industry by efficient service that limits the mortality from morbidity and saves the greatest number of workmen from being cripples, these men *are awake* to the need for conservation and production as a public and private service in the work of the physician and surgeon. From their efforts have come the modern hospitals, the boards of health, the army, navy and other government medical services, the "safety first" and "first aid" of the big corporations, the care of the insane and other defectives, mosquito control, and the thousand and one factors in which medicine may serve the nation and its citizens.

We Should Take the Initiative.

There is no tendency on the part of intelligent business to dominate medicine if the medical profession itself does what is expected of it. It is not from intelligent and constructive business that a wide-awake profession need fear dominion, but from back-alley business that promotes fake medicines, keeps alive low-grade so-called medical schools, that publishes patent medicine almanacs under the name of medical journals, and that finances the Chiropractics and other self-seeking cults that are doing so much to trail the medical banner in the mire.

We say a wide-awake profession need not fear dominion by business men. But we must *keep* awake and grasp the business point of view that demands conservation and production on the part of the medical profession. If we produce big men capable of dominating hospitals, the hospitals will be medically dominated; if we produce sanitarians of executive capacity and business breadth of vision, medicine will dominate public health work; if we produce men of capacity for army and navy work in its broad aspects and not merely its petty technic, medical officers will not be dominated by the lay officers; if we produce men big and far-seeing enough to manage corporation medical interests, these interests will be medically managed: but if we put business blinders on our medical graduates; if we exalt a punk old empiricism because we hate to see a lot of inert or poorly-acting drugs eliminated; if we make mere scholars of our new graduates; if we depend upon ancient prerogative and professional precedence to see us through; if we try to make of ourselves "a thing apart;" if we adopt the "holier than thou" attitude; if we glory in our medievalism—then we will deserve just what we will get.

Peasant-stand Independence.

In getting awake to the medical side of business, we must avoid the petty idea of dropping all

ethics and professionalism and adopting the ideals of the corner cigar store. Rather should we look for wise and capable guidance from the big-visioned men in the profession, from the right kind of medical organizations, and from a medical press that is freed from all petty commercial blight and can look big questions in the face.

What Is To Become of the General Practitioner?

By FREDERICK D. KEPPEL, M.D.,
CAZENOVIA, N. Y.

I have a little girl who can't seem to get her arithmetic without the assistance of her voice as well as of pencil and paper. She has never been corrected for this fault because her dad can't think without banging a typewriter, and he has in addition the vicious habit of wishing what he thinks he has reasoned out onto an unsuspecting public.

The burden of this spasm is the position of the general practitioner or family doctor, who, we are informed, is having his last days on earth and will soon join the pterodactyl and dodo as extinct species of animal life.

It has been said so often it ought to be true, that the specialist is crowding the general practitioner off the map. Possibly this statement of the case is correct, but one who is still in general work, although looking with longing eyes toward special lines, may be allowed the privilege of expressing doubt as to its truth.

A general practitioner or family physician is one whom the household is in the habit of consulting in case of illness or accident. It is his duty to use reasonable care in diagnosing disease, to relieve suffering and if possible to carry the case to a successful termination. When the family physicians have all gone to their reward, just who will advise the patient and his friends which specialist to employ in case of need?

See "Mr. Foster" for a Reservation.

We may in time have a "nickel in the slot" arrangement which will look at the tongue, feel the pulse, inquire into the activity of the bowels, examine the urine and finally pass out a card with the name and address of the proper specialist printed upon it; but that day has not yet arrived, and we have not been informed that any one is even working upon such a machine. Until the wonderful mechanical diagnostician is invented it would seem that we will have to worry along in the old-fashioned way, now and then calling in the reliable family doctor to advise about matters and things.

Is there any good and sufficient reason why the family physician should be superseded? What has he done or left undone which causes a general demand that he be put to death? We have no intention to attempt a defense of the fellow who got his diploma from God-knows-where, or for him who learned all that was necessary in college and finds no further use for books or society meetings. This class is a disgrace to the profession and a menace to the public. We do, however, wish to know why the honorable man who has done his best to fill his finite head with an infinite amount of knowledge and has served his patients to the best of his ability should be kicked out of his place of honor and service.

Glorified Mistakes.

In a practice of nearly twenty years, mostly spent in close proximity to specialists in practically all lines, I have never heard a single patient suggest that he would have been better served had there been no family physicians. Of course there have been the usual criticisms in regard to my own and other practitioners' mistakes, but I believe they have referred to the specialist as often as to the general man.

The general practitioner is the only man in the community who is ready to answer calls at all hours of the day or night: he is in the harness from the time he gets his license until the Angel of Death touches him gently and says: Come! The question is not so much what is to become of the general practitioner as what is to become of the rest of us if he should take it into his head to depart?

The general practitioner, as his name implies, is one who has a general knowledge of medicine and is qualified to diagnose and treat the general run of human ailments. He does not profess to know it all on any subject, and yet he manages to kick a goal about as frequently as his better versed brothers.

Who do you suppose it was who started all this talk about the family physician folding up his tent and stealing away to parts unknown? Well, I don't know exactly, but I have a suspicion that the report might be traced to certain so-called specialists who are not well enough versed in their chosen lines to demand and obtain the support of men in a more general line of work.

The Specialist, Real and Alleged.

No one with sense enough to hold the doctor's automobile would wish to be understood as trying to belittle the work of the specialist. Most of these gentlemen are conscientious, hard-working physicians; but they have a "fly" in their ointment as well as the general practitioner class.

The specialist's "fly" is the "fly guy" whose skull is empty of everything except a few dried nerve cells which rattle like coal going down a chute every time he wiggles his neck muscles. All medical classes are pestered with this sort of hangers-on.

As a general rule the doctor is a man who minds his own business, goes about doing good and is very prone to forget to tell his left hand about the charitable acts the right hand has done. He is also modest and retiring and this gives a beautiful opening for the chap who wants to blow his own horn. Which one of us has not at some time fallen into the hands of one of these "know it all" and "much holier than thou" consultants?

Behind the Scenes on Life's Stage.

Years ago I went to a circus and was greatly impressed when a little girl danced into the ring and began to boss a full grown elephant around. She made that elephant do the most ridiculous things, things which no self-respecting elephant should do. Once the old fellow protested and the girl walked right up to him and stuck a barb into his side. He switched his tail, let out a thundering bellow and then climbed up on the tub as at first directed. At the finish, insult was added to injury when he was made to carry the small despot, seated on his curled trunk, while she waved and bowed to the applauding multitude.

That girl and her elephant persist in popping up from the memories of the past whenever I am so unlucky as to get mixed up with one of these bombastic demi-gods of specialdom. You all know him, the chap who looks at you as if you were a caterpillar that by mistake has crawled onto his carpet; who takes charge of your patient with an air which says as plain as you please that *now* the poor invalid has arrived at the right spot in the universe and is about to be examined and treated as he should be. The great man generally ends by writing out directions for future treatment on a sheet of engraved letter paper and either handing it to the attending physician or, still better, sending it in an unsealed envelope by the patient. Ye gods and little fishes! If these men really knew the impression they make upon the average general practitioner they sure would stand before a mirror and get a first hand size up!

Time to Buck Up.

The theory that the family physician is passing is not only wrong but it is also the silliest nonsense. These men have the whole case in their hands, and if they should so much as hint, collectively, that they were about to assert their rights, the little fellow who has been shining his shoes to attend the funeral of the general man in

medicine would suddenly discover a very pressing engagement around the nearest corner.

The family physician is called to see a patient, and he prescribes a dose of castor oil. The patient does not like it but he takes his medicine just the same; or the physician selects a knife with which he proposes to cut into the living flesh. The sufferer certainly does not admire the idea, but he submits to it with the best grace possible. Now suppose the physician discovers that his patient requires one more highly skilled in the healing art and prescribes a specialist. Is not that specialist as much the prescription of the attending physician as is the castor oil or the lancet? The title which he gives himself and the fact that he has brought his patient to another man are both evidence that the general practitioner considers himself less qualified to treat the case than is the specialist to whom he applies; nevertheless, the attending physician should continue to be chief in the case, and any specialist who by word or deed discredits or under-rates him is showing poor professional courtesy and worse business judgment.

Needed: The Well-Trained Specialist.

The well-trained specialist is a badly needed individual, and if he fills his unique position honestly he will have no time to think about usurping the position of chief medical adviser from his colleague in general practice. The family physician is in no more danger of losing his job today than he was a hundred years ago, and any differently thinking brother who has it in mind to investigate the subject among the acquaintances and friends of a thoroughly competent, popular and self-sacrificing general man will be well advised if he practice up on sprinting and carries an umbrella in case of showers.

The Auditory Canal.

The auditory canal may be a straight passage and be easily explored, the tympanic membrane being readily seen by drawing the lobe of the ear upward and backward; but there is not always a straight passage, there being immense variation between individuals. There may be difficult access from a narrow opening; the floor of the canal may have a peculiar contour; the canal may be almost occluded from eminences along its course; it may be funnel shaped; there may be expansions or contractions along the canal, and the anterior wall may protrude into the passage.

No part of the anatomy is subject to more irregularities, and the physician should be on his guard that mere irregular contour is not mistaken for disease.

Chicago, Ill.

JOHN C. WARBRICK, M.D.

*Surgeons, Workmen's Compensation,
Employers' Liability, etc.*

This is a generalization of a super-abundant literature.

Do not harbor any expectation that services to an injured man will be paid for by any one but the party of the second part, who is the patient himself. If he states that any one (union or employer, or insurance company) will pay for him, that statement relegates him to the rear as a financial possibility and makes you and that absent or mythical somebody or something parties of the first and second part respectively.

As the patient's say-so binds the party of the second part not at all, make that party speak for itself at once. Do this by 'phone, by letter or best before your own witness. Verify the patient's statements unless you wish to discover for yourself first, that you have been defrauded; second, that you have earned the nicknames of "Come On" and "Gold Bricks;" third, you have belittled your whole profession.

No business man will waste sympathy on a purchase of "Green Goods" and an exhibition of belated indignation, or any words of futile protest on your part may be described, with more or less verbal embroidery, in circles where the titles E. M. (Easy Mark) and M. D. are regarded as synonyms.

Employers will sometimes sign an agreement to pay, when they are requested to do so, in advance. But after the services are rendered everything does look so different! As one firm put it: "Why should we pay? The work is all done."

There is another view, i. e., if you allow any one to put words in his employer's mouth, unknown to that employer, then the unfairness and fraud of the whole transaction, its sequel and its repudiation, rest upon your shoulders. Your only defense would be something like this: "I am willing that any one should order goods in my name and make me responsible without my knowledge. Then if the seller makes no inquiry I am to be liable for the bill." Oh, *caput scabere, caveat creditor!*"

As a remedy for the acute indignation more or less prevalent, at least in my own circle of acquaintances, there is nothing so good as a prolonged meditation upon the so-called "Golden Rule." There is another less soothing thought and that is that you have been stung in a transaction in which you were accessory. You were willing that a bill should be collected from an innocent party, one who had no responsibility in the matter, and you were too indolent to obtain that party's consent. In other words, you were dishonest; your dishonesty failed of success and now you are mad. Quite human but foolish withal!

DOUGLAS H. STEWART, M.D.

New York City.

ANNOUNCEMENTS

"Rheumatism and the Salicylates" and "Refraction Work in General Practice" will be commented upon editorially in November.

ORIGINAL ARTICLES

So many able articles are on hand that only a portion can be announced at present. Among those to be published at an early date—most of them in November—are the following:

"Some Problems in Refractoin," by Dr. Richard H. Satterlee, will interest every general practitioner who is looking forward to entering this specialty; and the men not so planning will find much of helpfulness.

"The Faucial Tonsil in Its Modern Aspect," by Prof. John J. Kyle, is one of the most able papers we have ever received. Previous papers by Dr. Kyle have been so welcomed by our readers that this one will be appreciated by a wide circle.

"Obstetrics in General Practice," by Dr. A. J. Farrell, crowded out of this issue on account of papers on infantile paralysis, will appear in November. The able paper on "Cancer," by Dr. E. E. Fisher, begun in this issue, will be concluded in November.

"Hemorrhage the Bete Noir in Removing Hemorrhoids," by Dr. Benj. E. Dawson, is a very practical and helpful paper of general interest.

"Rural Conditions of Health and How to Improve Them," by Dr. Harry A. Pawling, will interest every physician in rural practice; it is an able presentation.

"Puerperal Eclampsia," by Dr. J. L. deWolfe, a paper based upon a large experience, gives the treatment available to the country doctor—a treatment that avails.

Other papers are: "How Far We May Be Justified in Closing Wounds Without Ligating Severed Vessels," by Dr. T. F. Lockwood; "Disease of the Pituitary Body," by Dr. W. R. Dillingham; "Some Modern Obsessions in Medicine and Sanitation," by Dr. J. G. B. Bulloch; "Why Pneumonia?" by Dr. A. W. Herr; "Thoracic Emphyema," by Dr. C. S. Neer; and "Emergency Minor Surgery," by Dr. B. W. Stearns.

THE BUSINESS SIDE

"The Death of Therapeutics Promises a Funeral for Medical Business." The recent graduate and the student in colleges that have ceased teaching therapeutics are complaining of the fact that they don't know how to practice. No wonder! This paper goes into the matter from the business side.

Say, Doctor, don't you want to renew for 1917 NOW, before you forget it? MEDICAL COUNCIL is planning to be in every way better in 1917 than in 1916. It will help you in that difficult problem—making medical practice pay. The first of the year is a rush for our subscription department, and we will much appreciate it if a portion of the work is out of the way before 1917 comes.

Best CURRENT MEDICAL THOUGHT

Surgical Scissors

As wielded by Douglas H. Stewart, M.D.,
F.A.C.S.

Post-operative Ileus.

Wm. M. Thompson, M.D., F.A.C.S., Chicago, Ill., *Surg. Gyn. and Obstets.*, June, 1916. The best results are obtained by enterostomy and drainage in patients that are so ill that radical measures would prove fatal. When the patient recovers ileo-ileal anastomotic closure of the enterostomy wound and caecostomy or appendicostomy will complete the cure.

As to enterostomy, the following from McGrath's Operative Surgery may help some one. (Abridged.) Temporary enterostomy is resorted to in cases of acute septic peritonitis with distension and paralysis of the bowel. The patients are often in collapse, therefore operation must be prompt and usually performed with local anesthesia. Open the wound or make a new incision in right iliac region. If the presenting gut is adherent, never mind; the lower down and nearer the caecum the better, but even the caecum may be utilized. Fix the coil of gut to peritoneum or fascia of transversalis with a continuous suture of silk carried by a round needle. Do not penetrate entire thickness of bowel wall. Introduce one or two reinforcing stitches at each end of the wound, penetrating all the layers of the abdomen, peritoneum inclusive. Tie these last, as they close part of the incision. Make a small opening in the bowel; introduce a rubber tube. Fix this with a retaining stitch; then surround the tube with a purse-string suture; the latter is best introduced before incision of the bowel.

Disinfection of Septic Joints.

Boston Med. and Surg. Journal, F. J. Cotton, M.D., F.A.C.S., Boston. The closed joint has a high resistance to septic infections, hence the chronic course taken by joints that are infected by gono-strepto- and staphylococci, and the horrid course of infected knees when treated by the criminal method of drainage by wicks. Most of the latter patients die from septicopyemia and prolonged extensive suppuration between the muscle planes of the thigh and in the popliteal space, rather than from absorption from the joint. The joint might have some power of self-

protection, if given the chance. Seven case-histories are given; and the conclusion is: wash and disinfect the joint thoroughly; because, for a certain length of time, the infection is superficial and under the influence of disinfectants. After this shut the joint up. The joint must be sealed and protected. It must be left, after antiseptic cleansing, a closed cavity if success is to be the result. Drainage does not do this, but leads to failure by ensuring an open joint.

Old Erichsen would have loved the aforesaid. Listen! After removing foreign bodies, wounded articulations must be well washed out with carbolic (1 to 40) and the dressings applied with minute attention to detail (Listerism). A splint should be applied until the wound is healed.

"The three great principles are: Exclusion of air, perfect rest, and the continuous application of dry cold." This comes fairly near a closed joint in description.

Some Experiments with Rubber Gloves.

Carl E. Black, A.M., M.D., F.A.C.S., Jacksonville, Ill., *Surg. Gyn. and Obstets.*, June, 1916. This is a record of experiments upon the sense of touch, as shown by the finger reading of blind persons. It is all most interesting and ingenious; furthermore it differs very materially from the results which Scissors obtained with an esthesiometer some years ago. But the recognition of letters certainly calls for a higher grade of tactile sensibility than would be demanded by the points of the esthesiometer.

The doctor finds that there is a loss of nearly 50 per cent. in the sense of touch, with medium-weight gloves. Two weeks' practice improved the facility of reading through rubber gloves over 20% and gloves well-fitting and wet give the most favorable results; but put on dry give the least favorable opportunity for exercising the sense of touch.

One cannot help but think that this sort of test, valuable as it is, shows rather that the biggest loser by the use of gloves is the gynecologist rather than the general surgeon. Particularly as the latter usually makes his examination with the bare hand. The recognition of tissues by the hand in operative work is not of paramount importance. In fact, the surgeon does much of his work while holding a tissue with a metal forceps.

Intussusception.

J. Ambrose Johnson, M.D., Cincinnati. *Lancet Clinic*. The author gives a history of a successful operation upon a child, 6 months old; he

dwells upon the fact that the patient did not seem so very sick and yet there was a mass in the rectum that could be easily felt by an examining finger. Symptoms, diagnosis and the importance of early operation are well set forth. Pain, vomiting, muco-haemorrhagic diarrhea and a palpable tumefaction are considered pathognomonic when accompanied by an intra-rectal mass. The giving of cathartics is as reprehensible as giving them in acute appendicitis. An irreducible or gangrenous gut should be excised.

Perhaps a few words of description would apply to the symptoms mentioned. These apply to the forms that Sir Frederick Treves used to call the ultra-acute, the acute and the sub-acute. In the chronic form, pain may be paroxysmal or absent. But in any form, pain seems to become exactly as intense and then it often moderates. Subsidence does not mean that matters are improving but usually that gangrene has set in. If vomiting does not appear then the diarrhea is severe, and *vice versa*. Unlike the vomit of ileus, obstruction, etc., that of intussusception often gives temporary relief. Constipation is rare but tenesmus is common. A rectum with its sphincter so relaxed that one might almost look into it, is a grave sign indeed.

Gunshot Fractures of the Femur.

British Journal of Surgery, April, 1916, E. W. Hey Grooves, Bristol, England. The essential principles of treatment are as follows:

1. *Immobilization of the limb.*
2. *Dressing without movement.*
3. *Extension of the broken bone* sufficient to secure correct alignment and full length.
4. *Thorough cleansing and draining of infected wounds*, with provision for free or continuous irrigation.
5. *Semiflexion of the joints* above and below the broken bone, to relieve the tension of the great flexors and to place the limb in a position of physiological rest.
6. *Freedom of the uninjured parts of the limb and joints*, to insure that massage and movements may be carried out from the earliest possible moment.

The danger of doing too much in the treatment of infected wounds associated with gunshot fractures consists in the unwarranted removal of pieces of bone. Fragments should never be removed from a fracture unless they are certainly dead or non-viable; often in the early stages this can only be ascertained by pulling the bit of bone out to demonstrate the absence of vascular supply. As a matter of fact, however much the bone has been comminuted, its constituent fragments

are very seldom without vascular connections. This is easily demonstrated by dissection of limbs which have been amputated at an early period for gangrene. If a bit of bone is clearly lying loose in the tissues it is better removed from an infected wound; I do not believe there is any justification for the retention, still less for the replacement, of such a fragment in its septic bed. But this is a very different thing from exploring the wounds with fingers and forceps, and pulling out all the bone which can easily be removed. Such a practice leads to a flail-like limb which nothing can restore to usefulness except a difficult operation of late grafting. The general rule should be never to remove bone from a septic fracture until a late period, and then only when it is clearly dead.

The Fluoroscopic Screen.

C. Winfield Perkins, M.D., New York, in *Med. Record*, Oct. 16, 1915. "The radiology of gastrointestinal diseases is in its infancy, but with enthusiasm and conservative judgment it will attain high rank as a diagnostic measure and be demanded as a necessary procedure before operative interference. With the exception of gynecological diseases the Röntgen ray has, I believe, displaced the exploratory operation. Truly science has advanced if we have diminished the necessity of exploratory operations."

This article and its reprints are clear in wording and ample in illustration, but no abstract could do them any sort of justice. It is enough to say that they go far to make good the conclusion which is here printed. Further information or the reprints themselves may be obtained through the author, 234 Central Park West, New York City.

The Corroborative Diagnosis of Mastoiditis, Etc.

Harold Hays, M.D., F.A.C.S., New York, in *N. Y. Med. Journal*, June 17, 1916. In the differentiation of mastoiditis the X-ray is not essential, but it is valuable; and in determining the condition of underlying bone, before extensive destruction has taken place, it may be indispensable. In order to attain its full worth, two pictures should be taken, one of each mastoid, and then a comparison may be made between normal and abnormal conditions.

In making such comparisons it must be kept in mind that the right lateral sinus is usually larger and further forward than the left; and also further forward in diploëtic than in cellular bones. If it cuts into Reid's base line and shows the shadow of the anterior margin of its groove at (about) 50° to 55°, it may be regarded as in

normal position. Eleven histories are given, which lead to the conclusion that X-ray and clinical manifestations should go hand in hand; and also that the advisability of operation should depend upon one's suspicion of the true state of affairs. This suspicion should not be based upon unfounded surmises, but upon clinical evidence that in its turn is corroborated by the X-ray pictures. Any other course is misleading and unwise, especially so if an operator is undetermined as to the wisdom or unwisdom of awaiting further developments in an obscure case of mastoiditis.

Influence of the Pathological Tonsil and Adenoid Upon Health and Development of Oral Cavity.

Lancet Clinic, June 10, 1916. William F. Clevenger, M.D., F.A.C.S., Indianapolis, Ind. Tonsil abnormalities and hypertrophied lymphoid tissue in naso-pharynx influence the body generally by acting as portals of entry for pathogenic bacteria and diminish normal supply of oxygen by obstructing breathing.

The tonsil structure depends upon age. In early life composed almost wholly of lymphoid tissue, while in later years fibrous tissue in abundance laces through the gland.

Oral imperfections and nasal occlusion resulting therefrom, barring trauma, to be considered sequelae of imperfect breathing throughout early life. Septal deflections due, in a large number of instances, to high arch resulting from mouth breathing in childhood. Orthodontia indicated in most children after tonsil and adenoid surgery.

Large number of tonsil operations performed by the inexperienced to be condemned. Poor co-operation between the anesthetist, surgeon and assistant responsible for many errors. All tonsil patients should pass through the hands of the internist and not be operated indiscriminately. Many small hypertrophies in childhood to be considered as normal structures and surgery upon this class not tolerated.

Local anesthesia generally to be condemned, especially if adrenalin is added to solution. Hemorrhages very common following local anesthesia. Tonsil surgery should be considered major surgery and performed by the qualified surgeon only.

There are 66 additions to the new U. S. P., and 242 deletions; but few are of great therapeutic interest. A number of the deleted preparations are passed over to the new National Formulary, which has become a rather important book, much improved over the last one.

Clinical Diagnosis

Gleanings on diagnosis from current medicine. Points you can use in your practice tomorrow.

The Diagnosis of Infantile Paralysis.

Dr. Louis Fischer, New York City, in *Med. Record*, July 29, 1916, makes the following very definite points:

A symptom of great importance, described by Dr. Draper, of the Rockefeller Institute, is that flexion of the spine anteriorly produces pain and stiffness of the neck. The lymph glands of the body are enlarged.

An important symptom has been described by Culliver as a peculiar twitching, tremulous, or convulsive movement. It usually affects a part or whole of one or more limbs, the face or jaw. It may also affect the whole body. In the beginning, the symptoms may last less than one second, and do not recur oftener than every hour or so. Later, the spells lengthen to a few seconds, and recur at shorter intervals. The condition is sometimes accompanied by a peculiar cry, similar to the hydrocephalic. During the convulsive movement the child is apparently unconscious, with eyes set for a few seconds. A similar symptom has been described by Prof. Arnold Netter, of Paris. This preparalytic symptom, if noted, will serve as a warning of the approaching paralysis, and, when observed, the limb should be strengthened by support to remove the weight.

There are three types most commonly met with: the catarrhal, the gastrointestinal, and the cerebral.

In the catarrhal type there is nasopharyngeal involvement, or bronchial catarrh, or symptoms resembling the onset of a pneumonia.

In the gastrointestinal type we have symptoms of overfeeding, or disordered nutrition, vomiting, constipation or diarrhea, and always fever. We should always suspect an abortive form of the gastroenteric type if a child, in spite of having its diet carefully supervised, suddenly shows gastroenteric derangement, with anorexia and a general apathetic condition.

The cerebral type is seldom met with in the abortive forms. I have never seen a case with convulsions and rigidity of the neck muscles that was not followed by paralysis.

The reflexes will be found slightly exaggerated, especially the patellar, plantar, and ulnar. In some cases seen by me the reflexes were greatly diminished for one day and found normal the following day.

The abortive type is the most common form,

and, unfortunately, the one overlooked by the laity, because of the mildness of its symptoms. In many instances, the onset of slight sneezing, nasal discharge, and a temperature of 100° may be all the evidence of the poliomyelitis. Children convalescing from the abortive type are responsible for the spread of this disease. The symptoms being mild, the disease is overlooked.

Practical Therapeutics

Giving in concise usable form the therapeutic points from current medicine that are really of value to the busy practitioner.

Adrenaline in Infantile Paralysis.

Several gentlemen are emphasizing the value of adrenaline in the treatment of infantile paralysis, though an unwarranted controversy has arisen over the matter. The credit seems to belong to Dr. Meltzer, of New York, as aided by Dr. Bermingham. Our esteemed colleagues of *The N. Y. Med. Jour.*, in an editorial, express the very rational view that adrenaline, when injected into the spinal canal, acts as "a direct activator of the antitoxic function of the blood in the central nervous system." Sajous, in 1903, pointed out that blood-plasma laden with the adrenal principle circulates in the nervous elements, traveling upward as does tetanotoxin. The point is raised that the administration of adrenaline may aid the conceded activity of Flexner's serum.

We hope physicians will give thorough trial to adrenaline. Many suggestions are being made, principally by gentlemen who have had little or no experience in treating cases of the disease. We must confess that suggestions that have come to us—the hypodermic use of lobelia, large doses of calcium sulphide, continuous use of turpentine emulsion, the administration of echinacea, heavy dosage of asafetida, the external use of veratrine ointment, the use of quinine, etc.—all impress us as mere empiricism. Half of the pharmacopeia might be recommended in the same way. There seems to be a reason for the employment of adrenaline, and there is accumulating much actual evidence in its favor.—EDITOR.

Floor Dust in Infantile Paralysis.

An editorial in *American Medicine*, July, 1916, makes the sensible suggestion that children be not permitted to play upon the floor during an epidemic of infantile paralysis, and that the homes be kept as nearly dust-free as possible.

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Most Widely Circulated Medical Monthly.

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No. 11

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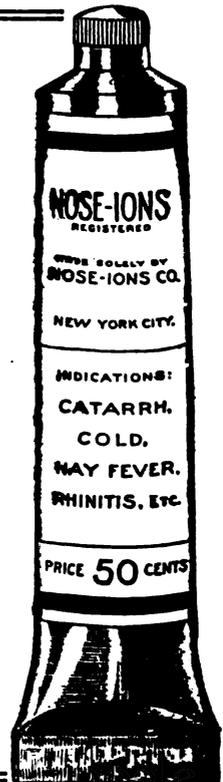
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Rheumatism and the Salicylates.

SPECIFIC remedies are having a hard time maintaining their reputations. The salicylates are commonly regarded as specific in the treatment of acute rheumatic fever. In a certain sense they certainly *are* specific; but, as is well known, there are dangers. In our own experience, the salicylates made from true oil of wintergreen are less dangerous than are the synthetic salts; but many gentlemen disagree with this dictum.

A. Fantoni, of Italy, and his colleague, Magliano, contend that the specific range of the salicylates in acute rheumatic fever is limited to the pain and fever. We all know that salicylate does not abort the disease and that it often fails to shorten its course or prevent the progress from one joint to another.

Authorities are coming generally to the view that so-called rheumatism is not a definite disease entity. A number of pathogenic microorganisms—diplococci, gonococci, streptococci, staphylococci, and influenza germs—are known to be associated with the cases of the disease which have been adequately studied. Many germs in a state of attenuated virulence, as proven by Ghedini, originate the symptom-complex known as rheumatism.

Helping the Salicylates.

While not disqualifying the salicylates within their proper limitations, Mariani and the authorities noted above think they do not go far enough; that other medication is needed to help the salicylate medication. Mercury seems to be the most promising agent for this purpose, a 1:1,000 solution of mercuric chlorid (bichlorid) being given intravenously in 3-Cc. doses once a day for three successive days, and then 4-Cc. doses on alternate days for three or four doses. Serious renal disease contraindicates.

The internal antiseptic, so-called, has its limitations. Probably all that can be expected is that some agents, mercury among the number, may aid in conferring upon the patient's blood-serum

antitoxic and agglutinating properties, increasing the number of mononuclear cells in the blood. Mercury seems to do this better than does salicylate.

Therefore, it seems rational to oppose pain and fever in acute rheumatic fever with the salicylates, and the infection with mercuric chlorid.

Refraction Work in General Practice.

MANY PHYSICIANS who desire to limit their practices more and more to that within doors, undertake refraction work in the belief that it is very simple, and some of them are led to believe that a correspondence course will fully fit them for such a specialty. True, such a course may help; but it is merely a beginning. Better than the advertised by-mail courses is a careful study of text-books followed by a post-graduate period of instruction.

Gentlemen who are attracted to ophthalmology in general or to refracting in particular should read the enlightening paper in this issue entitled "Some Problems in Refraction" and by Dr. Richard H. Satterlee. In it one can read between the lines that medicine is, in refracting, quite as great a factor as is mathematics and optics. So, then, the experience one has gained from years of practice is the very best foundation upon which to build. To this add a competent knowledge of the anatomy and pathology of the eye and the study of texts in clinical ophthalmology, and one is prepared to take up special study in refraction in such a work as is that of Thorington on "Methods of Refraction." The trouble is that most men turn this order around, and they succeed in making a general mess of it.

As is intimated in Dr. Satterlee's paper, many ophthalmologists look upon refracting as a necessary nuisance that pays their board bills; and, we may add, some of the more surgically inclined ophthalmologists really wish to abandon refracting, since to do it right consumes oceans of time.

Some of these specialists would welcome the chance to break in a general practitioner whom they respect and would like to aid; and they would turn over to such men, once they were trained, a very profitable line of practice.

One Way to "Make Medical Practice Pay."

So, Doctor, if you want to do refracting, and if you have the proper bent for it, follow the line of preparation we have tried to outline; and your wife and family will rise up and call THE COUNCIL blessed for putting the idea in your head, after you have doubled your present income—and are getting fat from want of exercise.

Trifling With Our G. U. Cases.

THESE RECENTLY came to hand a booklet purporting to give treatment of gonorrhoea. The minor drugs commended for internal use and the directions for irrigation of the anterior urethra with solutions too weak to be germicidal constituted as useless a line of treatment as could be imagined. What a waste of expensive print paper! And yet a number of physicians have commended this treatment to us, and there is where the *real* trouble lies.

There is no better way to grow pessimistic over medical practice than to have opportunity to observe the course of hundreds of cases of gonorrhoea given bluffed-at treatment. Honestly, if a case of gonorrhoea won't submit to *real* treatment, we put him to bed for ten days and keep him on light diet and plenty of water, and the results are actually and truly very much better than that achieved by "the usual treatment." Medicines are useful in the management of a case of gonorrhoea as *part* of the treatment—more useful than some of the specialists would have us believe—but what a bluff it is to treat a case of gonorrhoea wholly as was taught in the text-books of twenty years ago!

The safer way is to regard every case of gonorrhoea as in the domain of minor surgery and major medicine, for minor medicine has no place whatever in the treatment of these cases. Above all, we should not bluff through the treatment. We know perfectly honest physicians who *think* they are curing their cases of gonorrhoea, just as some of them *think* they never have a case of ruptured perineum, whereas at the hospital we find their cases of gonorrhoea were not cured nor their cases of ruptured perineum recognized. The matter of bluffed-at treatment of gonorrhoea and syphilis is a serious one; it strikes too deeply at the national vitality to be other than serious.

Doctor, take an account of stock. What are you DOING for your g. u. cases? If you are uncertain over the matter, get a modern text-book and study it. And if too busy to do that, why not face the issue and send your cases of gonorrhoea and syphilis to a competent genitourinary specialist? Give the poor victim a square deal in the interest of public health.

Infantile Paralysis Clinically Viewed.

THIS IS a composite report of expressions from men actually handling the cases of infantile paralysis, not from those who have merely read about it.

There is no certainty at all in diagnosis until after the paralytic symptoms begin to manifest themselves.

We don't know the cause of the disease, and we don't know how it is disseminated. It is a virus and it seems to be disseminated in *many* ways; probably details will be worked out in time, but no one knows as yet.

Only a certain proportion of persons are susceptible to the infection; but what constitutes susceptibility and what natural immunity may not yet be defined.

The laboratory has offered nothing definite and workable in the way of diagnosis.

Apparently, the rational treatment must be a serum artificially produced, or the blood-serum from an immune.

There is no defined or even generally promising drug treatment for the disease. This is not meant to discourage drug treatment. As in disease generally, rational therapeutics has a most useful place in the management of the disease in its various stages.

Physicians are making many mistaken diagnoses during the prevailing epidemic. Some cases reaching the hospitals have turned out to be rheumatism, and a few were undiagnosed fractures in children. Most mistakes in diagnosis were made because of haste in reaching conclusions.

Prophylaxis is of great importance. Strict quarantine is imperative. The discouragements are the want of a diagnostic standard, the high mortality, and the unrecognized and unrecognizable carrier.

Will we reach a solution of the riddle? We will, sooner or later; but it will come from quiet research in laboratories and hospital wards, and the outcome will be the resultant of comparison of data from many sources. No brilliant discoveries are in sight.

"What attention are you paying to the host of medical journal contributions recommending this, that and the other thing?"

"Too busy to regard them very much, but hope something will come from them."

Infantile Paralysis Quarantines.

JUST TO SEE how the quarantine was working out in actual practice, we crossed some state lines recently and kept our eyes open. Probably the estimate formed was somewhat superficial; but the Federal officers, in the limited districts in which they were working, were doing the most intelligent work, or so it seemed. New York State had the most effective state quarantine, which was apparent on the face of things. Wherever we went it was absolutely tight. The card system for passing automobile parties from town to town was admirable, and it worked beautifully from the standpoint of safety first—for New York.

But the present object is to call attention to the fact that, in the face of an epidemic, state lines have no right to exist, in so far as quarantine is concerned. We saw actual hardship inflicted upon women and children who were allowed to travel far from home in their own state, only to be incontinently dumped off at some way station near to a state line. We were on a train halted immediately over the line. In the forward coach we were a doctor; in the rest of the train a law-breaker if we presumed to "talk up" to some layman wearing a badge. From the rear coach a woman and three children were ejected at a "station" where in the darkness we could descry two buildings apparently used for loading cattle and a shed which did duty as a flag station where the passengers worked a semaphore to stop local trains. It takes little travel these days to demonstrate to one's own satisfaction that the U. S. Public Health Service needs the right of eminent domain during dangerous epidemics. If they had, things would be different.

Then, too, there is an amount of small politics being played in the present emergency that is actually nauseating. One Commissioner rushes into print over the "high-handed" deeds of another Commissioner—both skilled politicians—the whole trouble being that one of them "beat the other one to it." Fudge! We believe in quarantines; they are highly necessary; but we do not believe in little-tin Czars being concerned mostly over getting their names in every paper in the state of their stilted sway every day, while an ill-assorted personnel of competents and incompetents, lay and professional, acting police-

men instead of acting sanitarians, do the hard work; for we give these people credit for working hard according to their lights, but under an archaic system of state rights that this nation long ago outgrew.

The Clinical Congress of Surgeons.

The successful Congress held last month in Philadelphia was instructive and interesting to a remarkable degree. This and previous sessions have impressed us with the desirability of clinics and demonstrations over mere didactic papers and discussions. Were the National and State Society meetings designed along the same lines there would be an outpouring of doctors that would tax the capacity for entertainment of all but the very largest cities.

Of course the set paper and discussion is profitable; but usually not as profitable as the later and more detailed presentation in the transactions. Then, too, there is a tendency for the revamping of text-book matter and the conventional and obvious in general manifested in set papers. The editor commonly cuts out of contributions a lot of anatomical and text-book matter, thus saving the time of the reader and making the printed transactions more live and helpful than the original presentation. Such criticisms do not apply to a clinic. As the American Medical Association meets in New York City next year, it would be interesting were the program committee to present good clinics in the place of so many papers.

Why Magnesium Sulphate Purges.

Contrary to most purgatives, the sulphates of magnesium and sodium do not stimulate peristalsis; they increase the secretion of fluid and retard its absorption. Cook and Schlesinger, in recent researches, have shown that these sulphates are wholly if not entirely absorbed by the stomach and, after such absorption, stimulate through the blood the mucosa of the large intestine. Animal experimentation has shown that bismuth administered with Epsom salt will have passed a very little ways into the small intestine by the time free purgation results from the magnesium.

Any one who takes a full dose of magnesium sulphate before breakfast will have reason to agree with this theory.

These properties make magnesium sulphate a most valuable "intestinal antiseptic," as it were, because amebic and bacillary organisms are flushed out by a sort of back pressure from the blood itself.

Cod-Liver Oil.

The winter season makes cod-liver oil the drug (or food) of selection in a host of cases; and its value and availability does not admit of question. Unfortunately, many physicians are achieving the idea that it is an old remedy that should be displaced, since it has failed in their hands. Questioning several physicians who expressed such an opinion, we found that they were using various preparations of the alleged active principles of cod-liver oil, commonly in the shape of "tasteless" preparations, wines, cordials, etc. As a matter of fact, there are no active principles of this oil; the "extract" is almost inert and valueless; and the therapeutic usefulness resides *wholly in a good whole oil*. Doctor, don't let certain advertising deceive you; but use the whole oil, either by itself or in emulsion or thick extract of malt. You will be pleased with results. Petroleum oils are of value in the treatment of constipation, but they are not nutrient or possessed of any therapeutic action except in a mechanical sense. In respiratory disease emulsions of petroleum are valueless except as mere demulcents; so they may be of very minor importance in the treatment of certain diseases of the throat, and that is all. It is ridiculous to claim that petroleum oil takes the place of cod-liver oil in the treatment of respiratory diseases.

Humanized Bacterins.

In re our editorial on this subject in September, several gentlemen have expressed themselves as favoring the idea in general, though they see difficulties as regards the application of such a method in the treatment of infantile paralysis.

To what has been said it may be well to add that several investigators in England (See *Lancet*, Aug. 19, 1916) have been experimenting on the addition of human serum to nutrient media for the propagation of bacteria, and the method results in the easy growth of several of the more resistant germs; it increases the *amount* of the growth; it stimulates the growth of pathogenic organisms more than the non-pathogenic; it prolongs the life of the organisms, *especially the meningococcus*; it tends to produce bacteria true to type; and it obliterates the fine differences between types.

All of this would make it appear that, in the production of bacterins, sensitized or other, the employment of human serum, as we suggested, should present real advantages.

The new tincture of strophanthus is defatted and is a fine product.

Unexpected Conditions in the Rectum.

Doctor, learn to examine carefully all rectal cases; don't accept the patient's diagnosis of "piles." The matter has been brought home to us very sharply. One young man with "piles" was treated by three physicians and finally, after repeated urging for examination, we found a fistulous tract that had become tuberculous. He died. A sensitive woman patient used salves and suppositories galore, but finally submitted to examination. The broken-off end of a clinical thermometer was embedded in the rectal folds. Today a case of "piles" turned out to be seat worms. Three rectal cases were due to the self-use of the abominable rectal dilators sold at the drug stores. And a child with nervous reflexes had the pipe of a syringe embedded transversely in the rectum. Don't forget that the symptoms may point to the rectum when the trouble is actually higher up—too high up to be seen with the rectal speculum.

The Association for the Study of Internal Secretions.

Dr. Lewellys F. Barker, Baltimore; Dr. Judson Daland, Philadelphia; Dr. L. R. DeBuys, New Orleans; Dr. Emil Goetsch, Baltimore; Dr. George H. Hoxie, Kansas City; Dr. John B. Potts, Omaha, and Dr. Henry R. Harrower, Glendale, Los Angeles, California, secretary, have organized this promising association on a scientific and ethical basis creditable and stable. The new association starts out with an impressive list of charter members, a monthly bulletin, called "The Link," and a projected quarterly of high grade, the advertising to be carried being on the basis of the Council on Pharmacy and Chemistry of the American Medical Association. The annual meetings are to be held at the time and place of the A. M. A. sessions, and the whole plan is such as to commend the organization to discriminating and high-grade physicians. We wish it every success.

Please stick a pin in this note. The whole subject of gynecology has been so reconstructed within the last fifteen years that an intelligent physician should no more prescribe for a gynecologic case without local examination than he should for a sore throat. Now honestly, if you examine your patients who have gynecologic derangements, for how many of them will you prescribe a mere "woman's remedy" and let it go at that?

The following papers are contributed exclusively to this journal. Republication is permitted if credited as follows: **MEDICAL COUNCIL, Philadelphia.**

ORIGINAL ARTICLES

Sentences, like sunbeams, burn deepest when most condensed.

We are not responsible for the views expressed by contributors: but every effort is made to eliminate errors by careful editing, thus helping the reader.

Some Problems in Refraction.

By RICHARD H. SATTERLEE, M.D.,
187 Delaware Ave.,
BUFFALO, N. Y.

Some ophthalmologists look upon refraction as a nuisance and a bore, and their results are on a par with this attitude: they are awaiting the next sarcoma of the orbit. Refraction is by some regarded as a simple procedure which any one with a test-case can master in a short time; but this opinion is not borne out by facts. Men who have been laboring for twenty years on problems in refraction have not yet solved them. Diagnosis frequently requires all the anatomical, neurological, medical and special knowledge one can muster.

Reflex disturbances caused by eye-strain have been over-emphasized; but the difficult decision how far to correct certain manifestations, whether they are permanent, transitory or occasional, is a subject of which we hear little.

We vary medicines to meet changing indications; but when it comes to refracting to correct ocular errors, glasses are usually prescribed at once, and all concerned are disappointed if there is not immediate relief from all distressing symptoms. No matter how complex the eye condition, one or two examinations are supposed to clear up all problems presented.

The Fundus in Health and Disease.

The fundus in health is ordinarily easily measured, and the muscular balance being good, simply correcting the hyperopia, myopia, presbyopia, and the various astigmia, is followed by a good deal of relief; but fundus hemorrhage, retrolubar neuritis, diabetes, albuminuria, intestinal toxemia, optic atrophies, glaucoma and many other causes may produce false data, and no relief will be derived from glasses.

Cycloplegics.

So much has been written about the determination of the exact amount of hyperopia or myopia being the only requirement to cure a case, and when one fails to ameliorate all distressing symptoms by prescribing solely from the findings of a cycloplegic, the patient is looked upon as im-

aginative or beyond hope, when, as a matter of fact, after measuring the refractive error, you have merely eliminated one element in your diagnosis. The cycloplegic gives you no data regarding the relation of convergence to accommodation, which is often vastly more important than the exact glass an eye requires only when completely paralyzed. The value of cycloplegia is unquestioned, but when used as it ordinarily is, to save time and work and get a good price for a poor prescription, it brings the whole craft into disrepute.

The Third Nerve.

The third nerve, with its outer peripheral ramifications, constitutes the principal difficulty in determining the proper correction in prescribing lenses. The nuclei for accommodation and the sphincter irides are situated anteriorly, while those supplying the ocular muscles are located posteriorly. The diffuseness in the origin of the fibers which control the muscles makes the differentiation of such centers positively within a certain nucleus very difficult. It is this diffuseness which complicates the situation and makes it often impracticable without repeated examinations to determine the value or uselessness of a prismatic correction, whether to stimulate certain lagging muscles, relieve an over-active muscle or ignore these symptoms entirely, relying merely on the correction of the refractive error to reestablish a proper muscular balance.

Our Ocular Environment.

Our simean ancestry bequeathed to us a tendency to divergence and a retina adapted to light from the sun. Our present environment calls for long hours of excessive convergence and throws an enormous irritating burden on the retina to take care of the ultra-violet rays and artificial lights of excessive brilliancy. The human economy has not kept pace with the demands of our new surroundings. Take a race as a whole, with a tendency to divergence, and it is fairly comfortable with outdoor life, because the effort to converge to parallelism necessary to clear distant vision is negligible. The hyperope easily brings his eyes to a distant focus and they rarely tire;

but put those same eyes at work for hours at a time near by, and the overworked accommodation and interni reflexly irritate the rest of his nerves, and then what happens?

The interni may develop sufficiently to establish a normal balance; they may over-develop, causing an internal squint; the interni may not develop, causing the use of one eye at a time for near work; or the usual intermediate condition occurs, that is, the individual is enabled for a certain length of time to send sufficient stimulation to the interni and ciliary muscle, but if this is prolonged beyond a limited time he suffers from eye-strain and other reflex phenomena. The fact is often forgotten that the innervation the eyes receive from the nervous system is as variable as that received by other organs.

Physical Conditions.

Occasionally certain physical conditions will produce an enormous stimulation to one set of muscles which eventually proves to be temporary. A pseudo-heterophoria may be due to a spasm of accommodation, the ciliary muscle causing an overaction of some eye muscle, with the production of a false heterophoria. After wearing for a time a seemingly proper correction, the spasm relaxes and the allowance made for an inward, outward or upward deviation becomes intolerable, as no such condition any longer exists. At other times the refractive error will allow certain muscles to relax and what seemed a slight deviation from alignment will become more marked. This is emphasized in the difficulty often encountered in prescribing comfortable bifocals. To read requires the action of the interni and the accommodation. The stimulation of one means normally the stimulation of the other; a lens sufficiently strong to lessen the burden on the accommodation automatically decreases the impulse sent to the interni to converge properly, so while everything is clearly defined the eyes don't focus because your stimulation to the interni is removed; then, if you use a weaker lens you converge easier, but the visual acuity is lessened and strain is produced by the effort to see clearly.

The Accommodation.

The accommodation is occasionally influenced by systemic conditions, independent of age, and these causes have to be carefully determined and efforts made to restore the function. The high-tensioned school child and the debility of later life will sometimes require a lens for reading that is worse than useless when health is restored. A physician of fifty for six months required a glass he should wear at eighty: when his tape worm

was removed, his accommodation at once became normal for his age.

The pupils owing to a relaxed nervous state will sometimes dilate abnormally, producing photophobia and eye fatigue, or they may dilate unequally, causing a blurred image in one eye and creating a train of nervous symptoms. Sometimes in a disturbance of the brain circulation the pupils will become excessively contracted and this will cause blurred vision.

A physician's wife has a hyperphoria of the left eye every time she becomes anemic and the correction by a prism greatly relieves various reflex symptoms, yet as soon as she is restored to health any prismatic correction is decidedly uncomfortable.

Muscular Trouble.

When one eye muscle is paralyzed following cerebral tumor or traumatism, the constant variation in the amount of stimulation sent to this muscle by the effort of Nature to produce single vision makes it exceedingly difficult to judge how far to go in the correction of the defect.

There are cases of internal and external squint which show only at times of excitement in eyes absolutely normal. These cases do not accept any correction. What is to be done; let them squint?

Cases of mystagmus occurring only after grip or otitis media, cases of astigmatism which require a certain axis for distance, yet on account of tension a different axis for reading or which will not accept any astigmatic correction for reading owing to the fact that the pupils contract in reading and the center of the cornea is more regular in contour than the peripheral portions, cases where the axis of astigmatism have to be changed for a month following the filling of one or more teeth are all illustrative. Sinus disease interfering with the circulation in the eye or affecting reflexly the nerve nutrition and causing frequent changes of lenses necessary is another illustration.

Conclusion.

So one might continue indefinitely. The sole purpose in this brief outline is to call attention to the manifest absurdity of expecting to conscientiously and properly refract without considering the manifold complications and ramifications interassociated with the general system, with their possible reflex disturbances; and in order to do this how necessary it is to keep many cases under observation for months instead of expecting immediate and lasting results from one or two examinations.

The manifestations in ocular diseases which involve the sympathetic nervous system alone are entitled to an immense amount of study and research work.

Some day refraction will be considered on a higher plane by ophthalmologists and the med-

ical fraternity, and then it will be permitted to be done only by men of the highest medical education and not left to any one as it now is—a despised source of meal ticket to the average eye man, or a means of pseudo-professional standing to a clock tinker.

How to Improve Rural Conditions of Health.

By HARRY A. PAWLING, M.D.,
LOWVILLE, N. Y.

Department of Health, especially along the lines
of rural hygiene.

City vs. Country.

The question of rural public health is of constant interest to city life and is of permanent interest to public health officials. The attempt, more or less successful, which has been made to arrange county tuberculosis hospitals for counties rather than for districts has done much to link the rural and city life together. Notwithstanding this, however, conditions of health in the rural districts are behind those of the cities, and among the reasons are the following:

First, the native conservatism against innovations. It is almost impossible to convince people that the times have changed. It has always been the nature of a great many people to leave what they themselves consider well enough alone.

Then there is ignorance of hygiene. We all know that modern hygiene has been forced upon the farm, through the stable, because of the conditions under which milk must now be produced. The ordinary farmer has not yet learned that a farm well-conditioned along hygienic lines is more valuable than one which has been neglected. Many farms are now being managed by tenants who do not feel able to make changes needed, and the real owners, living away from the farm, do not appreciate the urgent need of correcting conditions which are wrong.

Again, there is the inaccessibility to practical knowledge of what has been done, is being done, and can yet be done, in modern hygiene. On the ordinary farm the same outhouse stands as it has stood for years, oftentimes above the well; sewage takes its own course, which seldom leads to even a cesspool. The farmer has not been taught that these conditions are wrong; that the fresh air of the country is spoiled by decaying garbage thrown out to attract the flies, and that this same fresh air is polluted by the dish water and slops which are thrown out. He certainly cannot be expected to enthuse over things of which he has as yet but very little practical knowledge.

Last, but not least, is the lack of funds with which to fully carry out the plans of the State

In the cities we find an entirely different condition of affairs. City conditions provide a greater accessibility to knowledge of what is being accomplished in matters of public health, and exhibit the results of successful sanitary engineering. In the city we find the organized board of health with a competent and well-paid health officer. Meetings are held regularly, conditions are reported and the proceedings find their way into the newspapers, where they are read by the people. The water supply is made as near perfect as possible; there are rules governing the care and sale of milk; and there is the inspection of meat offered for sale. Sanitary regulations are made and enforced. Here we find the district nurses and the school inspectors working together, with the result that communicable diseases are promptly reported, houses at once quarantined and epidemics prevented. The sick are visited and the poor are nursed where a trained nurse could not otherwise be had.

In the rural districts all things are different, and the problem is how to improve the conditions which actually exist.

Purchasing Public Health.

The slogan of the State Department of Health is, "Public Health Is Purchasable." With this ever in mind, the department has commenced a campaign of education in this State which must certainly produce results. New laws requiring the prompt registering of births and the reporting of communicable diseases have been enacted. Literature has been prepared and distributed, dealing with all phases of preventive medicine. There have been exhibits showing the proper care and prevention of tuberculosis and infant welfare. These exhibits have been shown in most or all of the cities of the State and in many of the larger villages. That they have been pro into the rural districts. The statement has been ductive of much good there can be no doubt. The time has now come when they should be taken made by at least one competent authority that

over forty per cent. of the babies born in certain rural sections of the country never reach their second birthday. I feel very certain that if these same exhibits could be taken for a single day into the little old red schoolhouse that many people would be reached who have not yet been reached, and that much enthusiasm would be aroused which has not yet been aroused. There is a great need of practical nurses in the country districts. The wages demanded by trained nurses are often prohibitive at a time when a nurse is most needed. School nurses in the rural districts would certainly prove a valuable asset.

The Role of the Physician.

The people should be educated to call a physician at the very beginning of any illness, no matter how slight it may seem to be. In this way, other members of the family and the neighbors will be spared exposure to a disease which at times is most communicable. The prevention and control of communicable diseases in the rural districts should be an easy matter, but it is not. It is safe to say that the number of unreported cases of communicable diseases which exist in the rural districts is greater than the number actually reported. This is because of the fear of being quarantined and because so many cases happen to be mild and respond to home remedies. Fifty years ago it was a common belief that every child must have measles and mumps, scarlet fever and whooping cough before he grew up, and the earlier in life each one took his turn the better it would be for him. Not infrequently mothers took their little ones to visit a sick neighbor in order to expose them to a disorder because it happened the epidemic was light in form and the season favorable. Now it is known that children grow up stronger and in better health if these diseases are avoided. We know that whooping cough alone kills ten thousand children in the United States every year, and that others who do not die from it have their bodies so weakened as to be unable to resist other serious maladies. Measles and scarlet fever take equal toll, besides leaving their victims with diseased ears and eyes and throats. These facts should be continually kept before the people.

The Health Officer.

The time is coming when this State will insist upon health officers devoting practically their entire time to public health work. Then and not until then will it be possible to carry out a plan of health survey which will mean the visiting of all families to ascertain whether or not there is sickness in the family. If this plan is ever carried out, we will find most of the

people willing to submit to treatment and anxious to observe the sanitary regulations prescribed. Such a system could not fail to lower the death rate in the rural districts.

In the meantime, the physician can do much by teaching the value of fresh air. How it strengthens the nervous system and increases the resistance to certain diseases, especially tuberculosis, pneumonia and common colds, and how impure air lowers the resistance to these same diseases. The people should be taught the value of properly ventilating their sleeping rooms. Windows should be properly screened against flies; outhouses should be properly constructed and cared for; sewage should be properly taken care of. The importance of doing all these things, and the economic results which are bound to come, should be impressed upon the people.

Cases of tuberculosis should be reported and the persons afflicted should be advised how to prevent the spread of the disease. The literature bearing upon the improvement of health conditions should be freely distributed.

School Hygiene.

In the schools much can be done. If every teacher would at once report to the local health officer the absence of a scholar who is reported sick, but not sick enough to need the services of a physician, she would often be the means of preventing an epidemic in the neighborhood. The teacher should see that the schoolhouse is properly ventilated, heated and lighted; that it is kept neat and clean. School cleanliness means chiefly the avoidance of dust, and much dust can be prevented by proper cleanliness of the children in shoes, dress and body. She should instruct her scholars in the proper care of their teeth, and should see that they carry out her instructions.

I know of one teacher in my county who adopted the plan of calling the roll each morning at the beginning of school and asking each scholar whether or not the teeth had been cleaned that morning. She got results, and I believe the same plan would work successfully in any school where it was adopted. Free tooth powder and free tooth brushes should be provided for those who cannot afford to buy them. It should be the duty of the teacher to know where the drinking water comes from; that it is kept in a proper tank in the schoolhouse; that every scholar has his or her own drinking cup, and that a suitable cupboard is provided for these cups when not in use.

Laboratories.

The physicians of this State should realize that there are now available adequate laboratory fa-

cilities for the examination of specimens for diagnosis, especially in diphtheria, tuberculosis and typhoid fever. They should certainly take advantage of these facilities offered by the State Department, because by so doing many uncertain diagnoses may be made definite, with resultant benefit to the patient, the physician and the community itself. They should cooperate with the department in promptly reporting cases of communicable diseases. They should be generous with the literature being prepared, especially that dealing with farm sanitation and the spread of disease by flies. Explain to the people the ways of taking specimens for diagnosis, and the manner of growing cultures from these specimens. Impress upon them the importance of their cooperating with their family physician, in order that their health conditions may be improved.

Publicity.

A growing interest in matters affecting the public health is reaching rural life through the

grange publications and through many of the weekly newspapers. The farmer is beginning to realize the economic value of health measures. He is becoming convinced of the fact that the value of his farm depends to a great extent upon whether or not it is in good hygienic condition. The scoring of his dairy has awakened him to much thought along these lines. He will soon learn to connect the larger returns through milk checks with the conditions under which milk is produced. The attempt to climb from grade B milk to grade A will have its effect on the health of the rural districts in the near future.

In conclusion, I wish to state that the time is coming when the conditions of health in the rural districts will be better and the death rate lower. It will take time to bring about this change, but it is bound to come as a result of the campaign of education which is to be waged by the State Department of Health through the physicians, the health officers and the people themselves.

Obstetrics in General Practice.*

By A. J. FARRELL, M.D.,
HALLETTSVILLE, TEXAS.

The successful doctor must have a thorough knowledge of the theory and practice of obstetrics in order that he may be able to use whatever of the general fund of knowledge and experience may be applicable to his own work.

Oftener than otherwise, in country practice, the necessary care and treatment of pregnancy is not possible, because the family does not know the necessity of it; so, usually, the doctor knows nothing of conditions until a week or two before the expected confinement, when his services may be engaged; and, in fact, often knows nothing of them until called to attend the woman already in labor.

When permitted, I see the patient once a month during pregnancy, examine the urine and take the blood-pressure, giving advice as to diet and exercise; if there is no abnormality, no medication is needed.

If there are symptoms indicating a deviation from health, they should receive proper treatment.

What may and should be done by the average doctor after labor has begun?

The first thing is the emptying and washing out of the rectum with enemas; follow by an

antiseptic bath of the external genitals and contiguous parts.

The next step should be to determine that the labor is actually at hand, and, if so, what is the presentation and position.

It is my opinion that, whatever it may have been at some time in the history of the race, in our time, labor is a pathologic process, and always needs the aid and care of a skilled obstetrician; but certainly many diseases get well without treatment, and in spite of harmful treatment, and labor is not an exception.

The Relief of Pain.

I have always made it a rule to prevent and relieve pain whenever possible; so in every case of labor, unless I see good reason for not doing so, I use analgesics and anesthetics to relieve pain.

When I was a young man, I was once called to a case of premature labor and, in my endeavor to prevent this, I gave the woman all the opiate she could safely take. This relieved the pain but the contractions continued, and a six- or seven-months' fetus was delivered without pain. I believed, from this experience, that the pain of child-birth could be prevented, in many instances, without interfering with the progress of labor, and without harm to the patient.

Since that time, unless I have seen some reason for not doing so, I have given hypodermics of

*Read before the Lavaca County Medical Society.

morphine and atropine, or hyoscine, in the first stage, and chloroform or ether in the second stage.

I have never seen harm come from this practice; but, on the other hand, I believe the woman comes through the ordeal more safely, in better condition, and is less liable to the complications that often attend and follow labor.

"Twilight Sleep."

In regard to the "twilight sleep" of which we have seen so much in the lay press of late, I will say that I have used hyoscine and morphine in these cases more or less for 10 years. I have conducted cases practically without pain, especially in the second stage, so that the woman did not know when the child was born, and had to be shown the baby to convince her of the fact, and I have had no accident.

Still, I do not believe it is safe or best as a routine practice; so have not used it in this way for several years. One reason for this belief is that I have found quite a number of blue and apparently dead babies, though I have been fortunate enough to revive them.

Another reason is that, especially in precipitate labors, the narcosis is prolonged far beyond the need for it, and may require constant watching for many hours after the end of labor.

Again, a narcosis that may be entirely safe with extreme pain, might conceivably become dangerous with the sudden subsidence of this pain.

Accidents and Complications.

The accidents and complications most commonly met with in obstetric practice are malpositions and presentations, slow labor or uterine inertia, post-partum hemorrhage, retained or adherent placenta, and puerperal convulsions.

Mal-positions are the occipito-posterior, whether head or breech presentations, and the presentations are those of any other part of the fetus.

My experience has been that the occipito-posterior positions are usually slowly changed into anterior ones by the forces of nature; but it adds to length and severity of the labor. So I believe if they can be changed at the outset without detriment to mother or child, it should be done. If this condition be discovered before the head engage at the superior strait, it is an easy matter to change it with the hand.

A Trying Case.

Some time ago—a year, perhaps—I attended a young woman of 17 in her first confinement; after the os was fairly well dilated and the head failed to engage, I found the delay caused by an occipito-posterior position. I introduced the

right hand, in a few seconds changed it into an O. A. The advancement after this was fairly rapid until the head reached the pelvic floor, when it showed again, though the expulsive effort seemed as strong as desirable. I then applied forceps and delivered the child without any trouble and without injury to mother or child.

This patient recovered without a rise in temperature or any trouble of any kind. I did not make a second visit to this patient.

In case the occiput should remain behind, if the head is of average size, I do not think the delivery could take place without a complete rupture of the perineum and probably would require the use of forceps. I have never seen a case of this kind, however, as all of my cases have changed of themselves or I have changed them manually.

As to those cases which present some point on the trunk, usually the shoulders, they always require prompt intervention. I have seen many cases of this kind, and it is my experience, if recognized early, before the shoulder is wedged down into the pelvic cavity, they are easily converted into foot or breech presentations and add no appreciable danger to the labor. But if they are neglected, as in one case to which I was called, after a quack had wasted 30 hours in the vain hope that it would right itself, it is extremely grave and nearly always results in the death of both mother and child, as it did in this case. I turned the child and delivered it inside of three minutes, but it had been dead for hours and the mother soon followed it.

Infection.

The organs involved in parturition are delicate, sensitive human organs, and exceedingly susceptible to infection, and neither hand nor instrument should ever be inserted into the vagina or uterus without a clearly defined necessity, and with sufficient knowledge and ability to accomplish the object of the invasion. If these are wanting, it is better to wait and summon counsel.

Slow or interrupted labor has many causes, among them deformities of pelvis or fetus, tumors, and deficiencies in the muscular and nervous systems of the mother.

Pelvic Deformities.

I believe that deformities of pelvis or fetus are rare complications in this country, as I have attended hundreds of cases and have never seen one where delivery was impossible, presupposing a proper position and normal expulsive power.

But there are many cases where the safety and well-being of mother and child require help, either by increasing the strength of the expulsive

effort or by external aid with forceps or otherwise.

Ergot.

I know the teachers and writers on obstetrics advise against the use of ergot for this purpose, and, perhaps, they are right when we consider what a murderous weapon it is in the hands of an ignorant and reckless man. But in many cases, where the contractions are lagging and without effect, when there is no mechanical cause for it, a few proper doses of a good preparation of ergot are a boon to the parturient woman, bringing a speedy termination to a labor that would otherwise drag on for hours and in the end perhaps have to be completed with forceps.

If the contractions are not normally strong, I give about 15 drops of fluidextract ergot every 15 or 20 minutes till effect, and I have always been able to get just the amount of force I desired, and no more; not always enough to terminate the labor, because a forceps delivery is much safer than one that requires an unusual strain on the uterus.

Forceps.

It is my custom to use forceps when a normal exertion that will not hurt the woman fails to terminate the labor in a reasonable time. This is entirely a matter of individual judgment and I suppose one must have some experience before he can discriminate; and therein, I suppose, lies the wisdom of the obstetric ban on ergot. There is much less danger in forceps in the hands of the inexperienced than there is in ergot. I have never used pituitrin, as ergot will do safely all I want done in this direction, and no one seems to know just exactly all that pituitrin will do.

Post-Partum Hemorrhage.

If I have not given ergot during the second stage I give a full dose at its conclusion, and keep one hand on the uterus to prevent a relaxation and filling up with a concealed hemorrhage.

If all seems well I wait 10 to 30 minutes; then, if no pains come on for the expulsion of the after-birth, I proceed to deliver it with a modified Credé's method, using a mild kneading and compression. If this fails, I introduce my fingers into the vagina, hook them under one side of placenta and roll it out, at the same time compressing the uterus with my left hand on the abdomen.

I think it rarely happens that the placenta remains attached to the uterine wall after the birth of the child. It has never occurred in my practice; but I was called in to assist in a case of this kind on one occasion 10 or 12 hours after the birth of the child, and my experience here

convinced me that when this is really the condition it is better to leave it alone until it comes loose of its own accord.

If there is undue hemorrhage immediately after the birth of the child I give another dose of ergot, remove the placenta at once, and clear out clots from the vagina and uterus, and, if hemorrhage continues, I compress the abdominal aorta against the spinal column just below the umbilicus. This is easily and quickly done and has never failed me; but, if it should, I would as quickly as possible pack the uterus with gauze impregnated with some mild styptic.

Conclusions.

Puerperal convulsions are said to occur once in 600 pregnancies, with a mortality of 25 to 40 per cent. It is a dangerous complication, and every woman should have careful, competent medical supervision during pregnancy in order that she may have the benefit of whatever preventive treatment we are able to give.

Since the cause of the disease is not known, the most we can do is to correct, if possible, every discoverable deviation from normal in every organ and function; and, since the weight of opinion is in favor of the theory that it is or may be caused by some renal change, it is safe to watch the kidneys closely and institute at once whatever treatment may be indicated by this condition.

Even though we do not know the cause of the condition, we are able to recognize the premonitory symptoms and perhaps ward off the attack or, at least, not let it find us unprepared.

If we find albuminuria, tube casts, a blood pressure above 150, edema, nervousness, sharp headache, disturbance of vision, epigastric pain, we may be sure that eclampsia is impending, and, no matter at what time during pregnancy these symptoms occur, if they do not yield to prompt, proper treatment, I believe the pregnancy should be terminated.

Treatment: two grains calomel with sodium bicarbonate every hour till effect; then keep bowels and kidneys active with compound jalap powder. If the pulse be full and strong with high tension, full doses of veratrum viride and potassium nitrate every hour till pulse-rate is down to 60 or 70. Give a warm bath and perhaps a hypodermic of pilocarpine; put the patient to bed, and have her drink a glass of hot water—no other food or drink—every two or three hours for twenty-four hours; then milk diet for three or four days; then gradually come back to solid food, but with as little proteid as may be.

If convulsions occur during pregnancy, I do not believe the woman should be required to go to

term. The chance for life for both mother and child is so poor that I believe it is a useless risk.

If convulsions occur during labor, the delivery should be hastened as much as possible. If the cervix is dilated and head not engaged, do a podalic version, and deliver by the breech. If the head is well down in the excavation, deliver with forceps under full anaesthesia. I doubt if it is good practice to use forceps when the head is about the superior strait, under any circumstances; a Cæsarean section, in my opinion, being much safer.

If the cervix is not dilated and the labor does not seem inclined to advance, a Cæsarean section would appear to be safer than a forced labor.

Medical treatment: A hypodermic of morphine and hyoscine will relieve some of the symptoms in the early stages; perhaps the most useful measure is the hypodermic use of ten or fifteen drops Norwood's tr. veratrum viride every thirty or forty minutes until its effects are seen. Formerly I sometimes resorted to a rather copious blood-letting, but I think the veratrum will have the same effect on the circulation without its dangers.

Elaterin in doses of 1/10 or 1/6 grain every hour until effect, and perhaps some potassium bromide and hydrated chloral per rectum are useful measures in many cases.

There is one other measure that I always resort to and for which I can give no physiologic reason: this is an enema of 1/2 ounce to an ounce oil of turpentine in warm water, repeated in an hour or two if needed.

There is at least no harm in it and all the patients to whom I have given it have recovered.

Puerperal Eclampsia.

By J. L. deWOLFE, M.D.,
WEST PASPEBIAC, QUEBEC, CANADA.

In country practice, the first the physician sees of the pregnant woman is when he is called to deliver her: the recommended monthly urinalysis, survey of other symptoms, etc., is impossible, or practically so. Yet these things should be done.

Regulation of the diet is not sufficiently emphasized. It may be noted that the quantity of the urine, and its specific gravity, not necessarily the presence of a trace of albumin, is *the more important*, too much emphasis being placed on albumin. To my mind, high blood pressure and diminution in the excretion of urea are danger signals of importance. Low blood pressure and a normal amount of urea, even if a trace of

albumin is found, are reassuring, the albumin by itself not necessarily being dangerous. Albuminuria is found in 50 per cent. of pregnancies in some period of development, though usually only in traces; and well developed albuminuria during pregnancy often gives rise to no symptoms of toxemia.

Albumin percentage is not a safe index of the amount of toxemia, preëxisting and associated pathological lesions being more important factors: renal insufficiency is not the whole story. A blood pressure of 150 to 160 mm. indicates impending eclampsia, but occasionally eclampsia occurs with a low pressure.

Theories.

Whether true eclampsia exists independently of nephritic toxemia is debatable, and sometimes it seems that the liver has much to do with the case; but cases coming to post-mortem usually reveal renal lesions. Clinically the toxemia is hard to explain. Urea is an end-product in the metabolism of albuminous compounds and is more or less constantly found in the liver. The contention that urea is in part formed in the liver is based upon the diminution of urea excretion in fatty degeneration of the liver; and it does appear as a clinical fact that the liver bears a relationship to certain cases of eclampsia. If urea is taken as a measure of the decomposition of albumin and the proteids, it would not appear improbable that deficient urea and the presence of albumin would coexist.

Treatment.

Little advance may be recorded in methods of treatment; indeed, the return to venesection is a recrudescence of old practice. Sedation, elimination, venesection and prompt delivery seem, even in this day, to be the program, as in the past. In my experience, venesection during the attack is the more potent for good of all of these. However, I quite agree with Rittenhouse (*Am. Jour. Clin. Med.*, April, 1916) that the main factor in the preventive treatment is the pushing of digitalis to the physiological limit. This digitalis treatment has no place in the attack, however, veratrum viride being preferable. Prof. Lapham Smith, of Montreal, advocates what seems enormous doses of veratrum, and I have not had his courage in its use. In my hands, in fairly full doses, veratrum has sometimes wholly failed. But venesection and prompt delivery have not failed, except in cases where the blood refused to flow readily or wherein mechanical obstacles retarded delivery.

The new U. S. P. requires a higher degree of purity for a number of chemicals.

A Study of Cancers, Not Cancer.

By E. E. FISHER, M.D.,
Room 412, U. S. National Bank Building,
SALEM, ORE.

(Concluded from last month.)

Symptoms of Cancer of Stomach.

In cancer of the stomach a history of gastric disturbance precedes the cancer in a large number, if not a majority, of cases. The average duration of symptoms in a series of one thousand cases was more than two years. This would indicate that in at least the majority of cases of cancer of the stomach, some lesion, ulcerous or otherwise, existed previous to the development of cancer, a point which has been disputed so far as cancer of the stomach is concerned, although accepted for all cases of cancer on the surface of the body, where, Mayo says, as far as he knows, cancer has never developed without a previous lesion. The symptoms of cancer in the stomach are vague, indefinite and widely variant, depending much on its location. At the cardia they may be pronounced early; at the pylorus, the more usual site, they are usually late and due to obstruction.

In all cases the chief symptom has been abdominal discomfort in the region of the epigastrium aggravated by eating. The vague discomfort is followed by nausea, belching, vomiting, vomiting of blood, and blood in the stools, loss of weight and strength; and these are the symptoms that drive the patient to the physician. The more positive and definite the symptoms, the more advanced the cancer. We *must* educate the public so that *any* epigastric discomfort continuing over a period of three weeks aggravated by eating solid food, will be warning sufficient to *compel* the patient to seek consultation and examination. This warning, by no means, means cancer or any disease that may develop cancer, and often restricted diet and some medicine will give them relief; but if it *is* cancer, this treatment will only increase the danger. A *thorough* examination means gastric analyses not once, but often, and careful investigation with the X-ray.

Weighing the Evidence.

The art of the diagnostician lies in weighing the evidence at hand, and it is the rule that a correct diagnosis, if made at all, will be made on comparatively few signs and symptoms of definite value. The presence of tumor and obstruction, supplemented by roentgenoscopy and the examination of the stomach contents indicates the lines of investigation.

The diagnosis of cancer of the stomach can not often be made early enough to obtain a radical cure by operation, but a diagnosis of some condition of surgical nature, probably cancer, can be made in time to permit operative interference in more than one-third of all cases (378 out of 1,000).

X-Ray Evidence.

The early diagnosis does not depend on any sign or symptom due to cancer itself, but on the mechanical condition produced by the growth. Therefore in cases of suspected cancer of the stomach the recognition of such mechanical conditions should be the first aim of the diagnostician. The evidence furnished by the X-ray is next in importance to the discovery of tumor and good remnants. It is a valuable aid in the diagnosis, not because it demonstrates in the early stage that cancer is present, but because it shows deformities and muscular deficiencies that are evidences of cancer. It also gives confirmation as regards the presence of obstruction and tumor in cases of cancer of the pyloric end of the stomach.

Gastric Ulcer.

The relation between gastric ulcer and cancer has been discussed frequently and thoroughly by Rodman, Ochsner and others, and its importance from a prophylactic point of view, and its bearing on prognosis, must be appreciated in order to decrease the percentage of mortality from cancer of the stomach. Rodman, Mayo and others have constantly directed our attention to the significant fact that the ulcer-bearing areas of the stomach are also the areas most commonly occupied by cancer. Others have concluded from their observations that there can be no definite causal relation between ulcer and cancer.

Now I shall quote largely from Ochsner on the "Relation Between Gastric Ulcer and Cancer." "Whenever experimental work shall have advanced sufficiently to convince pathologists generally that cancer is due to an infection, of which I am fully convinced, the causal relation between ulcer and cancer of the stomach will be clear as the relation between ordinary wounds and pus infection is today."

Streptococci and Cancer.

The experiments of Rosenow seem to show a definite relation between streptococci infection with a definite selective quality and the formation of gastric ulcer. The observations of Gaylord, Marine and Marshall concerning the production

of cancer in fish with food containing fecal excrement seems worthy of consideration in connection with this subject.

"There can be no doubt but that much unclean material can be eliminated from our food, or if it is present in the food in such form that it can not be eliminated, it can be at least sterilized by careful cooking, I refer especially to uncooked vegetables which are grown in soil filled with manure.

"Coming to the practical end of the subject, it seems clear that, if cancer of the stomach is usually implanted on ulcer we are in a position to reduce the mortality from this cause to a very marked extent, first, by eliminating the various causes of gastric ulcer so far as possible; second, by securing the permanent healing of these ulcers when they first appear, primarily by making an early diagnosis and instituting carefully regulated long-continued dietetic treatment and hygiene; secondarily, by surgical treatment; in the third place, by preventing the use of unclean, uncooked foods; and in the fourth place, by excising all suspicious ulcers.

Duodenal Cancer.

The fact that there are so few cancers of the duodenum, as compared to cancer of the stomach, can be explained by the fact that while there is stasis in the stomach there is none in the duodenum. In other words, while food containing the cancer-inducing germ will remain in contact with the ulcer of the stomach sufficiently long to permit the germs to become implanted, this is not the case in the duodenum. It is possible that these germs may require an acid medium to stimulate them to attack the tissues.

It is a relatively easy matter to overlook the history of a previous gastric ulcer, because in the absence of severe hyper-acidity, the pain in the cases is frequently not sufficient to be remembered through the great distress from which the patient suffers after the cancer has developed. The large majority of these patients have habitually eaten large quantities of food which was certain to be infected with manure, such as celery, lettuce, radishes, so the introduction of the cancer-inducing germ into the open wound of the ulcer could easily be explained. These gastric ulcers are of such long duration that the focus of irritation might readily serve to locate cancer-inducing germs which might have entered the circulation through some other portal.

This does not indicate that every patient who has ulcer of the stomach will ultimately have cancer, any more than that every soldier going to war will be shot; but it shows the wisdom of closing this opening for the entrance of cancer

by curing the ulcer early and permanently."—(Ochsner.)

Uterine Cancer.

One-fourth of all cancers in women are cancers of the womb, and it is so frequent and the suffering so severe and the death caused by it so dreadful that no woman should be ignorant of its early signs, but should be equipped with knowledge which will enable her to detect the disease at its earliest appearance. Records show that early treatment of cancer of the womb by surgery cures from 25 to 48 per cent. of the cases of the kind that they have considered operable. Cancer of the womb occurs oftenest in women over 35 years of age. Few have it before 40 and it is increasingly frequent up to 55 years of age. Its most frequent appearance is in the period dating from five years before the change of life to about the same period after the change. The conditions or signs which should make all women suspicious of cancer of the womb can be enumerated in the order of their occurrence:

1. Leucorrhœa (white discharge slightly tinged with blood at any time between the menstrual periods or after the menopause).
2. A distinct bloody discharge at irregular times between monthly periods, with more than usual flow at the periods, or any bloody discharge after the menopause.
3. Feeling of fullness, or distress, or pain centrally located, low down in the vagina.
4. Feeling of general weakness, with beginning loss of flesh.
5. Increased leucorrhœal discharge, accompanied by some blood and fluid, watery in its nature, with a tendency to offensive odor.
6. Increased weakness, loss of flesh, with development of a pale waxy appearance of the skin, and increased discharge of watery leucorrhœa, with occasional gushes of clear blood, all accompanied by a tendency to foul odor.

Importance of Symptoms.

It is only the first three sets of signs or symptoms that we should be interested in if we are expecting a cure of the cancer. Every woman over 35 years of age who develops an unaccountable leucorrhœa, especially if it is offensive in odor, or tinged with blood, unaccompanied by the menstrual period or after the change of life, should immediately insist on careful vaginal examination by the best physician she can secure. We urge prompt action when the suspicious symptoms of beginning cancer are recognized in order that complete removal of the disease may be accomplished and the woman cured of her trouble. The same prompt action is advised in later cases, because it is impossible to judge

accurately by the symptoms, without a careful examination, just how far the disease has extended.

Surgical Intervention.

When the examination reveals absolute signs of cancer of the womb, the most reliable medical men of the world are agreed that the complete removal of the cancerous womb by surgical methods offers the only reliable hope of cure. This treatment is often followed, in doubtful cases, by the application of Roentgen ray, radium or mesothorium. When the disease has become wide-spread, making complete removal by surgery doubtful, then the X-ray, radium and mesothorium offers the greatest hope for the prolonging of life and the relief of pain.

Breast Cancer.

Cancer of the breast is second in frequency only to cancer of the stomach. It has been customary to estimate that the breasts are responsible for 25 per cent. of all the cancers of the body.

In Great Britain one woman out of every eight over 35 years of age dies from cancer, while the death-rate in males is only one in eleven. Although men suffer more frequently from cancers of the stomach, the large number of cancers of the breast and of the uterus make it plain why woman pays the heavier toll to this frightful scourge.

The breasts, being superficial organs, susceptible alike to daily inspection and palpation, offer opportunities for early diagnosis that are certainly not possible, perhaps never will be, in the case of either stomach or uterus.

Some Facts for Women.

Every woman should be frequently reminded of a few pertinent facts.

While cancer is more frequent after 45, it is common enough between 30 and 40, and it is far from rare between 20 and 30, and it may affect young girls; it is equally common in married and unmarried, sterile and fruitful. There is a history of heredity in 25 per cent. of those affected, but this should not alarm, only stimulate, those with such a history to greater watchfulness.

We have clinical, pathological, experimental and surgical evidence to show that cancer is primarily a local infection, and may, in its inception, be cured: and the microscopical evidence is even more convincing.

In cancer of the breast, as in the uterus and stomach, the importance of early recognition of pre-cancerous conditions can not be overrated. Any tumor, lump, cake or swelling in the breast demands a careful examination at the hands of

the family physician, and if he so desires the opinion of a specialist should be asked. Scars are of less normal resistance than healthy tissue and should be watched continuously. Discharges from the nipple, whether watery, straw colored or bloody, are unnatural, and even though not accompanied by other symptoms or signs of trouble, should be looked after at once. Not infrequently will this be the only sign of potential or actual cancer. Sensitive areas, particularly if accompanied by hard, painful lumps throughout the breast, the symptoms being increased before each menstrual period, the organ also showing an appreciable increase in size for a few days, indicate that a condition is present which in 25 per cent. of the cases result in cancer. This is due to a chronic inflammation of the gland, which, in time, is followed by the development of small cysts scattered throughout its substance, which can not be reached by internal remedies or local applications of any kind. It is the pre-cancerous condition and demands prompt surgical treatment and is curable.

Concealing Conditions.

There is one more thing of which I wish to speak, and that is the tendency of women to suppress all knowledge of its existence, not even confiding in those to whom one would ordinarily go for advice. Stiff, ill-fitting corsets which unduly compress or irritate the breasts should never be worn, as they are unquestionably a menace.

There is but one treatment for cancer of the breast, and that is free removal by the knife. Use of radium, X-ray, electricity and caustics may do the victims of inoperable cancer some good, but none of them is of such demonstrated value that it is entitled to employment until surgery has done its best. Early operations cure 80 per cent. and upwards of patients with cancer of the breast, whereas the fairly early ones cure one-half of the cases.

Conclusions.

In conclusion I wish to urge once more the necessity for the early recognition of the symptoms of cancer and the *great* necessity for more frequent examinations; and, finally, that we add our mite toward the education of the laity, not to incite an unnecessary fear by the presentation of the hopeless side of cancer; but to excite sufficient fear of the beginnings of cancer to lead them to seek advice and proper treatment in the early stage of the disease in which the probability of cure is often 100 per cent., for coöperation of the public is essential if we are to have the full benefit of our present knowledge.

Let us say to the public: "Go to your physician

at once on the discovery of any sign or symptom of irritation about warts, moles, benign tumors, or ulcerations, chronic inflammatory processes or injuries, however slight, which fail to heal promptly."

When they understand that all sources of chronic irritation carry with them a deadly significance, the prevention of cancer will have been greatly advanced and the percentage of curable cases which come to the only known cure—operation—will be greatly increased.

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Disease of the Pituitary Body.

By W. R. DILLINGHAM, M.D.,
 HALSTEAD, KANSAS.

The pituitary body, consisting of a glandular anterior lobe and a nervous posterior lobe, is a small reddish gray vascular mass weighing from 5 to 10 grains and of an oval shape; it is situated in the sella turcica, in connection with which it is retained by a process of dura mater derived from the inner wall of the cavernous sinus. This process covers in the pituitary fossa, inclosing the pituitary body and having a small hole in the center through which the infundibulum passes. The anterior lobe is supplied by small branches from the internal carotid artery; the posterior by vessels from the pia mater. Through its position the hypophysis shows special relations to the optic chiasm and to the third and sixth cranial nerves.

The posterior or nervous lobe contains a substance that increases blood pressure and acts as a diuretic. The anterior glandular lobe is a true ductless gland, the exit channel for its secretion being formed no doubt by the lymphatic vessels or the blood vessels. Its relation to the other ductless glands is shown in experimentally induced hypophysis deficiency by marked changes in the histological picture of all the ductless glands.

The removal in dogs of all but a fragment of the anterior lobe produced adiposity, increased sugar tolerance, lowered body temperature and produced reverse sexual changes.

A functional hyperplasia of the anterior lobe

stimulates tissue growth apparent in the skeletal, cuticular and subcuticular tissues, and has an excitatory effect on the reproductive apparatus. Anterior lobe insufficiency inhibits skeletal and sexual growth.

A tendency to progress towards a state of relative glandular inactivity is apparent in most cases of pituitary disease.

Pathology

The diseases of the pituitary body seem to arrange themselves into 3 groups:

1. Those having symptoms resulting from hyperpituitarism.
2. These resulting from hypopituitarism.
3. Those of a poly-glandular character.

Acromegaly is a disease which results from hyperpituitarism and is characterized by gradual enlargement of the acral parts and hyperplastic alterations in the entire osseous system. The picture of this condition is a familiar one.

The skeletal changes, the cuticular changes, the sexual changes, all seem to result from over-activity and hypersecretion of the anterior portion of the pituitary body, and these changes are permanent, whether or not the secretory disorder which incited them has ceased to be active.

Hypophyseal dystrophy, when manifesting itself in the adult, is characterized by pronounced obesity, by inhibition of development, and by retrogression of the genitalia. When occurring in childhood there is an inhibition of growth and of ossification. These cases usually have polyuria, which has caused some writers to claim that idiopathic diabetes insipidus may be due to irritation of the posterior lobe.

The most common cause of hypophyseal dystrophy is tumor, either of the hypophysis or of the neighboring structures, with pressure. The tumors or glandular strumas which accompany pituitary disease enlarge very slowly and the symptoms can usually be traced back for many years.

Symptoms

Symptoms of poly-glandular character are occasionally found in which a pineal, thyroid, or ovarian symptomatology is sufficiently pronounced to make a primary hypophyseal disorder questionable, but in which are present pressure symptoms, and secondary disturbances of the reproductive glands.

Treatment

Operative treatment stands in the mid-point of therapy. The results consist in lessening the brain pressure, relieving the headaches, and improving the vision.

In dystrophy hypophysis tablets have been given and should yield good results.

Hemorrhage the Bete Noir in Removing Hemorrhoids.

By BENJ. E. DAWSON, A.M., M.D.,
101 East Thirtieth Street,
KANSAS CITY, MO.

I have in my library Erichsen's Surgery, published in 1869, also have a number of other books on surgery, by various authors, issued at later dates, down to Ochsner and Percy, in 1915. The advance in surgery, as manifested by these books, over this space of nearly half a century, is marvelous. There is marked advance in technic, in new instruments and in new operations—more than in several centuries preceding this period. This advance is so extensive that it elicits admiration and almost challenges one's credulity in every department of surgery but one; here there is flat disappointment. I refer to the section on the treatment of piles. Erichsen teaches the use of the ligature, and the clamp and cautery; so do Ochsner and Percy. Simply a repetition of each preceding book published during this period. They all give a cut of the old clamp with ivory lining on the under surface, to protect adjacent tissues from the heat. The last book does make some advance; it recommends a small-sized soldering iron, heated in a tinner's heater or gas jet.

Secret Methods.

When we consider the vastness of this surgical field, and the prolific harvest therein; when we consider that these methods are cruel, barbarous, unscientific and unsurgical, the intellectual stasis conspicuously patent here is almost beyond our comprehension. When our leading surgeons, and the medical profession in general, so culpably neglected this inviting field, we cannot greatly censure Brinkerhoff and a host of others for coming in with secret remedies and methods.

For many years this work was seemingly beneath the dignity of the ordinary physician. Every patient diagnosed his rectal trouble as "piles," and his physician accepted his diagnosis, prescribing therefor without an examination. The reason given for using these old methods is to control hemorrhage. It is very strange that our leading surgeons dread hemorrhage here, when it is as easily controlled as in operations elsewhere.

New Methods.

With appliances and methods we have to-day, any bleeding vessel is easy of access, within three or four inches of the anus. In the first place, any bleeding, whether from artery or vein, will cease of itself if below the upper margin of the internal sphincter as soon as these muscles con-

tract. It is seldom, though sometimes, necessary to use torsion or ligate below this margin. Do not do that which is unnecessary; a stitch in the rectum usually renders the use of the catheter imperative.

Technic.

For the middle variety, or those found in the lower inch of the rectum, they may be removed through the blades of a bivalve speculum before dilating, or after dilating without the use of the speculum. In the former method, insert the bivalve and open the blades just wide enough to allow the pile tumor to protrude into the field. The lower end of the hemorrhoid is then seized with the tenaculum, which is not to penetrate deeply into the tumor. With a pair of surgical scissors, curved on the flat, start just back of the insertion of the tenaculum, and remove a narrow strip of mucous membrane, longitudinally, to the upper end of the pile. The blades of the speculum should now be opened somewhat wider, so as to spread the lips of the wound, while the operator clips away with the scissors the hemorrhoidal tissue which protrudes through the opening.

Open the scissors slightly and press with the blades upon the denuded surface; the small grape-like projection of the hemorrhoidal structure will appear and can be clipped off, together with the redundant tissue. By using a little skill one can remove the entire pile and not injure the larger blood-vessel underlying the tumor, and encounter but little hemorrhage.

This process can be applied to each tumor, until the rectum is free. It is necessary in doing this work to leave a strip of undenuded surface between the pile tumors. At least three or four strips should be left unmolested. They may be very narrow if their continuity is intact. In a very short time the mucous membrane is reproduced, growing from the margin of these strips, leaving scarcely a trace of the surgical procedure.

In the latter, do a thorough, but gentle, dilatation of the sphincters, with the rectal bivalve, until the muscles are well relaxed. Now seize the anal margin with T-forceps and evert the inch over the left forefinger, thus doing the work the same as between the blades of the speculum, except the work is done quite outside.

Internal Hemorrhoids.

For internal piles—those above or extending above the upper margin of the internal sphincter—dilate thoroughly; then evert with T-forceps, going around the circle of the anus with four

or more forceps. With other T-forceps placed above these, which should then be removed, the climbing up, or, rather, everting the bowel, may be continued until the entire pile-bearing field is exposed and freely accessible to the operator. Next grasp any one of the hemorrhoids with the T-forceps, longitudinally. Drag it down, and, with No. 2 plain catgut suture in a short, curved, round-pointed needle, encircle the blood vessels supplying from above. Tie this suture, but do not cut it off. Now, with scissors, curved on the flat, remove the tumor, cutting beneath the forceps and below the suture. If the suture has failed to embrace the artery, which will spurt freely, you have your catgut and needle ready

to take another turn or so around it, and promptly stop the bleeding. With this same suture and needle a continuous line of stitches can be used to coapt the margins left where the pile was removed. Each tumor then is treated in like manner until all have been removed.

In this procedure the hemorrhage is under perfect control. This is scientific, surgical, humane and successful.

When the surgical work is completed, insert a roll of gauze, size of the thumb, smeared over with solution iodine, balsam Peru or calendula ointment. Put patient to bed, and remove rectal plug in about one hour; sooner if patient is restless or troubled with dyspnea.

Closing Wounds Without Ligating Severed Vessels.

How Far We May Be Justified In This.

By T. F. LOCKWOOD, M.D.,
BUTLER, MO.

A man was chopping in the timber some distance from home and, from a misdirected blow of the axe, severed the anterior tibial artery at the junction of the upper and middle third. He had the presence of mind to apply an improvised tourniquet made from his pocket handkerchief, above the spurting wound, twisting it with a stick. He remained in the woods for an hour—until his helper returned for another load of wood. He was brought home in the wagon and I saw him soon after his arrival. I informed him I would have to tie the bleeding vessel. He bitterly protested and asked if there was no other way by which the bleeding could be stopped. I told him it was the only rational way to dress the wound. I said to him, however, that there was a possibility of arresting the hemorrhage by suturing the incision, which was five inches in length, and applying a compress over the wounded artery, but it was too venturesome, as it might break loose while he was asleep and he might bleed to death before he was aware of the danger. He said he would take the risk and be responsible for the results.

I sewed up the wound with strong silk sutures, about one-half inch apart and one-quarter of an inch from margin of incision, taken deep into the tissues, tying them with extraordinary tension, bringing the parts so tightly together that a drop of blood could not ooze between the stitches. I then applied a dry antiseptic dressing with a compress four inches in length the size of my thumb, made from sterilized gauze, lengthways of artery above and extending half-

way down over wound. I then applied the usual roller bandage snugly from toes, over foot, ankle and up to the knee. I kept the patient in bed with foot elevated for four days, when I redressed the wound, reapplying a fresh compress with little less tension for four days longer, when I removed the sutures and roll compress. I re-applied the bandage over an absorbent cotton compress as a means of support to the weakened blood vessel and surrounding tissue. Recovery was complete without the loss of one drop of blood after the above treatment was inaugurated.

A Case Record

Case No. 2—A man was re-soling his shoe, and in trimming the leather he let his knife slip, severing the radial artery of left wrist. He bled to the point of fainting before his excited wife succeeded in getting a tourniquet applied tight enough to arrest the hemorrhage. The bleeding end of the vessel had apparently retracted, and I was unable to grasp it without enlarging the incision. This he objected to, saying he had all the knife cutting he wanted for one time. Remembering my former success, I proceeded to lace up the incision, which was about two inches in length, with silk sutures so tight that not a drop of blood could pass.

Surgical works tell us not to put too much tension on sutures; ordinarily that is correct counsel, but in superficial skin and muscle suturing it is not so significant, for in a few hours after sutures are tied tight, they begin to cut slowly into the cramped tissue and in a few days they become properly adjusted, and in the meantime repair is going on in the wounded artery.

After sewing the incision as above stated, I

then applied a gauze compress roll about the size of my finger, two inches long, placed parallel to the artery, letting it extend down over the wound about one inch. The external bandage was applied from fingers to half-way to elbow. In three days I re-dressed the wound which was as dry as it was the hour I formerly dressed it. In seven days I removed the sutures and re-applied a cotton compress. In ten days the wound was well. Since then I have treated a number of severed radial arteries in like manner without a leakage of one drop of blood.

Stab Wounds

Case No. 3—I was called hurriedly to meet another doctor in a case of hemorrhage. I found the doctor holding his thumb over a knife stab wound just above and to the inside of the knee. The puncture had cut the superior internal articular artery and it would throw a pulsating stream to an alarming degree for a small vessel whenever the pressure was released. The doctor said we would have to enlarge the opening to take up the artery, as the puncture was too small to find it otherwise. I said let us try another plan which I believe will answer. When I explained my plan, he laughed at me and said: "Doctor, it will never do it." But he said: "You may try it." I stitched up the wound with silk sutures drawn tight, put on a compress held in place with comfortably tight bandage and all was over. The fountain was checked.

Case No. 4—A man in a fight received a stab wound in his back over the scapular region, cutting the subscapular artery. A physician was called and, being unable to pick up the artery, he endeavored to arrest the hemorrhage by applying a compress. The vessel continued to bleed until the man was as white as tallow. I was called in consultation and suggested that we sew up the skin tight enough to hold coal oil and I was sure it would then hold blood. I applied silk sutures deep and one-fourth inch apart, putting extra tension on them. When I had finished and mopped the field of operation, not one drop of blood oozed out. We applied a compress the size of my hand over the wound, held in place by adhesive strips and a figure-of-eight bandage applied about the shoulders. Recovery was perfect.

Know Your Anatomy

In reporting the above case, I am reminded of a similar event that happened in my early practice. Just over the county line from where I was located, a man in a fight received a knife stab, cutting the subscapular or some other artery about the scapula; and he bled to death because the physicians were unable to find and to tie the bleeding vessel. He lived for three weeks, however, bleeding slowly but continually, with two

doctors in attendance. They said the bleeding artery was so deep and so far under the shoulder blade as to render it impossible to reach it. If a physician does not know enough anatomy to enable him to cut down elsewhere and tie the bleeding vessel, then he should resort to other means for relief. If they had only sewed up the knife puncture in this case, as I have described, I am sure they would have saved the life of their patient.

The Deep Palmar Arch

Case No. 5.—While assisting in marking young pigs, a man received an accidental knife wound in the hand, severing the radial artery at about the junction of the deep palmar arch. Owing to the smallness of the opening and depth of wound, I unhesitatingly resorted to the suturing and compression system, with happy results.

This method of arresting hemorrhage is recommended only in cases where the external opening is too small to ligate the vessel without enlarging the incision and for other unlooked-for hindrances arising, as in the first two instances herein related.

In conclusion, let me say to the young physician who becomes nervous at the failing attempt to seize and tie a spurting artery, to remember that nine out of ten bleeding arteries can be controlled by the above method. If, however, you can seize the end of the vessel and use torsion, it will, of course, aid materially if not suffice to arrest the blood flow. If the end of the artery cannot be seen but you know its definite location, seize the surrounding tissue and use torsion on the entire mass; it will greatly facilitate the compression and sewing system of stopping blood from a wounded artery. Try it in your next case and see the pleasing results.

This method is easily condemned; but we used to practice in the country and even yet shudder over some of the surgery we did under stress. Nevertheless, results were usually good—often unexpectedly good. But such work must not be classified as good surgery: we recall two disasters in the practices of other men, for this method is largely practiced without any physician coming to the front to defend it, as has Dr. Lockwood.

Permit us to urge the physicians at large to become acquainted fully with the technic of emergency surgery, and to avoid inadequate work wherever possible to do so. Better far to place the patient under ether and do a complete job. In the long run, results will be better, and the doctor will sleep better over his cases. There are, however, cases in which such technic may be necessary. We believe they are very few.—
EDITOR.

Some Modern Obsessions in Medicine and Sanitation.

By J. G. B. BULLOCH, M.D.,
The Octavia,
WASHINGTON, D. C.

The race today not only is nervous, but is in a fit condition to receive many erroneous ideas and false concepts based upon an immature development, and the admittance of too many ill-advised persons in our councils.

Accordingly we observe many pathies and fads being forced upon us by those of immature judgment, jumping at conclusions without the power of logical deduction, and illy informed as to the right course to pursue. The constructively strong should rule in matters which concern the welfare of the race.

Here are a few of the present-day notions, each considered under its heading:

Fresh Air Delusions.

This subject has come to be a perfect craze. Now, no one denies that good, wholesome air is an essential element for good health, but there is a vast difference between good ventilation and an imperfect system whereby the surfaces are chilled and induce congestions, thereby offering a fertile soil for the development and propagation of bacteria. A life in the open country air where one is for the most part out of doors and takes due precautions must of necessity be conducive to longevity and health, but the idea of leaving a comfortable house and making a change in all kinds of weather, leaving a warm house and going out of doors on a sleeping porch, there to inhale the germs of the dust-laden city, is certainly not conducive to health; and the practice of placing little babies out of doors in all kinds of weather should be condemned. The poor little baby who needs all the force at his command should not be left out of doors to get his respiratory passages and his abdominal walls chilled and thus bring on the seeds of a life of misery, bronchitis, asthma, tuberculosis and troubles of the stomach and bowels. The fact is, people have gone daft on fresh air. The most approved idea of the present day appears to be that it is not that we need so much air as that the bodily temperature should be kept at an even standard, not too cold or too hot, and that although fresh air or proper ventilation is the correct idea, the main thought is to allow the system to attain the equilibrium. Cold draughts are most pernicious.

The researches of Dr. W. W. Alleger, a bac-

teriologist of Washington, proved that currents of air contain many more bacteria than the undisturbed air of the room, and that constant, gradual ventilation is to be preferred to rapid interchange which stirs up the dust particles and increases the bacterial count.

Management of the Baby.

It is a well-known fact that the baby does not develop mentally to any special degree for the first few months, and yet we have put forth by certain physicians the doctrine of regular hours for feeding the child—waking him up through the night to feed him. Now why should we desire to impress a young baby in a disciplinary way and maybe thus do much harm to him? A babe should have no more discipline than is necessary for his good, and especially should be allowed to have his way as to the time of sleeping. In fact, a healthy child should sleep as long as possible and eat, as a rule, when he desires food, and under no circumstances should he be waked up to take his nourishment.

Therapeutic Nihilism.

It is a well-known chemical fact that the blood contains potash, soda, iron, etc., and yet we are told by some that there is no virtue in medicine. They seem to forget that what we call medicines are really foods—substances essential for the welfare of the body, but because perchance these articles do not cure all the ills, they say there is no virtue in administering them. True, we have but a few so-called specifics, but the human system needs for its special organs certain remedies, just as an engine needs attention to its several parts.

If, after a differential diagnosis, we arrive at the conclusion that the patient has pneumonia, we have no real specific for the disease; but, being aware of its gravity, we treat symptomatically the air passages, the heart and other parts and, metaphorically speaking, lubricate, clean and clear the way, that health may be attained.

Defective Hygiene.

Until we have either a National Department of Health, or health boards free from political influence, we may expect to be confronted by many sanitary problems. Is it right for one State to let a contagious disease be carried to an adjoining State? Do we, as physicians, use care in going from contagious cases to those not so afflicted? Do we wear rubber coats and disinfect our hands and our thermometers? Is it not a

fact that there should be no such diseases as mumps, whooping cough, measles, scarlet fever, etc.? Can we stamp out diseases unless we isolate the whole family or send each case to a special hospital until there is no danger of infection?

We all know how many eyes are destroyed by gonorrhoeal infection and how this disease, as well as syphilis, is making inroads upon our inhabitants in many ways. Is there any disease that does not at times create a fit soil for the engrafting of tuberculosis or cancer? Many new diseases are being brought from the tropics.

Whooping-cough cases should immediately be sent to the country and kept there until all danger is over.

Christian Science.

The extent to which humanity gives way to vagaries is very peculiar.

That there is a great Mind, a great Creator, one can not logically deny; that to a degree we are expressions of such a Being seems plausible, but that we do not exist except as reflections appears most ridiculous.

From a chemico-vital standpoint, we are material beings made up of many elements, and therefore that the ego or spiritual part is a factor in building up the body is plausible. We have to replenish that which has been lost by the disintegration of tissue. In a way we are ephemeral and constantly changing. That the mind can, in many cases, by the cultivation of the will and such qualities as love, good will, determination, etc., keep us in a better condition than the one who gives way to fright and anger, we will concede, but a material body needs material substances and treatment to effect a cure of its ills.

Efficiency, So-called.

If this term meant attention to duty, good work, discipline and other qualities which should be the part of those who work for the benefit of humanity, we might subscribe to the term, but "efficiency," to many, means to work the human body as a machine; to crowd into one century that work which the next generation should perform. Why this madness? Why work in insanitary sweatshops, factories, stores, those who are to be the mothers and fathers of the race? "Germany is now becoming alarmed at the decrease in birth rate," and France appears not able to correct the decrease. The old American families are dying out. There is too much strenuousness, too little relaxation for the human family. Added to all of this the race is on the decrease. Can we stop it? Certainly, if we can do away with false impressions and pernicious teachings.

OUR OPEN FORUM

The Treatment of Pneumonia.

Dr. John E. Weaver, of Rochester, N. Y., gave the readers of the COUNCIL (May number) a very interesting article on the above subject; which reminded me that I have been long planning to submit a course of treatment which I was instructed to use by my preceptor, now many years ago, which has proved very successful in many of my own cases. I hesitate in prescribing this treatment at this advanced date in the rapid changes being adopted in the treatment of so many affections, and pneumonia has been one which has no doubt been improved upon. Of course I am making the comparison of what was the treatment when I was a student and the present time. Nevertheless, crude and obsolete as it may appear, I will proceed, hoping that if nothing more is accomplished than creating an interest in old things, I will be well paid for my trouble.

My preceptor was a war surgeon, and necessarily was called upon to treat many cases of pneumonia. Considering the remote date when this practice was used, we must take into account that compared with then and now, and there are many remedies in use now that were not known then, one especially mentioned and used by Dr. Weaver, "phenacetin." At that time quinine was our only and most reliable antipyretic, and opium our main reliance in relieving pain.

Treatment.

The treatment for pneumonia taught me consisted first in giving the following:

℞ Pulv. Dover, 3 ss.; calomel, 3 ss.; pot. nitrate, gr. xxiv.

Mix Sig Div. in capsules or powders No. 3. One to be taken every four hours, followed in an hour after the last dose with a liberal dose of ol. ricini.

Of course we used this put up in powder form, and it made a rather formidable looking dose.

The cough, which appears in from one to two days, is husky, suppressed, and painful, very little is brought up, only a small amount of frothy mucus, thick and viscid; but on the third day the sputum is characteristic of the disease—thick, viscid, poured out and coagulates in the alveoli and bronchioles of the lungs, may contain blood, and is termed brick-dust sputum. In this stage the following expectorant is to be ordered:

℞ vinum ipecac, vinum antimony, tr. opium camph., syr. tolu, aa. ʒ iv.

Mix. Sig. Teaspoonful every hour to the point of nausea, the object being relaxation, favoring the discharge of the sputum. About

this stage or a little later I was advised to apply a blister, dressing same, after the blebs have been evacuated, with wilted cabbage leaves, and I might add that this dressing acts like magic in bringing relief to the smarting and pain caused by the blister. I have also found it very effectual in dressing burns, when nothing better could be had.

Quinine was employed as an antipyretic and was generally satisfactory.

Of course many may object to the opium in both the powders and expectorant mixture, but

Is It Due to Timidity?

I have never found it in the least objectionable. In fact, I have seen my preceptor use pulv. opium in such cases, to control pain, without the least untoward symptoms occurring. I might add that my treatment of pneumonia during my active practice has proven satisfactory, and I would not decline to use it now, especially in robust cases. By the administration of the powder, we get action on all the secretions, skin, liver, kidneys and bowels; in fact a general revulsive effect is obtained.

I have often wondered why it is that so many of our prominent men die when attacked with pneumonia. I feel sure we have all noticed this fact. Is it due to timidity? Are we afraid to give the proper medicines in sufficiently large dose to get the best effect? I have imagined it was due to this. Now I do not care to be looked upon as given to administering heroic doses in treating disease, but I will confess that I try to have the dose large enough to get the desired effect when it is most needed, and not play along with small and repeated doses. And I firmly believe that if pneumonia patients were treated more heroically, with more boldness, that the mortality would be far less than it is to-day.

Parkersburg, W. Va. GEO. B. SIMPSON, M.D.

Autoserotherapy and Autotherapy.

An abstract in the September issue shows the difference between these two methods of treatment, autoserotherapy (or autoserumtherapy) being the first developed. We have received a number of letters, some of which show that the two methods are, by some, viewed as one. Autoserotherapy is an auto-serum method: autotherapy is not a serum, but a vaccine, method. Neither can be viewed in the same light as antitoxic serums, though they (autoserumtherapy and autotherapy) have points in common as regards each other. And neither can be viewed as are the stock and autogenous vaccines. A vaccine contains the killed bacteria: an autotherapeutic filtrate does not contain killed bacteria. Neither autoserotherapy or autotherapy are upon an established basis: they are under trial.

Must Give Quantity.

And it must be remarked that the prominent authorities in immunology do not give support to either method; nor will they do so until one can tell *quantitatively* what a filtrate contains, and they will not be satisfied with giving them upon a homeopathic fit-the-case-with-the-minimum-dose basis. One knows just how many million killed bacteria he is giving in a vaccine. After while there may be established a unit basis for a bacterial filtrate, as there is for a serum. In a well-equipped laboratory making stock filtrates, such as the phylacogens, it is possible to know what strength the filtrate may have, because in its production a definitely known number of bacteria in definite media may be used in making the phylacogen under standardized conditions. The physician following the Duncan method may only approximate; the process is not standardized; a definite number of bacteria are not used; and effects can be checked off only by the reaction resulting. There may be a whole lot in autotherapy; but if there is, it will not be practicable to use it with any exactitude until after the technic is worked out upon a more quantitative basis than has been done, and then it will be just as elaborate a process as is the making of vaccines—not practicable in the average physician's office.

Report of Cases.

Dr. H. D. McQuade, Kansas City, Mo., in a letter to us, considers the matter as a moot question. He has written to several laboratories for information, and they have not replied except to attribute the results from the filtrate to an increased activity of the white blood corpuscles, antigens, antibodies, etc. The Doctor reports two cases of typhoid, Widal positive, with use of autoserotherapy very successfully; a case of otitis media very successfully treated with autotherapy (Duncan technic); a case of carbuncle treated by the oral administration of the filtrate, and successfully. So Dr. McQuade is trying out the *whole thing*. Some cases under treatment he is not prepared to express an opinion upon.

Dr. A. H. Dunton, Cincinnati, O., also reports a case of otitis media of long standing that fully recovered under autotherapeutic treatment. Acne indurata, twelve consecutive cases, are reported, with 50 per cent. cured and the rest relieved. He has also treated old leg ulcers of twenty years' standing successfully with the autotherapeutic filtrates. He treats bubo by the oral administration of a dilution of the patient's own pus in normal saline and not filtered. The Doctor is very enthusiastic.

Also we have received sharp condemnation of the method as unscientific; but not making any very definite points in the condemnation. We have not the space to print these letters, noted above, in full. So far as we have been able to follow up the matter, the most enthusiastic com-

mendations come from homeopathic and veterinary sources, though not all of them by any manner of means. On the other hand, we have heard, in general terms, of some very unfavorable results, the physicians not caring to publish their failures.

There is too much *indefinite* report, both for and against, in this matter of the bacterial filtrates. Some day, let us hope, there will be something more definite and convincing to print.—
EDITOR.

Advance Thoughts Not Well Received.

The article in February COUNCIL by Dr. Robert T. Morris revives old memories. It is common knowledge to the student of medicine how the pioneers of new ideas were hooted at and in many cases actually persecuted. Dr. Morris appears to have had his share of troubles along these lines. With your kind permission the writer will mention a couple of instances wherein he was made the goat.

Away back about 30 years I was called to see two children in a family that had joint affections, one in the knee, the other in the ankle. The diagnosis was "scrofula" of course. I had occasion about this time to send 40 miles for assistance in a surgical case. I was alone and Dr. Field was my nearest competitor. After the operation we walked over to see the children. On our return I told the doctor that in my opinion the time would come in the near future when "scrofula" would find its place as a tubercular disease. The doctor fairly shouted his derision. Later, I suggested this idea to others but was laughed at for my pains. I think the word "scrofula" is not now found in late text books.

My next rebuff was on account of Rocky Mountain fever. I was in practice on the great western prairies of Nebraska at this time. I soon had cases of mountain fever, and the local treatment was wild sage tea. A peculiarity of this fever in my district was the rapid heart action and profuse perspiration in many cases. Aside from these symptoms, the cases resembled typhoid fever in every respect. After two years' experience with this fever, I wrote up an account of my cases for the *Medical World*; my article covered three issues. I gave it as my opinion that these fevers were true typhoid fever, and that the several unusual symptoms were due to high altitude. If I recall correctly, the *Medical World* office had a severe fire about this time and my article was lost, *i. e.*, the original manuscript, but I think one or two issues had the article in part. This was about 1887. Some time later a doctor in Boulder Creek, Col., wrote an article on this fever backed up by post-mortem cases which fully verified my theory.

Better Results With More Food.

While treating these cases of fever all the way from town to 50 miles distant, I made another observation that I could never get anyone to listen at all. From necessity pure and simple I was forced to feed many of these patients solid or semisolid food, or permit them to starve. I could not give them the usual milk diet because all we had was condensed milk and Texas steers. In desperation I fed many of these cases rice custards, prune juices, oranges and pears, soft buttered toast, and I had splendid results. In one neighborhood 40 miles away had many cases and all recovered. These people had no well, so I insisted on a well and then I could apply the Brand cold water baths. This caused a revolt, but I held my ground. I afterward learned if I had lost many cases (lost none), I would have been mobbed. In this case of feeding "necessity was the mother of invention." For years I told of my experience before societies and through journals, and I always got the cold shoulder. Finally some of the "big guns" in the profession took up this matter of diet in typhoid fever, advocating more food, and talking wisely about calories just as though we country doctors understood all this. I made the statement more than once that I fully believed the old milk diet was responsible for thousands of deaths in typhoid fever.

Autotoxemia.

My next tilt with the profession was along about 1896. I was on the program for our State Society, at Tacoma, I think it was, for a paper on headaches. Another physician had a paper on the same important subject. Now I took the position that many headaches were caused by autotoxemia, and I further gave it as my opinion that in a few years we would come to look upon autotoxemia as a cause for many ailments that we did not then understand. Well, I can assure you that the society gave me the laugh in good shape. Now, entire volumes are written upon this one subject alone of autotoxemia, and we know that many headaches are caused thereby as well as many other obscure diseased conditions. The other doctor argued that many headaches, in fact most cases, were caused by faulty vision and the patient needed glasses.

I do not believe that acute rheumatic fever is caused by a germ, but is caused by imperfect elimination, autotoxemia if you please. True, germs are found in joints, but that does not alter my belief. I do not believe that lobar pneumonia is caused by a specific germ, but rather the germ is possibly a product of the inflammation.

Germ Theory Not Fully Known.

Now I know your readers will go all over me with their hob-nail shoes, but I can afford the pommeling I get because I am fully convinced on this score, and it will take stronger argument

than I have yet seen to shake my faith in my theory. I hope to live until I see I am wrong or right. There are some things about the germ theory that we do not yet understand. Many patients do we see here, who on account of the nature of their work often receive severe lacerated injuries, and the very great majority do well. Then along comes an isolated case, not many thank goodness, who receive the most trifling scratch and promptly die. These cases are usually robust people. There must be some natural cause inherent in the individual patient that produces such disastrous results. Unfortunately, medicine is something like the law—a given subject can be variously construed.

I have now been here on Puget Sound, in Bellingham, for nearly 26 years, and have never moved my office during this long time. It is a little out of date, but I am so situated I can look out of my office windows and see miles and miles of the beautiful Sound, and our sunsets can not be rivalled anywhere. This appeals to me as the years come and go, and as my hair becomes streaked with silver threads.

Wonderful Changes.

What wonderful changes have taken place since I entered the profession in 1883. Aseptic and antiseptic surgery, aseptic obstetrics. What a blessing! The treatment of diphtheria and lock jaw, the brilliance of modern surgeons, hygiene and sanitation, preventive medicine with all its wonderful possibilities. The germ theory of disease, which I think is a little overdrawn, has resulted in untold benefit to the human race. Yellow fever and malaria, syphilis, typhoid fever, must bow to the advance of our science. Cerebrospinal meningitis, the scourge of the Sound some years ago when so many young people died, has been almost conquered. Then the colleges did not even have microscopes; now every young physician finds it as necessary as an automobile. Verily, the world moves, and yet there remains much to be done.

The greatest necessity of today is some plan to abolish war forever.

Bellingham, Wash. L. R. MARKLEY, M.D.

A Fatal Case of Measles.

A girl, twelve years old, had an attack of measles; no medical attention. A few weeks after recovery had epistaxis, which was severe and stubborn. She was brought nine miles to my office on a cold day. There was epistaxis and some hemotysis. Auscultation showed a few moist râles. Temperature 102 F. Ordered patient to bed, and attended her for several days. Epistaxis continued for a while, though restrained by adrenalin and atropin, and finally by plugging the nostrils. For several days the temperature remained the same, but the epistaxis ceased. But it was followed by acute nephritis, with hematuria. After five days the albumin and blood

disappeared from the urine. There was slight delirium. Then, suddenly, the left tympanum burst; blood and serum were discharged. Finally the right ear was similarly involved. At no time did she complain of much pain in the ears. The lungs remained uninvolved. Then the temperature went up to 104, and the delirium was more marked. Patient grew steadily worse, developed meningeal symptoms and died, fifteen days after she was first brought to my office.

Were these complications and fatality due to the neglect of treatment when she was first taken ill and the exposure after apparent recovery? I believe they were.

Seneca, S. D.

S. D. SAUER, M.D.

What About That Case of Peritonitis?

Dr. T. C. Harris, Kenbridge, Va., under the title "Peritonitis: Recovery of a Desperate Case," in Open Forum, September issue, says he was "assisting Nature along right and conservative lines." No one can deny its being conservative, but it was a long way from being right for a case of acute appendicitis, as I believe his case was. Applying heat to even a possible appendix case, and then throwing in morphin to mask the symptoms, and then finally delaying nearly a week before operating, is not the way "Nature's wondrous healing power" is used out here in the West.

Early diagnosis, and then immediate surgical treatment, is imperative in these cases.

Your journal is the best that comes to my desk, and I read it with interest and profit.

Lawton, Iowa.

B. A. MELGAARD, M.D.

The Treatment of Sciatica.

The hypodermic injection of morphine at the seat of pain will give relief, if care is taken of the limb, for several days, afterwards using chloroform and ether, though they are somewhat difficult to handle in a hypodermic syringe. Anders recommends one or two parts of guaiacol in ten parts of chloroform. Carbon bisulphide, after its initial irritation, gives instant relief if discreetly applied; but the pain soon returns, though less severe.

Galvanism is a valuable remedy, the negative electrode over the painful area. Streptococcic vaccines aid many cases—those of rheumatic origin.

In a recent severe case under my care, five minims of the guaiacol and chloroform mixture noted above gave remarkably good results until after the patient disobeyed orders and suffered a relapse, which was relieved by vaccine in three ascending doses. A later attack was quickly terminated by injecting at the sciatic notch a hypodermic syringe of a solution of 10 grains potassium iodide in an ounce of distilled water.

Arroyo Grande, Cal. E. L. PAULDING, M.D.

<p><i>While we, as physicians, desire to be scientific students and practitioners of medicine, and that is the primary purpose for which this journal is published;</i></p>	<h2><u>THE BUSINESS SIDE</u></h2> <p><i>of Medical Practice</i></p>	<p><i>yet, for the welfare of our dependent ones and our standing in the community, we must secure a fair compensation for the services we render our fellowmen.</i></p>
<p>"The laborer is worthy of his hire."</p>		

"MAKING MEDICAL PRACTICE PAY."

The Death of Therapeutics Promises a Funeral for Medical Business.

THIS AGE is running strong for limitations (except of armament), of control (except of politics), and suppression (except of selfishness). The pharmacopeia must be limited, the physician must be legally controlled, an individual medical business initiative must be suppressed. Everything must be *verboten* until some self-appointed "experts" pass a vote of approval. The old is *non est, passe*, and out of harmony with cosmic omnipotence. The Creator started this old world wrong, and it is up to us to start it right. Nothing is too sacred for vandalism, misnamed "efficiency." We are even "controlling" birth, and next we will be "controlling" death or practicing euthanasia. Of the former "control" the San Francisco *Bulletin* says:

"As a social measure birth control is obviously a confession of failure; a plea of guilty to the charge of wasting humanity; an admission of society's failure to find a use for the most intelligent and most useful animal on earth. Society can use automobiles, aeroplanes and even great guns; infinite quantities of things which are pure waste or pure destruction; but birth control is a plea that it has no use for men."

And the same society is confessing that it has no use for medical men, as such; and has no use for remedial agents, as such. If the man is a machine-like agency for the application of laboratory tests for pathology, and the remedial agent is an exactly balanced antagonist of an exactly ascertained pathology, the so-called "remedy" may be used just as a pigment is used to get a certain desired tint. But the individual medical man; in fact, the whole tribe of medical men, is a merely human factor in the equation that the age should eliminate, suppress or control just like birth and death in general; and the non-specific and non-laboratory-produced remedy should be eliminated, with the human factor involved in its use.

The Province of Iconoclasm.

The old empiricism needed a large degree of limiting, control and partial suppression; laboratory tests are of supreme importance in diagnosis, and specific remedies are much to be desired. Iconoclasm is justified when it supplies something better. But iconoclasm and an iconoclastic age have no right to attempt the elimination of the human factor in a mad haste to set up a golden calf of "efficiency."

The human factor is the non-varying element after all: men are much the same as they always were. Even medical men, who drive muddy roads, attend all sorts of non-standardized people, improvise possible measures in impossible places, usually work without the help of nurse or assistant and are worn to a frazzle half the time, are *compelled* to meet the situation much the same as it was met twenty or forty years ago, and this despite modern advances. How foolish, then, for a few professors who are temperamentally and by training wholly unfitted to meet the ordinary medical situation, to attempt to kill the therapeutics of twenty centuries!

The Murder of Therapeutics.

Specific therapeutics, the god of this medical age, never can and never will have a wide range, for most disease is a non-specific functional derangement and it is met by non-specific rational therapeutics. The worshiper of specifics has no patience with rational therapeutics; he has been privately and publicly discrediting it until the lay public has come to half believe him. Worse than that, the disease which comes on with advancing years, starts as a functional disease and ends as a complicated case, is actually less efficiently prevented and treated now than it was twenty years ago. Look up morbidity and mortality statistics, and we find a dreadful increase in arteriosclerosis, disease of the heart, pneumonia, nephritis, cancer, and many others. We

are saving the children to let them die at middle age. We have murdered rational therapeutics and set up the god of specific therapeutics.

Flowers in the Garden and Weeds in the Farm.

The small plots devoted to specialism are beautifully cultivated: the really big fields are running to weeds and are cultivated by quacks, cultists, faddists and the half-prepared. What a mistake!

Physicians who are facing arduous practice as it is—young men of ability and graduated from our best colleges—tell us that they have had to learn therapeutics after leaving college, for it was hardly taught there. Right there is where rational therapeutics was murdered. And is it to be wondered at that these same young men learn their therapeutics from proprietary literature, from the enthusiastic empiricist, from the one-sided exploiter of some one kind of remedy to the exclusion of every other kind, and from the corner druggist? Our reformers can lecture them until they get tired, for these young men are getting better results than from therapeutic nihilism.

Shotguns on the Shelves.

But some good and well-trained diagnosticians don't go to the trouble to really learn *any* definite therapeutics; they pass out combination tablets accommodatingly labeled so that "he who runs may read." Patients soon learn to get the diagnosis from the doctor and the medicine or the prescription from the druggist; for the druggist, once the diagnosis is made, prescribes for them just as intelligently as does the diagnostician who knows no therapeutics. So does the cultist of any shade or label.

Declining Business.

People are perfectly willing to pay a physician who gives definite and skilled services and gets fairly definite results. The skilled diagnostician who also knows the art of rational therapeutics gives such services and gets such results. The other skilled diagnostician does not. But people are tiring of the sort of practice that starts out with an initial thorough examination and diagnosis, and then simply strings them for as long as they are willing to come back.

Primarily the colleges that murdered therapeutics are responsible for the business funerals at which so many educated physicians are the chief mourners. Don't deceive yourself, Doctor. You may be really an ultra-scientific man, and you may scorn the diagnoses of a Class C physician around the corner; but his patients stick to him and yours drift away from you. Perhaps there is a reason.

The last generation of "big men" in medicine

used to cure their patients, and they grew rich at doing it. Think back a few years and you may recall some of them, and perhaps they were your own professors. Now few internists ever grow rich: that happy sort of growth is limited to the surgeons and specialists.

The best revival medical business can have is a revival in rational therapeutics. With the exact methods of diagnosis we now possess, with the accurately fabricated remedies at hand, the art of rational therapeutics should flourish as never before. Why does it not so flourish? Because our medical colleges are strangling the subject; because our best writers and investigators are otherwise engaged; because the styles have changed and the profession follows the styles. Doctor, don't you think it about time the colleges gave our young men a square deal? If they do, you and I, and the other old fellows, will have to buck up or the new generation will cure most of our patients while we are away on our vacations.

"Lo, the Poor Doctor!"

By EDWIN G. KYTE, M.D.,
SEYMOUR, IND.

"I'm going to get out of medicine some day," he swears, and goes ahead and dies in the harness!

Physicians are no different from other men, unless it is that they are more human. Where will you find another class content to work along, usually altruistic in all things, giving to their work the brilliancy and pains that in other lines of work would make them noted and wealthy, and equally respected in their community?

It has always been a source of wonder why they do it, going ahead with cheerful readiness day and night, only to wear out and die shortly after fifty, leaving a dangerous financial future awaiting the widow. There is no time that an established doctor, the average plugging medical man, does not realize that his life is usually a hand-to-mouth existence, devoid of luxuries, full of strains; that he hasn't the equipment he needs; that he really should knock off and take a year's course covering a few of the hundreds of new things; that the nightmare of a malpractice suit may be a bad dream soon to come true. Still he trudges on, wearied to the uttermost, tortured with confinement cases, sick of the clatter of ignorant neighbors. Between times of dispensing his measures of prevention and assistance he has an occasional brain-storm wherein he confesses to himself that he can think of no reason why he

should be eternally pestered by the madness of his existence or why he should spend his life in the pennance of practicing medicine when his sins have been only ordinary.

He Starts.

"Doc" starts out with his diploma and a hospital certificate. He does not locate until he has taken more work. In his hospital internship he has worked very hard and faithfully for some high grade medical men and won their friendship. Such friendships are usually lasting. Of course, "Doc" is going up the ladder like the "big boys." Nothing to stop him, you see. No little office in a back street! A bas the crossroads, country town or little city! Think of all the extra preparation he has taken! Every fellow can't expect to become a specialist with an immense income, but "Doc" has a good grip on the future. You might say he has a mental strangle-hold on it.

For some unexplained reason no one feels like disturbing his serene confidence. They never tell him the successful specialist is a "rare bird." But, to make an offhand guess, "Doc" faces chances of more than a hundred to one hundred thousand that he will be no Billings or Cabot.

With his ego intact "Doc" now considers the possibilities of hirsute adornment. Not a mess of whiskers—not even a Vandyke. But a neat, trim, and trimmed "Charlie Chaplin" mustache just to give that needed dash.

That Office of His.

Now he locates his office. Equipment costs a great deal—after you itemize the account; so "Doc" buys only necessary items. About fifty per cent. of these so-called necessary items will go into the junk in a year or so because the wise men who design office fixtures have an uncanny way of knowing the propensity of the youthful medic to feel a bit devilish and important while selecting a few pieces "attractive to the eye of the patient" as well as being "absolutely necessary." The most of us have been through this stage. I seem to hear your reminiscent chuckles over the useless fixtures you bought. Go ahead and laugh! You didn't laugh when you had to junk the stuff!

The Big Wait.

"Doc" begins the Big Wait. Some medical man with the gift of poetry should give us an adequate portrayal of the Big Wait. Justice has never been given the subject in the written word. It seems to "Doc" that every other physician in his neighborhood is unusually busy. Will that

first patient never come? "Doc" grabs a bag and sails around the block on an imaginary hurry-up. He feels embarrassed—something like a sneak-thief caught in the act. Didn't *you* do the same stunt? Didn't most of our predecessors gallop horseback fulfilling the same requirements of that ancient stunt of appearing busy? The Lord only knows how many calls "Doc" missed by being away from his telephone on a fake run! * * * Then came the chronics that had been the rounds, and an occasional emergency call. Of course, it all went on the books. Went there to remain unbalanced. The months go on. "Doc's" money is fast disappearing. He loses his swagger and is at the point of sleeplessness when he meets the One Girl.

The One Girl.

The special branch of Providence that cares for the plugging "Doc" may jest with him in other ways, but usually sends him the One Girl. Look around at your associates in business and compare their domestic lives with yours. You are in a good position to know, because you often have the skeletons hauled out for your inspection, and prescribe an oiling to keep the rattle from sounding like a klaxon. The wife you have can cook fit for any man, and make a dollar go the limit in elastic work. She's sensible, and clean. She's just what you need. She's all the things you care to say about her in a complimentary manner. Just pause a minute to add the list of things she can do in a faithful way and you will see what I mean by saying a special branch of Providence was helping.

He Seems to Feel a Thrill of Life.

The One Girl believes in "Doc" and his future. The poor fellow, then in the dregs of despair, is uplifted, encouraged, and again happy. That extra vote was what he needed, and he annexes her after long consideration of benefits possible to acquire as a respectably married man, plus a sudden and hasty calculation of income. "Doc's" wife moves his fixtures around, adds a dash of curtain colors, transposes pictures and supervises office sanitation in addition to household cares. Her winning ways bring some patients, some friends; some more friends and patients. * * * Then comes the baby and the small savings vanish. But depression cannot last always. "Doc" has new inspiration. He now has a family to provide for. It is a big thing just ahead of him and he must labor. He must carry more insurance. * * * On he plugs, now temporarily ahead of the game and wearing better clothes. Folk account him a successful physician.

Oh, for a Vacation.

He doesn't take a vacation extending over two weeks. They say he hasn't time to leave his practice. You and I know *why* he hasn't. Time was when he prayed for work to do. He now energizes every minute keeping up with the game. He *must* stay with the crowd, but it's hard to get ahead of expenses. He is making ends meet, but they don't overlap. "Doc" can't stop. The fear is upon him.

Just the Average Medical Man!

"Doc" is the average medical man. A few make a great deal of money. A goodly number combine successful business side-lines and get an income in no way related to the practice of medicine. But the great majority plug along like "Doc."

Why He Sticks to the Game.

Ask him why he sticks. He'll tell you he has devoted much money, time and study to his profession. He is no longer young; he cannot afford to tide over the change to other work. If a man practices medicine several years and tries to get away from it, the average employer will take him for a lunatic. His business efficiency can't permit him to take on a "failure." That's what he calls him. He will about as soon hire an ex-convict. The average layman doesn't have any other idea but that doctors ought to make a lot of money. So if a physician chains his pride and sets forth to make an attempt to cash more for his labors, to leave his family better prepared when he should come to shuffle off, the prospective employer can't see why the fellow hasn't made a success in medicine, if he's any good at all. Success to him is measured by money. "Why, there's Dr. So-and-So, who has a pot of money and is a noted specialist. They say he keeps ten or fifteen private nurses on the jump all the time with his out-of-town cases."

For Glory, Honor and Immortality.

No. "Doc" plugs along over the worm route. Frequently his medical judgment is put to definite proof, and he wins. The family press heartfelt thanks and pay promptly. "Doc" has a song in his heart now! Another life saved! Another family that from now on cannot do without him! Life is indeed worth while! What is a little money if a man be held in this esteem? What cares he for dirt, filth, and the eternal fight against ignorance?

At the Very Core of Life.

His friends and neighbors respect him, and—well! "Doc" *couldn't* quit the game if he tried.

Many have said that he typifies their ideal of a physician. People come to him for advice on all kinds of subjects because they believe in him and love him. He has been at the very core of life and feels himself on close terms with the wisdom of men much more learned. * * * Isn't that a little wren singing outside the office! There's a family of wrens in his own yard. They come every year. Shucks! Who is better off than "Doc?" And he whistles like a boy as he pulls down a fat ledger and begins an inquisitive poking into accounts which long ago accumulated long whiskers.

Medical vs. Non-Medical Optometry.

For a period of fourteen years the writer hereof instilled atropin, homatropin or some other potent drug into eyes with the object of preparing them for eyesight test, preliminary to fitting glasses. For the past seven years cycloplegics have not been used where the patient was purely a candidate for glasses. The number of cases thus tested without artificial cycloplegia is 2,100.

Obviously the cycloplegic method could have been chosen had it proved to be the best in actual work during a period of practical experience of more than twenty years, during which time both methods were used in testing several thousand eyes.

One who has used both methods can write on this subject with some degree of assurance and authority concerning their respective merits. Therefore the author has arrived at the following conclusions:

In the practice of fitting glasses one does not need to use an artificial cycloplegic. The results thus obtained are not physiological. An arbitrary deduction, as usually made for findings under cycloplegia, is unreliable and empirical.

Intolerance and fear attendant upon the use of drugs in the eyes is fast driving those who need glasses from the medical to the non-medical optometrist. That this assertion is true, witness thirty-seven States that now legally recognize and regulate the practice of eyeglass and spectacle fitting.

To those who expect to continue in this work it must be evident that a change is being made to the non-cycloplegic practice.

Amarillo, Texas. CLAUDE WALCOTT, M.D.

Appendicitis in Germany.

A well-known surgeon, Professor Kuttner, writes in the *German Review* that appendicitis is disappearing as a result of the severe plainness of Germany's war diet, and other ailments and ills are also decreasing as a result of abstinence from rich food.—*Associated Press*, Aug. 8, 1916.

PAPERS FOR DECEMBER.

Full of practical suggestions helping you to greater success.

Editorial comment will be made upon "Our National Drug Standards" and "Intensive Treatment of Syphilis and Gonorrhoea."

ORIGINAL ARTICLES.

"The Fauical Tonsil in Its Modern Aspect," by Prof. John J. Kyle, is one of the most able papers we have ever received; we are holding it for December.

"Chloro-Brightism," by Dr. M. W. Thewlis, presents some new and original thoughts; and it is a paper of great clinical importance.

"The Logical Treatment of Cancer of the Cervix," by Magnus A. Tate, M.D., F.A.C.S., is an intensely interesting surgical paper, thorough-going and authoritative.

"Thoracic Empyema," by Dr. C. S. Neer, analyzes thoroughly an involved class of cases, and is most helpful in its suggestions for treatment.

"The Injection Method in Treating Hemorrhoids," by Dr. Rollin H. Barnes, briefly shows the objections to the method; and it gives a better way.

"Needless Surgical Operations on the Uterus and Its Adnexa," by Dr. S. A. Savitz, protests against some much-urged technic, but is not an anti-surgical paper. This paper will interest you.

"How to be Pneumonia-Proof," by Dr. A. W. Herr, discusses pneumonia from the standpoint of personal hygiene. He makes out a good case.

"Mercury as an Internal Antiseptic," by Dr. M. L. Dalton, will rejoice the heart of the hopeful therapist. This paper is practical and helpful.

"Emergency Minor Surgery," by Dr. B. U. Stearns, is written by a general-practitioner surgeon and simplifies the subject. There are many valuable points presented.

THE BUSINESS SIDE.

"Nerve and Business," the third paper in the series of "Making Medical Practice Pay," takes up the discussion of the personal factor.

"Deficient Teaching of Medicine, a Liability and a Mortgage," by Dr. E. P. Cuthbert, rubs in hard the lessons we try to teach in our article in The Business Side in this issue.

"Ethical Publicity," by Dr. Walter T. Brown, is a striking paper we hope to find space for in December; but it may go over to January.

THE QUARTERLY SUPPLEMENT.

The newest thing in the line of drug exploitation is the United States Pharmacopeia, IX. Dr. M. Clayton Thrush will present an able paper upon it in this Supplement. Some other current advances will also be outlined.

We are going to make THE MEDICAL COUNCIL in 1917 the best and most helpful general practitioners' journal in the field. Renew for 1917 NOW.

Best CURRENT MEDICAL THOUGHT

Surgical Scissors

As wielded by Douglas H. Stewart, M.D.,
F.A.C.S.

Gas Pains.

Gordon K. Dickinson, M.D., F.A.C.S., Jersey City, Transactions Am. Assoc. Obstets. and Gynecologists. After quoting extensively from the literature of the subject, the author says: "In 1900 Kemp issued a little book on enteroclysis. It had no general sale, and his investigations have not been greatly exploited; but for over ten years I have been using in Christ Hospital the double rectal irrigation, as advised by him. If a normal saline solution enters the rectum at a temperature of 120 degrees, and be passed into the rectum and out again for twenty or thirty minutes, then a physiological stimulation and a betterment of function will occur through the entire anatomy. The water should be flowing constantly, with occasional compression of the exit tube. Various methods have been tried from time to time, but my interns and nurses invariably fall back to the Kemp's tube, which seems to meet every indication in an advancing case of tympany."

When Scissors corroborates the aforesaid, it might be explained that he invented a pump for such a purpose, and that in Kemp's work on "Diseases of the Stomach and Intestines" occur the following lines, page 508: "The author has had this employed upon himself with the happiest results." With two wash-boilers, one a reservoir and the other a receptacle, at the passing of the fifth gallon frog-spawn-like or green-leaf-like forms appear, which show conclusively that the small intestine is being emptied. Two feet of elevation above the patient is sufficient for the reservoir, and the patient may control the exit tube by pinching or by relaxing. Pressure is not so much a factor as is duration of flow. Dr. Dickinson well says that a warm, mildly perspiring skin soothes; so does the warm bath. But among the insane and violent warm baths of a week's duration are followed by the happiest results. So with an internal bath, the longer its duration, the kindlier its effect. This has prevented its more general use. It is as good as the doctor states it to be; it is even superior to many,

if not all, the methods in common use, but it refuses to yield its splendid results to the man who complains of too much trouble or of too little time. For an earnest, patient worker, "it will meet all the indications." Anyone who will give the method a square deal will be rewarded by a very pleasant surprise. Indeed, if he has fussed in vain with all sorts of things, on prior and similar occasions, then the bubbling of gas from the exit tube and the rapid change of the patient for the better will come as inspirations to persistence and perseverance. A preliminary enema of normal salt, or the well-known S. S., is an advantage, and a metal irrigator is doomed to fail on account of its conducting heat to the skin, so that a temperature of 120 degrees becomes unbearable. On the other hand, a nurse softened and distorted one of my irrigators with too hot a solution, but the patient did not complain of discomfort.

The Handling of Cysts.

A sebaceous cyst should be transfixed, its contents squeezed out gently (they are sterile), and finally the collapsed wall may be seized with forceps and dragged out with, possibly, a few touches of the scalpel to sever adhesions. Careful dissection and removal of an exposed sebaceous cyst requires a rather large wound, which leaves an extensive scar. If the transfixion corresponds with a natural fold, line or wrinkle, then the scar will be scarcely noticed. Dermoid cysts should never be transfixed; the contents may be infectious, and careful dissection, with removal entire and unruptured, is necessary.

Fibroma, being allied to sarcoma, should have an elliptical incision, including all adherent skin. Cysts may be aspirated, and later they may be removed, if that process fails.

Ganglions may be punctured (multiple) with needle, and then bandaged with a pressure pad. If this fails, they may be punctured and injected (carbolic, 1 to 20). And if this does not succeed, then excision, with cuts parallel to the tendons, may be employed. Enlarged bursae may be treated as ganglions are, plus splint fixation of the joint for eight days.

Venesection.

A. Theilhaber, Berlin, *Klin. Wochenschrift*, Jan. 10, 1916. Venesection is an underrated therapeutic resource which will afford relief to dysmenorrhoea, uterine or ovarian colic, menopause and its disturbances, neuralgia and the neuroses of the plethoric, and certain sorts of cephalalgia. Its most important place, however,

is as a prophylactic of cancer and post-operative return. An annual or, better, semi-annual withdrawal of 400 to 500 cc.'s of blood is of much value, especially when combined with diathermy and organo-therapy. The stimulation of the whole hematopoietic system, followed by the nutrition of the same organs, give good grounds for expecting most favorable results.

I asked a German barber-surgeon, who had bled thousands of men, just what result he really did get from semi-annual bleedings. His reply was: "When I bleed a man twice a year, he gets so full of healthy red blood that he never can stop being bled."

This article of Theilhaber's gives the impression that even in patients whose cancer it was impossible to remove in toto, so that portions of the growth remained, even in such patients capital results were obtained.

Ammonia as an Enema.

British *Lancet*, July 8, 1916.—T. A. Black offers the following prescription for an enema to be used in the treatment of post-operative abdominal conditions where ileus and intestinal paresis may be present: Liquor ammoniæ fortior, 1 dram; water, 1 pint. A hypodermic of pituitary extract, 1 cc., given half an hour before the enema produces an increased effect. The enema must not be used too frequently or in succession, or any stronger than the prescription above given, as otherwise injury to the intestinal mucous membrane is liable to occur. The enema produces a large movement and discharge of flatus.

The Purpose of the Tonsil.

Nose, Throat and Ear, E. B. Gleason, M.D., Philadelphia. "Its functions are similar to those of lymphatic glands. As part of the hemopoietic system they form young lymphocytes, most of which pass into the circulation, but some escape to the free mucous surface and carry off effete products with them. Secretions from the lungs are coughed or carried toward the tonsils and, in vomiting, the contents of the stomach are brought into direct contact. Bacteria after entering mouth or nose are directed toward the tonsillar crypts, which are lined with stratified epithelium and the mucus within them serves as a culture medium for the development of vaccines. The latter after entering the lymph currents of the tonsil are borne away into the system and by contact with, and by excitement of, the fixed cells, antibodies (opsonin, agglutinins, etc.,) are produced and immunity results.

"Disease will so alter the tonsillar functions as to render the tonsil not a protector against systemic infection, but a portal for its entrance."

The purpose of the tonsil, then, is to manufacture and distribute vaccines or bacterins, and an unhealthy tonsil may have its mechanism reversed, distributed or overthrown, and its immunity may be exchanged for infection. In view of this, persistent refusal to interfere with normal tonsils and prompt removal of diseased ones may be equally advantageous to the community and its welfare.

Military Surgery and the Surgeon in the Present European War.

Kilbourne Tullidge, M.D., *American Medicine*, July, 1916.—Only one section of this able article is abstracted, viz., "Injuries of the Spleen, Three Cases."

The first case was a farmer, twenty years old, brought into the station in a state of extreme shock, with a small, thready pulse, lowered respiration, blanched mucous membranes and skin, cold and clammy, muscles relaxed, eyes sunken and dull, pupils dilated, mouth half open, diminished sensibility and sub-normal temperature. Examination showed bullet wound of left side, just below tenth rib, one inch posterior to mid-axillary line, coursing upwards and outwards, piercing diaphragm and lower extremity of left lung, and making its exit through sixth interspace. The vast amount of blood-flow and the condition of patient demanded immediate splenorrhaphy, and an oblique sub-costal incision exposed an organ which was swollen, torn and of reddish-black appearance. Clots were wiped away, interrupted chromic gut sutures were carried through broken edges, dipping deep down into the soft substance, which was handled with difficulty. Surfaces were brought together, the abdomen closed, and the cutaneous sutures were painted with iodine. The surface covering the wounded lung was securely strapped by adhesive plaster from mid-line anteriorly to vertebra posteriorly, and from the sixth interspace to the twelfth rib. Rapid recovery, with patient out of bed in twelve days. The second case had the bullet lodged in, and subsequently removed from, the spleen. The third case had performed splenorrhaphy, nephro- and pancreatorrhaphy, with purse-string closure of splenic flexures. All three recovered.

Metal Sutures in Fractures of Large Bones.

O. Laurent, in *Bulletin of the Academy of Medicine*, Paris. This article is enthusiastic about the results of fastening fractures with

silver wire and bringing the ends out of the wound to form a drain.

The lesson inculcated is the wonderful squareness of John Eric Erichsen. Listen! 7th Ed. Erichsen's Surgery, page 304, paragraph 3. (Abridged), 1878.

"The use of wire ligatures is altogether of American origin. It originated with Physick and Levert, of Alabama. It was revived by Marion Sims. If the ends of the wire were left out of the wound the noose became imbedded in a mass of plastic matter, etc. If the ends were cut short the sides of the wound healed over them. They became encapsulated but by no means innocuous."

Oh, well, read it for yourself and then recall how many times fractures have been wired with silver wire, in days gone by, in America. As for short bones, like the patella, probably no method has been more practiced than "wiring the patella."

Practical Therapeutics

Giving in concise usable form the therapeutic points from current medicine that are really of value to the busy practitioner.

Dangers of Nitrous Oxide-Oxygen.

McCardie, *British Med. Jour.*, July 22, 1916, reported a death from nitrous oxide-oxygen anesthesia. Now comes Dr. J. F. Baldwin, Columbus, O., in *Med. Record*, July 29, 1916, who states that Teter, of Cleveland, knows of twenty-six fatalities, nine occurring in Cleveland. Miller, of Providence, has collected references to eighteen deaths. Rovsing got track of thirteen deaths. Gwathmey reported three fatalities. Eight deaths have been reported from Detroit; and Baldwin, in the article, reports thirteen deaths in Columbus.

No mortality has been reported from the Mayo clinic, but the method has been abandoned there.

Dr. Baldwin says in conclusion:

"Nitrous oxide-oxygen has a field of usefulness to which it should be strictly limited. It can be used for very brief operations, as it has been for many years in the extraction of teeth. It is also probably the safest anesthetic to use, as suggested by Ochsner, in cases of acute pulmonary congestion, or of acute nephritis. With these exceptions, which make its field a very limited one, nitrous oxide-oxygen should be looked upon as the most dangerous anesthetic that can be used, even in the hands of the most experienced."

Our own conservative views, as expressed in an

editorial in June, have been criticised. It appears they were fully justified. That editorial was with reference to nitrous oxide and ether in obstetric analgesia. We never did believe in nitrous oxide in major surgery. Mixing anesthetic agents is dangerous: it is justified at times, but it increases the dangers.

Swapping Blood.

Leyton reports in *The British Medical Journal*, April 1, 1916, an interesting experiment he tried, viz., transfusing blood from a patient with erythaemia to one with pernicious anemia, and vice versa. After the anemic patient received two ounces from the erythremic man, he became pale and nauseated, with pain widely distributed. But he recovered and seemed to improve; so the transfusion was repeated, using eight ounces of blood. This time the event came near being serious. A few weeks later he was as anemic as ever.

This plan has been suggested before. It would seem that the polycythemic, or erythremic patient could supply to the blood of the anemic a useful substance; but the plan has never worked out well in practice. Perhaps the trouble is anaphylactic in some cases. Or it may be that the matter involves the development of a toxin or a ferment in case of corpuscular excess. At all events, swapping blood is very apt to be a dangerous procedure.

Puerperal Sepsis.

Dr. Norman Porritt, in *The British Med. Jour.*, May 20, 1916, advocates a suction tube in the place of the uterine douche, as safer and more effective. Sixteen cases of chemical peritonitis following intrauterine douches are cited. Fluid can easily be forced from the uterus into the peritoneal cavity. But a drainage tube may remain in the puerperal uterus for six, ten, and even fourteen days.

Dr. Ernest Gallant, of New York, reported 252 cases of continuous uterine drainage in non-puerperal cases, the tubes being worn sometimes for months.

Dr. Porritt passes into the uterus a Budin's catheter, and makes suction by means of a Higginson syringe. He believes that efficient drainage of the uterus is the key to the successful treatment of puerperal sepsis.

Be careful with any suction apparatus used that air is not pumped *into* the uterus. Any suitable catheter will serve, provided the holes near the tip are sufficiently large.

Mucous Colitis.

Dr. Sidney K. Simon, New Orleans, in *N. O. Med. and Surg. Jour.*, July, 1916, believes that no case will be pronouncedly benefited if two factors are neglected: surgical indications, and constipation. The latter he would regulate largely by an appropriate diet, the ingestion of large quantities of water and the giving of petroleum oil. He objects very strongly to the routine employment of rectal irrigations, even oil enemata being employed very sparingly.

Under no circumstances should drastic purgatives be used.

The Treatment of Anaphylaxis.

Leyton, in *The Lancet*, June 10, 1916, recommends, in the treatment of serious anaphylaxis, the subcutaneous administration of some form of alcohol; the injection of camphorated oil to meet the respiratory symptoms; and the hypodermic use of hyoscine. Especially should hyoscine be used as a preventive previous to the injection of a second dose of a serum.

Fasting and Acidosis.

An editorial in *The Jour. of Lab. and Clin. Med.*, July, 1916, states that fasting will lower acidosis either in health or in diabetes if it has the effect of stopping a one-sided metabolism and throwing the tissues on a more nearly balanced ration of fatty acids and glucose. There is likely to be more danger of serious acidosis developing during starvation in the case of fat rather than in lean diabetics.

Sulphur and Sore Throat.

An editorial in *The Lancet*, July 1, 1916, calls attention to a death by asphyxia of a girl to whom flowers of sulphur was repeatedly administered by insufflation: it gradually accumulated in the larynx. The editorial writer thoroughly discredits the method as useless and believes it is often dangerous.

Vulvovaginitis.

The Bulgarian bacillus having been exploited as a local application, in the form of a culture, in vulvovaginitis, Dr. Milton B. Cohen, Cincinnati, and other investigators, conducted a careful study of many cases in which this treatment was employed. In *The Jour. of Lab. and Clin. Med.*, July, 1916, he reported that the *Bacillus bulgaricus* does not thrive in the human vagina and that the treatment seems to be useless.

CONSTRUCTIVE REFORM

The Harrison Law a Constructive Reform.

PROFESSIONAL personnel used to bear the odium of an undue proportion of drug-users, and the additional one that the wives of physicians and druggists were, as a class, largely represented in the narcotic cure institutions. When the Harrison law went into effect the fact came out in many communities that some of the physicians went away to be cured of a habit that was reducing their efficiency in practice. Many of these men are now back in practice and doing well. Doubtless the Harrison law was their salvation. And the fact that a physician must now account for the narcotics he purchases, and his wife may not purchase them, will result in many happy medical households that were formerly most unhappy.

The "Dope" Drug Store

A few years ago we knew a small drug store in a good residence neighborhood that frequently purchased $\frac{1}{4}$ grain morphin pills in lots of 10,000, and these were sold over the counter without question to reputable and responsible people. That whole neighborhood was tipping more or less with morphin, using it for every slight discomfort. And yet the fact remains that few of the customers of that druggist were confirmed users of the drug, as he was careful not to sell to such; *but*, and here is the rub, there was another drug store not far away that did not hesitate to sell to addicts, and the first store was a recruiting ground for the second. So exclusively was the second store a "dope shop" that it was closed a week after the law went into effect, and the first store will not use 10,000 $\frac{1}{4}$ grain morphin pills during the next ten years. Think of the constructive reform wrought in that one community. Then think of the thousands of such communities and the sum total of reform therein.

The "Dope" Doctor.

Always relatively few in number, yet there were in thousands of communities "easy" doctors who could not say "NO!" but who could not be considered as "dope doctors." These "easy" doctors were like the "easy" druggist; when reputable and prominent people wanted morphin they got it and without one thought upon the part of the "easy" doctor that many of his good-family patrons drifted over gradu-

ally to the "dope doctor." The "easy" doctor and druggist were a potential menace without meaning to be, and thoughtlessly so. The "easy" doctor and druggist are not now nearly so easy as they used to be and the "dope doctor" is being rapidly put out of business. In fact the "easy" druggist does not exist, the law being so drawn as to leave no loophole for him, although it does leave a small one for the "easy" doctor. Regulating this quasi-professional distribution of narcotics by professional men is a constructive reform with a wider reach than the more difficult one of cornering the non-professional vender in the city slums, for the city slums are few, while the country towns are many.

The Incompetent Therapist.

We knew a doctor of surgical bent, but who would not give up general practice to pursue surgery as a specialty. Like many such gentlemen, he was a good surgeon but a most incompetent therapist. He despised *materia medica*, and he gradually drifted into the pernicious habit of practicing medicine with six or eight drugs, among which morphin was unduly prominent. A busy man, he failed to keep track of refills in his office or of his prescriptions in the drug stores. The Harrison law hit that man like a rifle shot, for he made the horrifying discovery that he had seventy-two dope fiends in his practice, mostly made such by himself. He was worried nearly sick over it; but he and a fellow-practitioner who *does* know therapeutics took hold of the situation and cleaned up a bad situation, to the infinite improvement of conditions. This man is one of many that the Harrison law has compelled to learn how to practice medicine without using an undue proportion of narcotic drugs.

The Capable Therapist.

The phone used frequently to ring at night and one would hear: "Doctor, come over right away and be sure to bring your hypodermic with you." The competent therapist would go, find morphin not at all indicated in the case, refuse to give it, and depart without being paid for his call. Next day, and for many days after, he would notice the automobile of the neighboring incompetent therapist at that house; and the incompetent therapist would remain the fam-

ily physician because he always did just what was wanted, give hypodermic doses of morphin for any and everything. The Harrison law has stopped a whole lot of that sort of thing, to the business advantage of the competent physician. Doctors are all under this beneficent law, and the "easy" or incompetent doctor does not possess the advantage over his competent fellow that he used to, which is a good thing for the business of the competent doctor and the health of the people.

Narcotics in Patent Medicines.

Heavy narcotic dosage in patent medicines has been suppressed, only certain specified doses being now allowed. It is open to question whether any whatever should be so allowed except in products dispensed only on prescription. Also the Commissioner of Internal Revenue takes the very proper ground that hydrated chloral and a few other drugs should be included under the ban of the Harrison law. We have personally treated nine cases of chloral habituation induced by the lay consumption of chloral-bearing proprietary medicine; so we quite agree with the Commissioner. Now chloral is a valuable drug when properly used, but its abuse is reprehensible. Certainly it has no place except upon the personal direction of a capable physician. When we get *all* narcotics out of patent medicine distribution a great reform will be accomplished.

Self-Prescribing.

We used to have quite a bit of practice in a country community settled by a thrifty class of foreigners who were close-fisted; and we always knew two things about a case in advance of inquiry, that is, the patient had been ill a few days before we were called, and he had been dosed with laudanum bought at the country general store, which had a big trade in it. These people were too thrifty to tolerate the opium habit because it was too expensive to keep up, but they were bad cases because always heavily dosed with it in the early stages of most any sickness. The Harrison law has had two strange developments there. First of all, a dentist has located there. Before the Harrison law aching teeth were treated with nothing but laudanum. Now the people can't get the laudanum and can't stand the aching teeth, so they go to the dentist. The second development is a doctor has settled in that place, where they never had one before, and he is said to be doing very well.

Hospital Routine.

Some night nurses used to be "handy with the hypo," and patients who should not have it got

morphin on the sly. That has been stopped, as a nurse must account for the morphin she uses. Then, too, friends of patients used to smuggle morphin into the wards. That has also been stopped. The giving of morphin by residents, anesthetists and dispensary doctors has declined very much. The domestic and other help is more reliable, for they have no morphin "slipped" to them, and this improvement is noted in many other kinds of employment not in hospitals.

Some Strange Developments.

For some strange reason the morphin "fiend" seemed to be more or less immune to disease; at least he seldom visited the doctor, taking an increased dosage when he felt badly. Now these people are coming to consult us just like others. Quite a good many families were kept poor to keep up the morphin habit in one member of the household, and these families were bad pay. Now they are doing better and are more prosperous. Many people who dabbled with morphin lost a good many days from work. Now they are steady workers. Negroes in many places went on cocaine srees, and we know from experience they were ugly customers. That sort of thing is all but ended. A surprisingly large number of people who took morphin also drank liquor to overcome the drug depression, and then took morphin again to steady their nerves after heavy drinking. These people can't get their morphin and they are drinking less than before. The Chinese are becoming better citizens because most of them can't get their opium. The heroin habit is comparatively easy to break off from. We have not seen a heroin addict for months. There are now no doped cigarettes, or at least very few. Many immoral women who were drugged continually are gaining their self-respect and are getting out of the red-light district, although we don't know whether they are becoming really more moral. Some theatrical people tell us the Harrison law has improved conditions in that profession. Dope and dope prescriptions by mail have been stopped almost wholly.

Certainly the Harrison law, even though it has some defects, is working a vast deal of reform, and the public and professional conscience is being awakened to the narcotic evil. When the law first went into effect we received a good many complaints from physicians. These complaints have ceased. While it may sound selfish to place a commercial argument in a reform propaganda, it truly looks to us that the Harrison law has really helped the business of the reputable and able physician.

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Practical Papers for December Issue — on page 53.

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December, 1916

THE MEDICAL COUNCIL

"GREATER EFFICIENCY - BETTER INCOMES."

Most Widely Circulated Medical Monthly.

Vol. XXI

Philadelphia, Pa.

No. 12

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A service of truth, and only a service of truth, from cover to cover.

Advertising Standards on page 12.

1917 SERVICE to YOU

The times are strenuous; changes are rapid.

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"Standing Pat" and "Looking Backwards" will never produce 1917 progress.

Doctor, we have mapped out and well under way the best

year's work for 1917 Medical Council we have yet accomplished.

We see more clearly than ever before the *practical things* a medical journal must do to *really help* its readers (*you, Doctor*) to be more successful and prosperous in your work.

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enthusiasm, so much energy, to carry those things through to a *constructive* result.

Just turn to page 58 and see what we have in store for you in 1917.

Be sure to read the last paragraph (after the list of titles), "Greater Efficiency—Better Incomes."

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THOS. S. BLAIR, M.D. }
EDITOR

PHILADELPHIA, PA.

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Our National Drug Standards.

INHERITANCE is both good and bad; this is especially true of drugs. From the fathers we received many good and useful drugs, an inheritance of permanent value; but some of these old "simples" are not up to modern requirements. For some years we have been eliminating one after another, and the process of elimination has given rise to unjustified reports that nearly all drugs are worthless. And yet, in this day of drug and therapeutic nihilism, the number of newly introduced drugs and drug preparations has exceeded the number that have dropped by the wayside.

An examination of the pharmacopeias of the world will reveal the startling fact that only nineteen have been revised since 1900, and only three since 1911, five years ago—the British, the U. S., and the Norwegian. Only the Argentine standards have, of all the South American States, been revised in this century. An examination of existing pharmacopeias shows scores of drugs hardly known in modern medicine. As an example, *Unicus Benedictus* ("Cardui"), of recent notoriety, is recognized in the Belgian, Croatian, German, Japanese, Netherlands, Russian, Swedish and Swiss pharmacopeias. By comparison, the British and U. S. pharmacopeias, the two most recently revised, are ultra-scientific. Can one wonder at the backwardness of pharmacy? And, again, is it at all remarkable that the proprietary medicine has flourished?

Truly the proprietary men have saved the situation from stagnation, and in two ways: first, by exploiting worthless drugs and thus killing them off in professional esteem; second, by bringing out new drugs of value, a thing the medical profession itself has been very slow in doing.

Three Standards.

A rather anomalous situation has resulted. The American Medical Association considers the newer proprietary preparations of such importance that it prints a new and revised edition of

"New and Nonofficial Remedies" every year, thus producing the most critical and scientific drug standard in existence. It makes no claim to be a *therapeutic* standard, since the drugs incorporated are simply on a *scientific* basis and require *clinical* trial to demonstrate their value or lack of it. It is surprising how many of them make good and are, later, incorporated in the U. S. Pharmacopeia. The new revision is fairly crowded with drugs the fathers never heard of.

Pardon the implication; but the book, *New and Nonofficial Remedies*, is a standard of the drugs to be, the U. S. P. of the drugs that are, and the National Formulary of those that were. The first welcomes the coming guest, the second entertains the present visitors, and the third speeds the parting ones. So everybody ought to be happy, for one can find whatever he is looking for in these three standards. The doctor who likes to be in the forefront of modern advance, the safe and sane standpatter, and the "old fogy," can each and all pick out drugs to their liking and find perfectly first-class pharmaceutical standards for all of them. The American pharmacist plays both ends from the middle, and probably he is very wise in doing so. Not for him is it to tell the profession of medicine what it should prescribe, but he does take a care to have perfectly good and workable standards for everything apt to be called for. The physician who wants to prescribe Acetylparaminophenyl Salicylate, the one who wants *Tr. Digit.*, and the "old chap" who wants *Antiperiodic Tincture* (a mixture of rhubarb, angelica, inula, saffron, fennel, gentian, zedoary, cubeb, myrrh, camphor, agaric, pepper, cinnamon, ginger, quinine, aloes and alcohol), can each have any or all by neat and legal standard, signed, sealed and delivered.

Objections to the Pharmacopeia.

Some gentlemen believe that the U. S. P. should be inclusive only of such drugs as have a true basis in pharmacology, while others believe the book should be a standard for practically

everything in the line of drugs. We believe that, on the whole, the Revision Committee has done well, and this opinion is based upon a most careful study of the work. Of course, Doctor, there are many drugs therein that *you* do not use, and there are a great many that I do not use, but many physicians use these very substances we fail to appreciate. As a standard of *the drugs that are*, the U. S. P. Revision Committee *must* be guided by returns from the *whole* United States, not by the opinions of a few research men. That they have been so guided should serve to popularize the work among physicians at large.

The National Formulary.

We have never been enthusiastic over the N. F., probably because of an ingrowing predilection against combination tablets, stock elixirs, and shot-gun pharmacy in general. Nevertheless we know perfectly well that there are many combinations in wide use by men who are very successful in practice. The new N. F., on the whole, makes wise selection from among the host of formulæ, and it is a great improvement over its predecessor.

The N. F. is now practically a secondary list for the Pharmacopœia, including such drugs as aletris, asclepias, castanea, conium, dulcamara, leptandra, quinidine, scoparius, and xanthoxylum—all drugs that “won’t down” in the opinion of thousands of estimable medical practitioners; and the N. F. is no longer a mere list of elixirs, etc., designed to imitate more or less prominent proprietary products. Within its bounds, the new N. F. is just as scientific and discriminative as is the new U. S. P.

Our Limitations.

Not one of us knows enough to prepare an acceptable pharmacopœia or formulary. Such books must serve the physicians and pharmacists of the *whole* country, inclusive of “many men of many minds”; so let us accept our national standards in the spirit in which they were prepared. Of course they might be improved upon, and will be at the next revision; but, though admittedly imperfect, they are the most elaborate and satisfactory set of drug standards in the world today, and we ought to be proud of that fact.

We Should Use Our Standards.

The national standards are part of the law of the land; they are good enough for the Federal Government, and they ought to be good enough for us. In truth, they *are* good enough. If the physicians at large were to be by law compelled to prescribe none other but the products described

in these books (which, of course, we would not favor), clinical results would be immensely improved. But the individual physician, without any compulsion, will find it distinctly to his advantage and to the advantage of his patients to study the three works which are our standards, N. N. R., however, not having legal recognition.

Permit one little “fling” in conclusion. No “combination tablets” are official, even though they are, one hundred times over, the most popular form of pharmaceutical among dispensing physicians. These tablets, or most of them, are utterly unscientific, and *we all know they are*. Despite popularity, the Revisers left them out. Good for the Revisers! They have done the medical profession a positive service.

The Supplement in this issue is largely devoted to a discussion of the U. S. P. We urge all physicians to read what is there said.

The Intensive Treatment of Syphilis and Gonorrhœa.

THE SUM TOTAL of human misery caused by inherited syphilis and uncured gonorrhœa is in a fair way of mitigation by intensive treatment. Surgery holds the center of the stage because it is intensive; but modern intensive medicine is running as a close rival. Civilization of this age *demand*s intensive treatment.

Repeated Wassermanns are essential in gauging intensive anti-syphilitic treatment, for with positive reactions intensive treatment is safe and without repeated tests it is not safe. Learn to give salvarsan yourself, Doctor, and give it six times a year for three years, with mercury by various routes as a routine. But don’t do this unless your work is constantly checked off by Wassermanns. When physicians generally come to do these things, inherited syphilis will largely cease to be and cerebrospinal sequelæ will seldom be seen.

Successful treatment of gonorrhœa is one for major medicine, minor therapeutics having fallen down hard in this field. Modern text-books tell all about the subject, and we will not repeat here; but we wish to call attention to a treatment for gonorrhœa in women, as advocated by Dr. Alfred H. Hellman, in *The Urologic and Cutaneous Review*, August, 1916. He uses the ultra-violet ray in addition to the local treatment, which follows:

“The inside of the uterus is wiped with pure carbolic acid, and this rapidly followed by 95 per cent. alcohol. Whatever drips into the vagina

is rapidly wiped dry. Then the entire vaginal wall is painted with silver nitrate, 20 per cent., and the vagina packed with sterile gauze and the speculum removed. It is well to have a large number of applicators wrapped with cotton ready beforehand. The patient removes the gauze the next morning (18 to 24 hours after treatment) and douches with zinc sulphate, 3ii to two quarts of hot water. Large, thick pieces are thus brought away, almost casts of the uterus and vagina. The treatment is given three times a week in the office, and on the other days two douches as described above are taken. Any accompanying cystitis is treated by catheterizing and then injecting twenty to thirty cubic centimeters of 10 per cent. dermatol in sterile olive oil. The solution is allowed to remain in the bladder, to be passed at urination. As improvement is made the carbolic is replaced with tincture of iodine, and then half-strength tincture of iodine. The silver nitrate is replaced with iodine powder (5 per cent.), (a powder devised by the chemist, Dr. Sulzberger).

"Unless there is a severe salpingitis, the treatment is completed in about four weeks (twelve treatments). In the presence of a persisting salpingitis, the light treatment is continued until cure is established. For this another two to four weeks is required.

"The treatment is probably so effective because of the use of powerful antiseptics to the infected area. The superficial membrane, with its infecting organisms, is removed more or less *in toto*, and further bacterial growth is inhibited by the repeated applications. I use the ultra violet ray applications because I believe in their efficacy. Just what role they play in the cure of these cases I cannot decide, but possibly their powerful actinic and bactericidal action aids the strong antiseptics."

This seems formidable; but it is not so severe as one might think. Thirty years ago *the* treatment of uterine disease was with silver nitrate fused on a sound; and the physicians using it were unwittingly giving scientific treatment to intra-uterine gonorrhoea, the most common form of intrauterine disease.

The Rational Use of Mineral Oil.

During the session of the Congress of Surgeons, at Philadelphia, we talked with numerous gentlemen upon the subject of mineral oil as a laxative. There was practical agreement as to its value, but the point was raised that different densities of oil products were variously adapted to different individuals, the heavier oils suiting some cases and the lighter yet others. One must determine the adaptability of any case in which difficulties arise.

Another point is proper dosage. Some persons respond to half the common dosage, especially of the more heavy products. There are also some patients upon whom the effect is satisfactory only when administered upon retiring.

With the same intelligence in administration exercised with drugs in general, there need be very few patients who experience any digestive disturbance or annoyance in taking this useful agent.

And incidentally, Doctor, we should impress upon our patients that laxative foods and mechanical laxatives, such as agar and mineral oil, are to be preferred over so many purgative drugs with undesirable side effects.

The Editor Wants to Talk a Moment.

MY DEAR DOCTOR:—The support you have given in 1916, and the many kind expressions received, make me feel that we are getting upon solid ground—you and I—and, while I do not favor what is known as personal journalism, yet I wish personally to express here a real and vivid personal interest in the problems and the welfare of every subscriber.

Perhaps there is much of both loss and gain in any editor's environment and points of view; so I have no criticism regarding other editors or their work, hoping only to be consistent, balanced, judicial and fair in my own work.

I am an active practitioner of medicine and spend very little time in THE COUNCIL offices. I believe a truly clinical editor senses the medical situation and is more intimately in touch with the problems of his readers than is one whose contact with medicine is not that of daily clinical effort.

It is with much pleasure that I announce for 1917 so comprehensive a list of papers as you will see on page 58. These are all of high practical value, and I trust that every subscriber of the year now closing will see the force in our journalistic idea and will continue with us for many years to come.

Permit me to add that ample space will be kept open for new advances and problems arising that cannot now be foreseen; so there will be no "cast-iron," atmosphere admitted into our pages.

Hoping for a consistent and constant advance of professional ideals, science, practice, and economic progress during these strenuous times, I am, with kind wishes for your success,

Faithfully yours,

THOS. S. BLAIR.

Therapeutic Notes.

Try chrysarobin in 5 per cent. solution (in chloroform solution gutta percha.)

Arterial hypertension in syphilitics is not reduced by antisyphilitic treatment.

It is asserted by Kahn that the intravenous administration of calcium salts is of value in mild cases.

The use of kaolin in a powder blower to treat the throat as a prophylactic against infantile paralysis is suggested by Whittemore.

It has long been suggested that apomorphin be administered to facilitate the expulsion of foreign bodies from the bronchi. Careful observation has shown it to be an ineffective method of treatment.

The electrical treatment by autocondensation has not been so successful in high blood pressure as was at first claimed. The pressure does fall but rises again very quickly. Some persons are much depressed by the treatment.

Lusk has shown, what many parents have found out to their consternation, that the conventional 3,000 calories per day, the normal basis of nutrition for adults, does not suffice for growing boys. They seem to require about 5,000 calories.

Infantile paralysis has often been rife in Switzerland and no approved treatment has arisen there. Disinfectants are applied to the nasal passages and antiseptic gargles are used. Scrupulous cleanliness and ample ventilation are emphasized.

Hexamethylenamin is being abandoned in the treatment of infantile paralysis, since it is ineffective in an alkaline medium. Dr. Goldstein, of Camden, N. J., suggests using in its stead helmitol, which liberates formaldehyde from an alkaline medium.

Helmitol is a proprietary form of hexamethylenamine methylene citrate; it is a white crystalline powder with an agreeable acidulous taste, and it is given in doses of 10 to 15 grains to an adult. It is decomposed by both acids and alkalis, but more rapidly by alkalis.

It is wonderful how fully sweet chocolate disguises the taste of many medicines. Crush a tablet or pill and incorporate with a little sweet chocolate, and most children will take the mixture very readily. Chocolate creams may have powders or tablets in the midst thereof and the child be none the wiser.

January—A Big Issue

1917 with THE MEDICAL COUNCIL will be a big year. You will profit from THE MEDICAL COUNCIL, because its articles are written by capable physicians and surgeons who know how to convey their messages to the general practitioner. Many very prominent and able clinicians are reaching the profession with worth-while messages through our medium.

Editorially, "Infant Mortality Rates and the Milk Supply" will present some carefully worked-out data and conclusions that should lead to a shake-up—some things you probably never thought of before. "The Aftermath of Infantile Paralysis" will introduce some admirable papers upon the subject, as noted below.

ORIGINAL ARTICLES.

"The Orthopedic Surgical Treatment of Infantile Paralysis," by Prof. James K. Young, is a definite and exact presentation most timely and authoritative.

"Physiological Therapeutics in Paralysis Following Poliomyelitis," by Prof. Albert C. Geysler, outlines some very practical methods any well-equipped physician can utilize in the treatment of these distressing cases.

"Anterior Poliomyelitis," by S. N. Robertson, M.D., reviews the whole subject on the basis of our present knowledge and from the angle of the general practitioner.

"A Plea for Fuller Recognition of Physical Disorders in Medical Practice," by Prof. W. W. Young, should make every physician think. It shows how inefficient most of us are in an important line of pathology none the less real though non-observable by ordinary methods.

"The Occurrence and Treatment of Pain in Locomotor Ataxia," by Prof. Edward Livingston Hunt, is a brief and to-the-point clinical presentation outlining a form of treatment that gives definite results.

"The Child's Welfare At and Immediately After Delivery," by D. S. Hanson, M.D., you will profit from immensely. It is an able and timely paper.

"The Logical Treatment of Cancer of the Cervix," by Magnus A. Tate, M.D., F.A.C.S., begun in this issue, will be concluded in January.

Other papers, some of which will appear in January, are: "Roentgen Diagnosis," a most sensible and balanced article by C. Winfield Perkins, M.D.; "The Vaginal Douche," one of the level-headed papers for which Frances A. Harper, M.D., is known by our readers; and "Rectal Reflexes and Neuroses," an able paper by Atwater Lincoln Douglass, M.D.

THE BUSINESS SIDE.

"The Doctor and His Community" will continue the discussion of our propaganda for "Greater Efficiency, Increased Income."

The paper of Prof. W. W. Young, in the Original Articles Department, will have a business sequel in "A Challenge to the False Claims of Eddyite Healers," by Albert H. Burr, M.D.

The following papers are contributed exclusively to this journal. Republication is permitted if credited as follows: **MEDICAL COUNCIL, Philadelphia.**

ORIGINAL ARTICLES

Sentences, like sunbeams, burn deepest when most condensed.

We are not responsible for the views expressed by contributors: but every effort is made to eliminate errors by careful editing, thus helping the reader.

The Fauical Tonsil in Its Modern Aspect.

By JOHN J. KYLE, M.D.,

Professor of Otolaryngology and Laryngology, Medical Department, University of Southern California.

LOS ANGELES, CALIF.

Function of the Tonsils.

There is nothing definite known in regard to the function of the tonsils. Many hypotheses have been advanced but none of them seem to hold water. It is argued by Brieger and others that the tonsils protect the body against pathogenic infection, by passage of lymph through the tonsils to the surface. There are many reasons to think that the reverse theory is more consistent with our investigations, and that is that the tonsils are an open entrance of infection, and no tonsil that can be detected easily is a normal tonsil. Unfortunately, one can never tell, in all cases, whether a tonsil is the harbinger of microorganisms or the source of systemic infection, unless they are removed and the condition of the child or adult compared some time afterward with the condition before operation.

Anatomy.

There is probably no subject possessing greater interest than the medical and surgical treatment of the faucial tonsils. There is no operation about the upper air passages that is more often performed and none requiring greater skill and aptitude on the part of the surgeon than tonsillectomy. After many years of observation I have about come to the conclusion that there is no one operation about the head that is so often poorly executed.

The development of the tonsils begins in early fetal life, about the third month, and at birth most children possess tonsils and adenoids, which are perceptible to the naked eye. Not infrequently at birth children have large tonsils and adenoids, sufficient to interfere with feeding. Infants will with difficulty take the breast or the bottle, and for only a short time, crying and fretting on account of inability to breathe and take nourishment at the same time. These children are poorly nourished and do not develop naturally. Sometimes they are treated empirically for stomach or intestinal disorders, and not infrequently the nurse is requested to wash out the stomach, time after time. A little careful examination will frequently disclose the source of irritation.

Most medical men are more or less familiar with the anatomy of the tonsils. The position of the tonsils in their fossæ surrounded by the pillars predisposes to retention of food particles, debris, and the natural secretions from the mucous membrane lining the crypts. This cannot be demonstrated by merely looking into the throat.

Demonstrating Infection.

If one cares to demonstrate whether or not the tonsils contain pus, cheesy deposits, or infective material, it will be necessary to cocainize and with a forcep evulse the tonsil and by making traction the tonsil may be so compressed that its contents will be squeezed out. This may be examined and the character of the infection or debris determined. Sometimes the organisms present may be the *Streptococcus viridens*, *staphylococcus* in its different varieties, *pneumococcus*, tubercle bacilli, diphtheroid bacillus, and practically all the varieties of mouth organisms. The organisms may be confined to one or two varieties, or to a very great many.

Focal Infection.

Mouth Breathing.

Mouth breathing in infancy, from tonsil and adenoid tissue, predisposes to deformities of the mouth, middle-ear disease, disease of the teeth, lowering of the tissue resistance, and a variety of focal infections.

There is no age at which tonsils and adenoids cannot be successfully removed. In very young infants, the adenoid structures are so soft that there is no particular pain connected with their removal. In young children the tonsils should be removed always under ether anesthesia.

Pain and inflammation in the tonsils are not necessary for the establishment of focal infec-

tion. Many times the sequel of absorption from the tonsils is fairly pronounced, and the tonsils are apparently so small as to excite no attention whatever. The late Dr. Pinchon was one of the first in this country to call attention to the hyperemia or redness of the anterior pillar covering the tonsil as a reliable sign of a chronic diseased tonsil, and his observations hold good today.

The tonsils empty into the deep cervical lymphatics beneath the sterno-mastoid muscle, and enlargement of the deep cervical glands of the neck is suggestive of absorption from the tonsils. There may be a simple swelling of the tonsillar lymph node, a fibrous caseous degeneration or suppuration of the gland, and which is tubercular in many cases. Sometimes in acute and chronic inflammation, the glandular enlargements in the neck disappear with local treatment of the tonsils. The tendency is for a low form of inflammation to continue for a long time, and it is during this period and before caseous degeneration or suppuration that the greatest danger to systemic infection exists. A blocking of the lymph channels by swelling of the lymph node is not sufficient to prevent the tubercle bacilli, for instance, in reaching the lung. We think it advisable, in the removal of enlarged glands of the neck, first to ascertain the possibility of tonsillar infection and remove them at the same time, thus preventing a second operation on the neck.

The Tonsils and Tuberculosis.

The tonsils are the most vulnerable spot for the entrance of the tubercle bacilli, and the removal of diseased tonsils as a preventive to tuberculosis, or in the relief of incipient tuberculosis, is probably the most satisfactory thing to do.

The blood supply of the tonsils has been very accurately worked out by numerous investigators. There is no question but that a certain amount of absorption into the system takes place through the blood stream as well as the lymphatics. The blood supply of the tonsils is important on account of the surgery of the tonsil. The time is past when one can ruthlessly remove the tonsil and make no scientific effort to control the blood supply, as in surgical procedure. Severe hemorrhage from the tonsil following a tonsillectomy may be as important a factor in producing shock as the loss of blood from any traumatism or other surgical procedure. Therefore, we should aim to secure, either preceding enucleation of the tonsil or immediately following, all bleeding points with the aid of a hemostat. The true tonsillar artery and vein (J. Leslie Davis) pass down behind the tonsil and through the aponeurosis, near the superior and

posterior portion of the tonsil, entering the tonsil at its median point.

Hemorrhage.

The tonsillar branch of the dorsalis linguae enters near the base of the tonsil about the median line. The point of hemorrhage at this spot as a rule cannot be detected unless the base of the tongue is well depressed. The lingual branch, however, may be found sometimes near the middle of the fossa. Sometimes there is a small bleeding point on the internal wall of the fossa, a branch of the dorsalis linguae, and about the median line and near the attachment of the posterior pillar. These three points are the ones where we anticipate serious hemorrhage.

I want to explain a little later on my method for controlling hemorrhage in tonsillectomy.

Nomenclature.

The nomenclature of diseases of the tonsils in their relative frequency are: acute and chronic cryptic tonsillitis, acute and chronic interstitial tonsillitis, acute and chronic peritonsillitis, and membranous tonsillitis. Among the latter are particularly diphtheria and streptococcus infections. Other organisms may produce membranous tonsillitis, but diphtheria and streptococcus infection, more particularly hemolyticus, are the most virulent forms of membranous tonsillitis.

Tuberculosis, syphilis, hyperkeratosis, Vincent-Plaut angina, and hemorrhagic angina comprise most of the diseases of the tonsils. The hemorrhagic angina not infrequently follows after birth, and such cases usually die. Chronic interstitial tonsillitis, and without perceptible local symptoms, is sometimes a factor in producing pain in the ears and pain about the larynx, sometimes radiating to the temples of the diseased side.

Diagnosis.

To reiterate the suggestion made, it is very easy to diagnose an acute inflammatory condition involving the tonsils; but a chronic and latent inflammation of the tonsils is very difficult of diagnosis. Sometimes the tonsils are greatly hypertrophied; at other times, so submerged between the pillars as to be totally obscured, and unless by evulsing the tonsil, its absence or presence cannot be detected. A small hypertrophy of the tonsil, except as it prevents good breathing, may not be a source of absorption. A tonsil containing cheesy deposits, constantly or at times, foul and offensive, should be removed. A foul breath is more often from an exposed or hidden crypt than from diseased teeth, or stomach or nasal disorders.

This paper has nothing to do with the therapy

of tonsillar affections, but has to do briefly with the sequelæ of tonsillar diseases and with the surgery of the tonsil.

Tonsillar Systemic Infections.

Probably the general practitioner is more interested in the relationship of tonsils to systemic and focal infections, and no place has there been a closer relationship, as demonstrated by numerous contributions, between acute articular rheumatism and acute tonsillitis. There is a condition that is closely allied to so-called rheumatism, and that is the radiating pains to the neck, arms, fingers and back, which is subject to acute exacerbations. The throat symptoms as a rule precede the articular rheumatism. Endocarditis or pericarditis not infrequently have their origin in the immediate removal of the tonsils, and the disease may be relieved and even cured by the immediate removal of the tonsils. Chorea in young children is sometimes alleviated by removal of the tonsils.

I feel convinced that the tonsils are frequently the avenue of infection in tuberculosis of the lungs; that their removal is not contraindicated in tuberculosis, and that the operation can only be beneficial and not otherwise.

Hyperthyroidism and the Tonsil.

There is probably an intimate connection in some cases between diseases of the tonsils and enlargement of the thyroid gland in young children, and diseases of the thyroid in adults, particularly exophthalmic goiter. Dr. B. R. Shurley, Detroit, and others in this country, as well as abroad, have made this point quite clear. Even in advanced cases of exophthalmic goiter I have seen a wonderful alleviation of all the symptoms through the total removal of the diseased tonsils.

In middle-ear disease, either acute serous or catarrhal, in young children, there is usually an amelioration of symptoms following the removal of tonsils and adenoids. Middle-ear deafness is a prevalent condition and is in a great majority of cases due to neglect of the nose and throat in infancy. It usually manifests itself in middle life, and is so far developed at that time that treatment is often unsatisfactory.

Tonsillectomy.

Danger of operation, where tonsillectomy is indicated, is practically nil; that is, in the hands of one familiar with the technique of the operation. In only one case in many hundreds of operations have we had a death following a tonsillectomy, and this was due to a status lymphaticus, as shown by post-mortem examination. Francis R. Packard, of Philadelphia, and W.

Humes Roberts, of Pasadena, California, and many others, have reported deaths from status lymphaticus following tonsillectomy under general anesthesia.

We usually have about one severe case of secondary hemorrhage in fifty cases. Secondary hemorrhage may come on in young children as well as adults, and age apparently plays little part in hemorrhage. Paralysis of the palate muscles, with regurgitation of fluids, has been reported by Dunbar Roy, of Atlanta, and others. However, in his case the paralysis passed away after a short time. Not uncommonly have we observed a temporary paralysis of the fauces for a few hours after using a local anesthetic, with regurgitation of fluids into the nose.

Complications.

Pneumonia is a complication that may follow tonsillectomy, providing the patient is taken out of doors and exposed to dust a few hours after operation, and a patient should remain for at least twenty-four hours in a hospital. The exigencies of the occasion may demand removal in operations done in the physician's office, but after all this is a bad practice.

Tearing of the pillars by an operator, more particularly the posterior pillars, always leads to more or less cicatricial change, producing sometimes a narrowing of the post-nasal space. If narrowing occurs, a horizontal slit should be made through the posterior pillars. If there is a tear in the pillars at the time of operation, the operator should have enough presence of mind to close the perforations. A short time ago a physician in Southern California was defendant in a malpractice suit for fifteen thousand dollars, for accidentally destroying the pillars of the fauces while removing the tonsils. There was such marked evidence of carelessness or incompetence that the man was compelled to pay a large indemnity, in fact thirty-five hundred dollars.

The voice is seldom materially affected in injury to the pillars, and there is little danger of injuring the voice in any case, providing the operation is carefully performed.

After Treatment.

The after-treatment is the one that seldom receives any attention from the operator. The pain and soreness following a tonsillectomy is usually severe, and in consequence an opiate should be given to relieve pain and distress. Edema of the uvula not infrequently occurs, and this should be relieved by puncturing with a sharp knife. A child or adult should remain in bed for twenty-four hours following an opera-

tion. Where a general anesthetic is used and the patient complains of a great deal of thirst, we allow him to take ice water in small quantities. The patient may use a gargle composed of tannic acid and sulpho-carbolate of zinc, of each fifteen grains; carbolic acid, five drops; glycerine, two drachms; peppermint water, sufficient quantity to make one ounce.

The Anesthetic.

For tonsillectomy under general anesthesia we preferably use ether, given by the drop method. Some men order to be given, a half hour before operating, both to children and adults, a small dose of atropin for the prevention of excess of mucus.

For local anesthesia we prefer a one to two per cent. novocaine and adrenalin solution; and in the absence of this, we use one-half of one per cent. cocaine, to which has been added adrenalin ten drops, and two drops of phenol to a dram of one-half per cent. cocaine.

This is first injected beneath the mucous membrane of the anterior pillar, beginning near the base of the tonsil and working up toward the superior fauca, and in the posterior pillar and back of the tonsil. About ten drops of the fluid is also injected deep into the base of the tonsil about the capsule. About thirty to forty drops is all that is necessary to each tonsil.

Various Operations.

Methods of operation under local or general anesthesia are many. We have before us a great number of reprints devoted to the tonsil operations. Many of these operations are almost duplicates of each other. Probably there is no operation on the tonsils that has more advocates and notoriety than the Sluder operation. There are only a very few men, according to our observation, who are skilled enough to use the Sluder method with satisfaction. The operation which we propose to describe is, in our opinion, very satisfactory.

A Simplified Operation.

Under good illumination, if with a general anesthetic, the patient should be in a horizontal plane with the head slightly elevated and mouth opened with a Whitehead gag, preferably with tongue depressor attached. The tonsils should be grasped in the median plane and high up, and the most preferable vulsellum forcep that I know of is *Museux*'s. With the complete or partially submerged tonsil taut, the anterior pillar fits like a glove. With a Seiler's nasal scissors a buttonhole can be made between the tonsil and the anterior pillar, and by gradually pushing the scissors backward and close to the tonsil, the

aponeurosis is reached. By separating the scissors, a dry dissection of the anterior portion of the tonsil is made. With the tonsil still taut, and with a curved Prince's scissors, if there is any attachment of the posterior pillar superiorly to the tonsil, it may be relieved. With the tonsil still retracted, a long curved hemostat of some make, preferably a Kelly's hemostat, may be gently passed behind the tonsil and between the pillars, and the aponeurosis firmly secured. Within the aponeurosis will be found the true tonsillary artery and vein. After the hemostat has been placed securely in position, and with the Prince's scissors, the aponeurosis that binds the tonsil superiorly can be cut. The tonsil now hangs pedunculated and a wire snare, preferably a Pierce-Mueller, can be placed about the pedicle. The hemostat still remains in position after the tonsil has been removed. The hemostat in this position, after the tonsil has been removed, acts as a retractor, exposing the fauca to view, and any bleeding points on the pillar or base of the fauca can be easily detected and grasped with an artery forcep. By making gentle pressure with a gauze-tipped sponge holder, bleeding from the capillaries can be easily controlled. Sometimes the artery forceps may be allowed to remain attached to the vessels during the enucleation of the opposite tonsil.

The hemostat should remain attached to any bleeding point three or four minutes. Sometimes even after removal of the hemostat bleeding may begin, and it is necessary to reapply. By taking these precautions, it is seldom ever necessary to sew the pillars or tampon the fauca.

It is very frequently unnecessary to separate the posterior pillar from the tonsil. The one point to be remembered in a tonsillectomy is that the tonsil itself must be kept perfectly taut during the whole of the enucleation. After enucleation, and all hemorrhage has been absolutely controlled—and this should always be at the operating table—the pillars and fauces should be inspected for possibility of a small amount of tonsillar tissue remaining. The tonsil will not re-produce itself, but sometimes a small amount of lymphoid tissue at the base of the tongue may, by a slow process, work its way upward and between the pillars and resemble true tonsillar tissue, and may even be as great a menace and receptacle for infection as the true tonsillar tissue.

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We are talking about it. Doctor, what have you to suggest on this subject?—EDITOR.

Chloro-Brightism, with a Report of Two Cases.

By M. W. THEWLIS, M.D.,
WAKEFIELD, R. I.

Chloro-Brightism consists of chlorosis to which is added the minor symptoms of Bright's disease, with or without albuminuria. The term does not allude to the secondary anemias, as seen in tuberculosis and syphilis, but to a disease by itself which presents the exact picture of chlorosis, together with symptoms of renal insufficiency which are far more important in treatment than chlorosis. In fact, attention to the kidney lesion is absolutely essential in effecting a cure. Chloro-Brightism was first described in the clinics of the Hôtel Dieu, of Paris, and very little attention has been given to it in medical literature.

Report of a Case.

Case I. An unmarried girl, aged 20, came under my care for chlorosis. She had a waxy appearance and the hands, lips and gums seemed bloodless. Menstruation had been irregular for some time. She had experienced breathlessness, cardiac palpitation, incessant headache and vertigo, and merely raising in bed fatigued her. The limbs were badly swollen and it was impossible to remove the rings from her fingers and the mark of the stethoscope left an indentation on the skin, owing to the edema.

To these symptoms of chlorosis were added the following minor symptoms of Brightism. She was compelled to get up several times at night to pass water; had sensations of dead fingers and experienced sensations of electric shocks on lying down. She had morning epistaxis and complained of several itching of the limbs.

She had been under treatment in different places and each time had the routine treatment of chlorosis, which consisted of the administration of iron and the usual diet of meats, strong soups, jellies and wines. Her mother informed me that each time she had taken this treatment she had steadily become worse. The hemoglobin by color test was only 10 per cent. I could find no evidences of tuberculosis, but on making a urinary examination I found an abundance of albumin and numerous hyaline and granular casts. The latter findings, together with the minor symptoms of Bright's disease, confirmed the diagnosis of chloro-Brightism. She was immediately given an absolute milk diet and a course of iron phosphate, five grains being given three times a day.

In about a week the color began to come back

to the skin, the breathlessness improved and she had gained in weight. After two weeks of the milk diet she was much improved; there was no more palpitation and she could move from the bed to the chair without fatigue. She had gained ten pounds in a month and the hemoglobin test showed an improvement of about ten per cent. each week until recovery seemed complete.

Comment.

This represents a typical case of chloro-Brightism in which the treatment for chlorosis was given but was badly borne. The urinary examination revealed the secret and the results of the treatment were rapid. The condition does not represent a secondary anemia similar to that following tuberculosis or syphilis but is associated with, related to, and caused by, a peculiar condition of the kidneys which is far more important in treatment than attention to the symptoms of chlorosis.

Symptomatology.

The symptoms are in no way different from ordinary chlorosis. The patient has the characteristic color of the skin, weakness, dyspnea on exertion, vertigo, cardiac palpitation and irregularities of menstruation. Edema of the face and ankles are seen and the extremities are usually cold. The blood shows a typical picture of chlorosis.

The difference comes, however, in the study of the minor symptoms of Brightism or renal insufficiency, which is not usual with ordinary chlorosis. The patient is compelled to get up two or three times at night to urinate; has sensations of dead fingers and experiences sensations of electric shocks on lying down. There is morning epistaxis and itching of the skin. The urine shows feeble toxicity and many casts.

Diagnosis.

The routine treatment of chlorosis by meats and tonics which fails usually signifies that there is an underlying cause, in most instances, of (1) tuberculosis; (2) syphilis or (3) Brightism. The latter would ordinarily be the least expected but very likely to be the underlying cause of many cases, and is very easily overlooked. The urinary picture, together with the minor symptoms of Brightism and also the therapeutic test of the absolute milk diet, will usually clear the diagnosis. The urine must be carefully examined microscopically in order to obtain this evidence, for many times it shows nothing abnormal by the chemical analysis. Albuminuria may only be

transitory and does not constitute a valuable diagnostic sign. In every case of ordinary chlorosis the urine should be watched for the presence of casts because always with chlorosis there is a tendency for the kidneys to become insufficient.

Pregnancy and Chloro-Brightism.

This is one of the most frequent associations of chloro-Brightism and is not uncommon. An understanding of this condition is highly important to prognosis and treatment. Every case of impregnation, however, in a patient who has Bright's disease does not indicate chloro-Brightism because anemia does not always accompany chlorosis.

Case Report.

Case II A quartipara, aged 38, was delivered of a healthy child in August, 1912. She had a history of metrorrhagia after each pregnancy, and one sister died from a similar condition. After each pregnancy this patient, who was previously in excellent health, went suddenly into a coma and remained in this state for thirty-six hours. She recovered from this and was in good condition until three weeks after labor, when she suddenly was taken with severe metrorrhagia. Ergot was prescribed which gradually checked the flowing after several days.

This is the history of each pregnancy. After the hemorrhage had stopped she was profoundly anemic, the face being waxy in appearance, the fingers ivory and the extremities edematous. The urine showed an abundance of albumin and the microscopical field was literally filled with hyaline and granular casts. A diagnosis of chloro-Brightism was made and an absolute milk diet prescribed, two quarts being given daily. The following gives the results of treatment on the hemoglobin scale, on different dates:

Sept. 22, 1912....	7%	Oct. 26, 1912....	55%
Oct. 3, " ...	20%	Nov. 2, " ...	70%
" 11, " ...	30%	" 20, " ...	85%
" 19, " ...	40%	Dec. 1, " ...	90%

This shows the results of the absolute milk diet without the administration of any chalybeate. The urinary picture did not change a great deal, but the general health improved each week. Nothing was added until the last of November, when a few vegetables and fish were allowed. This made a continuous milk diet for three months. The casts and albumin continued for two years after the attack, even when she was able to do her work. She is now in excellent health, four years after the attack, and has had no recurrence of symptoms of Brightism.

Comment.

In this case apparently this peculiar condition of the kidneys predisposed to metrorrhagia, since with nephritis there seems to be a tendency to cause hemorrhage. In this instance, the prolonged flowing seemed to bring on the anemia, but in order to correct it attention had to be directed to the kidney mischief.

Differentiation.

Chloro-Brightism seems to be a different affection from common Bright's disease because the latter when associated with pregnancy does not always cause anemia, and, moreover, does not show evidence of actual inflammation of the kidneys. Many cases of chloro-Brightism associated with pregnancy are so mild that they often pass unnoticed. I have seen these cases so mild that the only symptoms presented would be vertigo and breathlessness on exertion, which would be relieved by the ordinary diet for nephritis. It is important in pregnancy and the puerperium to examine the urine for casts because the chemical analysis may not reveal any abnormality. In the two cases mentioned there has been no signs of a permanent nephritis as a result of the attacks.

Prognosis.

The results of chloro-Brightism on the mother are sometimes severe and may cause abortion, albuminuria gravidarum or eclampsia. On the child occasionally it hinders the growth and frequently it is the cause of a placental lesion.

Will this condition of the kidneys be permanent and will it lend to chronic Bright's disease? These are the most frequent questions asked by the patient's family. In the great majority of instances chloro-Brightism does not end in confirmed Bright's disease. Undoubtedly there remains a weakness to the renal filter which predisposes to kidney inflammation which might supervene in such diseases as tonsillitis, influenza, pneumonia and syphilis. Occasionally the disease may end in uremia and death, but usually if proper treatment is given the results are satisfactory.

Treatment.

An absolute milk diet is indispensable and should be continued for weeks. It is remarkable how the milk diet can be continued for so long a time with constant improvement. The absolute rest which the kidneys get from the milk diet seems to produce the cure. It has been my experience that in the severe cases the addition of anything to the diet will not produce as good results, and, on the contrary, will be badly borne.

In cases of a milder type, milk and cereals

may be given and in the mildest forms the ordinary diet for nephritis will suffice to effect a cure. The absolute milk diet is preferable to patients who are obliged to remain in bed, while those able to exercise require the ordinary diet of nephritis. Two or three quarts of milk daily was the amount taken by my patients. Preparations of iron and arsenic, and injections of cacodylate of soda may be used as in ordinary chlorosis.

Summary.

1. Chloro-Brightism should be suspected in all cases in which the routine treatment for chlorosis fails.

2. Anemia with symptoms of Brightism; albuminuria, and the presence of hyaline and granular casts, confirm the diagnosis.

3. Albuminuria may or may not be present, and is not a valuable diagnostic sign.

4. Often associated with pregnancy and may lead to many complications if not properly treated.

5. Has a bad effect on the mother and child.

6. Rarely ends in confirmed Bright's disease or uremia.

7. Absolute milk diet is the treatment.

The Logical Treatment of Cancer of the Cervix.

By MAGNUS A. TATE, M.D., F. A. C. S.,
CINCINNATI, OHIO.

Volumes have been written upon cancer of the uterus, its pathology and treatment, and yet today we stand baffled before the public, because we do not know the cause of uterine cancer and have not agreed upon a uniform method of treatment.

The medical and surgical world has striven hard to master this dreadful disease, and the laity have almost come to the conclusion that surgery is their only recourse.

That the cancer death-rate is slowly increasing (especially so in large cities) has led many practitioners to appear before various health boards to advocate the instruction of the public, by means of lectures and pamphlets, giving much of our knowledge relative to cancer.

Some years ago, in the seventies, Hofman told us that 7,500 died of cancer yearly in the U. S., and throughout the world over 500,000 yearly paid the penalty. Since that time the gravity of this disease is fully acknowledged.

Unconscious Neglect.

We medical men appreciate the horror of this malady, and yet our position is often like that of the drowning man when the poor or rich woman presents herself in our office to be treated for a condition which she has had for months and never realized; but through that sense of false modesty, or what not, she would not be examined, but kept her sickness to herself. This is not over-drawn; it is a common condition, and when a distinguished surgeon once stated that all married women should be examined at regular intervals, his advice was indeed good for womankind. Unfortunately, such a practice at present is not the rule; women go to a dentist regularly, but the

gynecologist sees them only when they are sorely afflicted, and often it is too late.

Prophylaxis.

Much discussion in the past has ensued over the prophylaxis of uterine cancer. What part, if any, does unrepaired laceration of the cervix play as a causative factor, and does syphilis through its inroads increase the liability of cancer in the presence of some lacerations and trauma connected with labor?

Cullen states that all injuries incident to labor have a potent influence in the development of the squamous-celled cancer of cervix. Yet we know that thousands of cases have occurred in women who have not borne a child or miscarried, and that countless numbers of virgins are also afflicted.

In fact, many cases begin in the glands of the cervix far distant from the vaginal portion, so that, taken at its face value, we can state that there is no constant relation between trauma of the cervix and cancer.

If there be an erosion of the cervix in the presence of the cancerous growth, we cannot say whether the erosion antedated or followed it. Irritation from a constant discharge is also given as a causative factor in the presence of circulatory disturbances; but, again, we can cite authorities who say that irritation never will and never can produce a cancer.

Irritation and Its Role.

If irritation be the cause, why does not the wearing of glasses cause cancer of the nose, or the wearing of a truss produce the disease in the hernial region?

We do know that most women who have cancer are over 35 years of age; but age also is not so potent a factor as was formerly credited to it. Recently I have had a very rapid malignant case

in a woman only 28, and some years ago saw cancer in a young woman only 22, and my experience is not at all unique.

A hemorrhage after the menopause usually means cancer, and now it is stated that such a case should be subjected to a hysterectomy, even if cancer be not present (as shown by microscopical examination of removed organ) such a course is justified as a prophylactic measure. This, at present, seems to me rather radical teaching. Incising operation of the cervix as a means of diagnosis is attended by much risk (unless a frozen section is made, and an immediate operation follow), should the specimen prove positive. It is now realized that such a trauma in the presence of cancer invites rapid growth.

Uterine Fibroids.

When a fibroid is diagnosed, an immediate operation is advised by many, even if the growth be small and symptomless, as it is stated that malignant degeneration occurs in from 3 to 5 per cent. of all cases.

This, however, is not my practice at the present day, as my experience leads me to say that symptomless small fibroids only bear watching. Not many cases of inoperable cancer die directly from hemorrhage; it is usually from an infection which is often associated with an insufficiency due to compression of the ureters. Where there are metastatic growths, some die from intestinal obstruction. Such a case I recently lost, wherein a resection of the colon was made, the patient living nine months after the operation. Whether the cancer be a squamous or a cylindrical-celled adenomatous growth, whether it be the everted vegetative cauliflower, or the inverting inflammatory growth, it means immediate surgery if the case be operable.

If a cancer be of the cervical portion, the tubes and ovaries are free from metastatic growths, unless the case be of unusual long standing. This led Shauta, in his famous vaginal operation, to leave the ovaries and tubes in situ.

Metastasis.

In 30 to 50 per cent. of the cases of a few months' standing metastatic growths are found in the pelvic and abdominal glands. The size of growth does not seem to have the bearing on prognosis that one would readily expect, as some very small cancerous cervixes exist with pronounced early metastatic involvement.

There are no means available to tell, aside from the microscope, whether an enlarged gland be a metastatic or an inflammatory growth. The most frequently affected glands are those adjacent to the large blood vessels, the internal and external iliac.

It is stated that the cylindrical-celled variety is the most malignant form, and that the inverted is more malignant than the everted type of cancerous cervix.

We use the term "recurrence of growth" the same as does the laity, when we know that it is simply a *continuance* of a growth which was not eradicated. This naturally does not mean it was always an improper or unfinished operation; but tissues may have been involved of which we had no means of knowing. Again, it may have been disseminated or implanted in the wound by the manipulation of the operator. Even years ago the surgeons recognized the danger of puncturing fluctuating tumors, as they might be malignant, which would result in a very rapid growth, after a seeming relief of temporary symptoms.

The curetting of the uterus may reveal a malignancy in a very unsuspected case, and a resultant hysterectomy follow, and yet no cancer be found in the tissues. This has led some to say that the curettage really scraped out all of the cancerous tissue; but I can hardly accept such a statement, as I would be almost sure that the fault be with the microscopist.

Cancer of the Fundus.

It is uniformly acknowledged that cancer may involve primarily the body of the uterus; if so, it is the least malignant form and absolute cures often follow its radical removal; but it is also acknowledged that when the cancer is located in the cervical canal we are dealing with its most malignant variety, and cures are rarely recorded, unless a case be found in its incipiency.

The continuance of life in cases not operated varies somewhat, but at least one-third die within one year and three-quarters within two years, with here and there one living three years.

Pregnancy and Cervical Cancer.

One of the most disastrous complications of cervical cancer is pregnancy. Fortunately this occurs only about once in 2,000 labor cases. An unsettled question relative to this condition, in most of the cases, is whether the cancer existed before the pregnancy or *vice versa*. If pregnancy does take place in the presence of cancer of the uterus, an abortion follows in at least 30 to 40 per cent. of cases. The average immediate mortality, as stated by Sarvey, who collected from the literature, 603 cases, was 43 per cent. There is no doubt that the existence of pregnancy increases the rapidity of growth, and usually Cæsarean section is the choice for delivery. I reported an interesting case before the last meeting of the Ohio State Society. The patient entered the Cincinnati Hospital about one year ago, and was delivered *per vias naturalis* of an appar-

ently healthy child, but the cancerous condition in cervix was well marked, even the bladder and rectum were involved. So a subsequent hysterectomy was readily ruled out. A Cæsarean operation was out of the question in this case, as the woman was in active labor with the os well dilated or, rather, torn in many places, allowing enough space for the child to pass through. The last I heard of the patient she had entered a hospital and was failing rapidly, but the child was flourishing.

Operative Procedures.

Naturally, the outlook for cure will depend upon the physical condition of the woman, the extent and location of the growth and the character of operation performed. If a too radical operation be made, there are more numerous *immediate* deaths, while with the less radical operation the recurrences are more frequent.

It requires sound judgment and experience to state (knowing as we do that cancer cases do not stand prolonged operations well) whether a given case should be operated, and while a freely movable uterus usually means operation, the question of decision depends greatly upon the individual surgeon.

The Abdominal Operation.

Most operators prefer the abdominal route, because they believe ultimately better results follow. There are two varieties of abdominal operations, the simple one (named by Clark a make-shift operation), one where no attempt is made to remove any of the connective tissues, and the radical one, where much connective tissue, broad ligaments, tubes, ovaries and glands are removed, with a liberation of the ureters from their bed of tissue, blood vessels ligated outside of ureters close to pelvic wall, and often a large flap of vagina removed. If we stop to compare the more radical operation with other methods advocated, are we justified in adopting it with the greatly increased risks? My answer based upon experience is yes, provided we see the case early and other conditions are favorable. The so-called radical operation, with its modifications, as advocated by Werder, Reis and Wertheim, and now generally credited to the latter, gives a primary mortality in skilled hands of 20 to 40 per cent.

H. C. Taylor says: "The surgical removal of cancer is a mode of treatment about which we have definite knowledge, and it is not to be abandoned until we have something that is certainly better with which to replace it."

Hopeless Operations.

The possibility of helping women otherwise hopelessly diseased has induced us to operate on cases in which the chance of relief was slight.

This has affected badly the statistics, both of the primary and permanent cures of cancer. Taylor claims a primary mortality of 15 per cent.

The above gives us in a nutshell the gist of the problem. Cases were operated upon that were not operable, and proper judgment has not been exercised.

Very often in the past, unsurmountable technical difficulties arose in cases which should not have been subjected to operation, and the complete operation had to be abandoned, and you readily know the results. It is now stated that Wertheim's mortality of 19 per cent., and others who claim 15 to 20 per cent., will now be greatly reduced by the more careful selection of cases. This is as it should be, and is one of the great lessons learned from time and experience.

Injuring the Ureters.

The danger of division, ligation and sloughing of the ureters is a serious complication, as shown by one of Wertheim's reports, where out of 500 cases there was sloughing of a ureter in 30, and in 5 both sloughed, undoubtedly due to interference with the blood supply.

The Vaginal Operation.

The vaginal route, so earnestly advocated by Shauta for many years, has some advantages in certain cases, as when the patient is too weak to stand the prolonged abdominal operation, is too fat, or where the vagina is very large and the uterus is somewhat prolapsed, allowing more easy approach.

A cuff or circular flap of vaginal tissue is secured over the cervix; the ureters are dissected free from the bladder columns, and this followed by a slow and careful dissection, until the uterus hangs only by the broad ligaments. The uterus is then removed, but not the tubes and ovaries.

If we search the literature for statistics, we find a better mortality for the vaginal than for the abdominal operation; but the ultimate results are not so good. I now use the abdominal route as the one of choice, but have not wholly discarded the vaginal route.

Some years ago I took occasion to thoroughly study the literature, and presented a paper, "Vaginal Hysterectomy for Carcinoma of Uterus," before the Ohio State Medical Association. The best record I have (case of cancer of cervix, operated 10 years ago by vaginal route), is well and has reached the age of 65 without a recurrence.

Ligation Treatment.

A treatment that has now fallen into disuse is that of the ligation of large blood vessels, as the internal iliac, with the idea of starving the

growth. This was found to be based upon false premises.

Many unexpected complications follow the radical operation, overcome the strength of the patient and add another death to the long list.

Hemorrhage may be a very serious factor, especially when coming from the numerous venous sinuses around bladder and ureters, and is responsible for many deaths.

Complications.

Vesical and urethral fistulae give great discomfort to the patient. Bladder complications are not only annoying, but are often very serious. A paralysis of the bladder requiring long catheterization leads to cystitis, this often to infec-

tion of the kidney.

The time required to make the radical operation, even in the hands of the efficient surgeon, is a potent factor. Shock and exhaustion are common complications, and an infection of the abdominal walls occurs in about one-fourth of the cases.

It is distressing to have a late complication set in after the patient has rallied nicely and apparently the case is running a favorable course. Such a case I recently lost; pneumonia developed the eighth day and the patient succumbed the tenth day.

The toxemias of uremic origin are always grave. *(To be concluded next month.)*

The Injection Method in Treating Hemorrhoids.

By ROLLIN H. BARNES, M.D.,

Editor of *The Proctologist and Gastroenterologist*; Fellow of the American Proctologic Society.

ST. LOUIS, MO.

There seems to be a revival of the injection method in treating hemorrhoids. The reasons for this are the facts that the text-book methods are not satisfactory; that we have not advanced in our hemorrhoidal methods as surgery has improved, and the old methods have become obsolete. When we return to the injection method, we are making a step backward rather than forward in the treatment of hemorrhoids.

Success in the treatment of hemorrhoids depends upon the obtaining of a clean, smooth surface of the anal canal mucous membrane. The reason for the recurrence of hemorrhoids after operative treatment is that we leave unevennesses, which set up inflammatory processes. This is why we find recurrence so common after the injection method.

Methods Should Be Exact.

We have been taught to believe that hemorrhoids are a minor trouble, which is a mistake, and we have been making an effort to find some simple method by which we can cure them with the least inconvenience to the patient. While I believe in simple measures, we must use methods that have sufficient exactitude to obtain the desired result, a clean, smooth anal mucous membrane. The removal of hemorrhoids is a plastic operation; and when we so consider it, then we will recognize that we can not obtain good results when we depend upon a method resulting in a slough, or upon the injection of carbolic acid, quinine and urea, or any other substance for the removal of undesirable tissue.

It seems to me that it would be a rare condition wherein one would be able to inject the proper amount of any substance, so that he would remove exactly the amount of tissue desired. Usually, I believe, sufficient tissue is not removed, and this is fortunate; for where the tissue removed is too great we find very grave results. I believe the injection treatment commonly results in a slough, irrespective of the statement of those who advocate this method that no slough occurs. I have seen many cases in which this method has been used and that resulted in ulceration, and a number of good authorities make similar statements.

Clean Surgery Better.

When it becomes necessary to use surgical methods in the treatment of hemorrhoids, would it not be better to use our best surgical knowledge and remove them as we would remove undesirable tissue in any portion of the body? Therefore, why not use the longitudinal elliptical incision for removing hemorrhoids? The criticism that has been made of this method is that of hemorrhage. This criticism may have been valid in the days when hemorrhage was the surgical danger. We believe that this is the only way by which hemorrhoids can be removed that fulfills the requirements of good surgery. The man today who cannot control hemorrhage from the smaller blood vessels is not entitled to the name of surgeon. When we use such methods as cause a slough, we only accentuate the danger, and the greatest argument against their use is that we are unable to obtain the good results that can be obtained by a smooth, clean surface following treatment, which is necessary for the success of any method.

Needless Surgical Operations on the Uterus and Its Adnexa.

By S. A. SAVITZ, M.D.,
1825 Tasker Street,
PHILADELPHIA, PA.

We will admit that many surgical measures are resorted to without special benefit to the patient. We must admit that many of such operations performed were more for the benefit of the surgeon than of the patient. That we are still ignorant of many physiologic conditions relating to the uterus and its appendages is a fact. The very first function, viz., menstruation, is yet a much disputed question with regards to its etiology. Nevertheless its irregularity both as to its time and length is the most frequent reason for surgical interference, regardless of any pathological findings. How quickly we forget that the menstrual flow may be shortened or lengthened and yet sound health be maintained! How often we forget that for some women it may be normal to menstruate one or two days and for others eight to ten days! How important it is to bear in mind that it is an exception rather than a rule for an individual to menstruate regularly month to month, year to year! And one making a careful inquiry would soon be convinced of these facts. Every woman is a law unto herself.

Menstruation and Ovulation.

What I have said about menstruation may well be applied to ovulation. In fact, still less is known of the relationship existing between ovulation and menstruation. It is questionable whether ovulation takes place periodically or continually; whether it occurs independently or synchronous with the menstrual flow. Conception has occurred during lactation, after menopause has set in, and even prior to the appearance of the menses. It is even not uncommon to meet with individuals who menstruate regularly during pregnancy. Suffice it to say that the physiology of the uterus and its appendages is as yet indefinite.

The ovaries have other functions besides ovulation. They seem to have distinct functions in stimulating the ductless glands. This accounts for the nervous phenomena which appear after their removal. Yet they are convicted very often without carefully weighing the evidence. Will she gain or lose by their removal? Is she better off with the little discomfort with them or will she be better off with the symptoms of artificial menopause? Such questions, it seems to me, are seldom considered by the operator. The psychic disturbances produced by a double oophorectomy

or a hysterectomy should be given the most serious consideration, especially if the woman is anxious for children.

A Thorough Survey Needed.

There are two important points seldom considered by the so-called non-conservative surgeon: First, a thorough study of the patient, including a complete *personal* history, physical examination, laboratory examination, and last but not least an X-ray examination; second, her age, her mental attitude and her *family* history. These facts can be properly ascertained if the family physician would be given opportunity by the hospital physicians to aid them. I am not referring to cases where pus or malignancy is positively diagnosed. Such cases should of course get the full benefit, and a complete removal of the organ involved should be the rule.

Hospital Haste.

I have seen women sent to the hospital on an afternoon and the following morning would be minus either her tubes, ovaries, or both. If conclusions are reached in such brief space of time (emergency cases excepted), it is fair to assume that the resident in charge is given more responsibility than he should shoulder. On many occasions, the surgeon meets the patient for the very first time on the operating table. Here I may say, before going any further, that my plea for conservatism is particularly for charity patients—not for those who are able financially to employ consultants or specialists, if you choose to call them, and undergo thorough tests and examinations before the surgeon arrives at a positive conclusion. Is not a poor woman entitled to the same benefits? It is a known fact that the poor receive equally good attention as the private patients in the medical wards. Thorough examinations are made; histories are well studied; laboratory tests are made; and the X-ray is frequently resorted to. The physician in charge usually takes a personal interest in each individual.

Hurried Surgeons.

Walk across the corridor into the gynecological ward, and you cannot help but notice the difference in environment. The surgeon is busy. Busy with what? To get through quickly—so many on the waiting list, is the cry. The anesthetic is given. During this brief space of time the resident whispers to his chief a few remarks on her history. Soon a laparotomy is performed. In many cases the surgeon finds nothing but an inflamed ovary or a very simple

salpingitis. Of course he removes the ovary. By the time he has removed one of the so-called affected organs, he has already forgotten the age of the patient and advantages she may have by saving the other ovary intact.

Too Much "Safety First" Surgery.

One of the demonstrators in a leading hospital gave his reason to his ward class for removing the other tube; it was "for safety sake." To my mind, there was no plausible reason for removing either tube. This very surgeon whom I have in mind was asked what he thought of the next patient ready for operation. He answered: "I really don't know, my boy; wait until I operate." I would class this type of man in the lowest rank of his profession. It is this type of surgeons who obtain and hold positions either in colleges or hospitals through opportunities, and do not possess an ounce of ability. They usually are assistants to our class "A" surgeons.

The chief surgeons themselves have no time to look into the merits of all the charity cases. They are no doubt conscientious and conservative. Their assistants, who should follow in their footsteps, are in many instances incapable. Their aim is to report so many operations. I venture to say that 75 per cent. of the cases under their charge are wrongly diagnosed prior to the operation, and 50 per cent. of the cases operated on could have lived with little discomfort without operation. I have seen ovaries removed not only for chronic oophoritis, but also for acute oophoritis. I have seen numerous tubes removed not only for chronic conditions, which would be a plausible excuse, but also for acute salpingitis. In all of these cases I made it my business to learn whether or not efforts had been made to bring about a subsidence of the attack with medical, hygienic or other means than surgical, and in all cases answers to my inquiry were in the negative.

The Writers Are Conservative.

All of the eminent gynecologists, either in their lectures or text-books, outline conservative treatment for such cases, with reported good results. Statistics based on 6,000 cases of various diseases of the uterus and its adnexa treated in the clinic of Schauta under conservative methods, show they were attended with good results, and in only 10 per cent. were operations resorted to. Those operated on were because of pus, malignancy, or difficult complications which would not yield to medical treatment.

The Moral Status of Needless Surgery.

It is criminal without doubt to perform an abortion—the law says so. Is it not a greater

crime to perform a double oophorectomy and make a woman sterile for a simple inflammatory condition? The woman who foolishly has an abortion performed has a chance to repent. The one minus her ovaries has no chance. Her life is a dull, unhappy existence. In the one case the doctor is justly classed a criminal. In the other he is thought of as a surgeon. If space would permit, I am in position to report numerous cases that I have sent to hospitals with indications for a curettage only, but instead had major operations performed upon them.

Choosing a Surgeon.

In the last two years I have particularly watched such cases, and my experience is the excuse for this article. Those who are fortunate to be placed in the care of the conservative gynecologist—one who is not only a skillful surgeon but an observing clinician—usually have no regrets. I am sorry for those who choose the opposite type of surgeon. There is no valid reason why a patient with uterine trouble should not be considered as thoroughly before an abdominal section is attempted as is the one with a suspected gastric ulcer. This is my plea. This is why I am taking my time to present my views. Who is to be blamed? My answer is: first the surgeon, and second the family physician. The surgeon in charge, whether he be the chief or assistant, just as long as he has the power to come to his own conclusions, should not only be a capable diagnostician but should possess clear, moral conscience and conservatism. He should be one who has proven his qualifications, not only to the medical profession but to the public at large. The non-conservative type, particularly those who are on the teaching staffs in medical schools, do not take the pains to study their patients. It is this type of man who considers an operation in the same attitude as a mechanic does in overhauling an engine. It appears to me they consider their patients as inanimate objects for experimental purposes only. Briefly speaking, most of them do not consider the moral, noble side—the patient's future.

Regulating Surgery.

It appears to me that definite rules should be laid down by the law—almost similar to those applied to the general practice of medicine—before one is permitted to specialize in major surgery. Above all, the specialist should be an able diagnostician.

In 1913 I published an article in THE MEDICAL COUNCIL entitled "The General Practitioner of Today." I then claimed that general practitioners were not given sufficient considerations

in the hospitals. I am more convinced of this fact, only that I may add it is *their own fault*. Self-reliance and self-possession—two capitally important elements a physician should possess—are usually lacking in the majority of the general practitioners. I do not believe in conceit and I do not believe in over-indulgence of self-reliance, but I do believe in self-confidence—at least sufficient of it to give a patient a thorough personal consideration and study instead of

shifting the responsibility to some inexperienced surgeon.

This is the era of specialists. We refer too many cases; and our sense of timidity is well recognized by the so-called specialists. We already have too many rhinologists, proctologists, oculists, etc., etc. But above all we have too many of those who call themselves "Gynecologists." Whose fault is it that so many pathies originated and the public at large is losing confidence in our old, esteemed medical fraternity?

Thoracic Empyema.

By C. S. NEER, M.D.,
VINITA, OKLA.

Acute suppurative conditions with the thorax have not been recognized and dealt with with the same promptness which has in recent years characterized the management of acute suppurative conditions within the abdomen. The toll of human lives which results from this neglect, while considerable, is not so large as would accrue from the same degree of laxness in the recognition and treatment of suppurations below the diaphragm.

Nature kindly allows a patient with an unrecognized empyema to live for many weeks, sometimes even bringing about a cure by her unassisted efforts, in the discharge of the pus through a bronchus; and in a still large number a cure results after a very much delayed drainage operation by the surgeon. There is, however, a considerable mortality due to this delay and, what is often lost sight of, the percentage of morbidity is enormously increased. By the delay in treatment the lung is permitted to become enveloped in a dense layer of partly organized fibrin which interferes with its expansion and may result after drainage in the persistence of a thick-walled cavity with much retained pus—the so-called chronic empyema—and the prospect of a life of invalidism for the patient.

Causes.

Of the various causes of empyema may be mentioned pneumonia, infection beneath the diaphragm, due to abscess of the liver; ruptured duodenal ulcer or appendicitis, and various infectious diseases, especially scarlet fever, measles, typhoid and whooping cough, in which infection of the pleura occurs by blood metastasis. Tuberculosis of the lung may produce it by involving the pleura.

Because of its importance the empyema associated with pneumonia will be considered first. Of the 22 cases of empyema that I have been connected with during the past few years, 18 were of this type. Statistics show that about 2 per cent. of cases of lobar pneumonia develop empyema. The studies of Anders and Morgan would indicate that in more than half of these the empyema appears before the crisis; that is, it appears as a complication of the pneumonia, while in a smaller number it occurs as a sequel. Metapneumonic empyema is much more common in children, and 75 per cent. of all cases of empyema in children are due to the pneumococcus. In adults other organisms play a much more important part.

Serous Effusions.

Serous effusion in considerable amount may be demonstrated in more than 6 per cent. of the cases of pneumonia—three times as often it will be observed as purulent effusion. Small, serous effusions occur much oftener, probably in one-half the cases.

It sometimes happens that a serous effusion becomes purulent after a lapse of time. I observed a case in which, after pneumonia, needle puncture showed a clear serum. The symptoms failing to clear up, another puncture was made a few days later, which showed pus.

A phenomenon, which is found in some cases of empyema, is the co-existence of a serous effusion by the side of a purulent one. I have seen one case of this kind in a patient who developed chest symptoms following an operation for suppurative appendicitis. The patient was having cough, a septic temperature and sweating, and there was diminution of the breath sounds and slight dullness over the lower portion of the right lung. The attending physician aspirated in the mid-axillary line and thought he got a

few drops of pus. In using a good-sized needle the next day at the same point and at various other points over the chest we were unable to obtain pus, but, going around to the back, we drew a syringe-ful of clear serum. Then we thought there might have been a mistake about the first puncture and that we might have a sero-fibrinous pleurisy to deal with, and decided to wait. The symptoms continued and, the condition of the patient getting worse, we decided a day or two later to open the thorax, and on doing so found plenty of pus. Koeniger, in 1909, published some experiences with this condition and warned against being misled by such a harmless-appearing serous effusion, to which he gave the name *manteler-gusse* or "cloak effusion."

Metapneumonic Empyema.

Cases of metapneumonic empyema may be divided into two classes: (1) those in which practically the entire pleural cavity of the side is involved, and (2) those in which adhesions confine the pus to a certain limited area. In these cases of circumscribed empyema the pus may be between the chest wall and the lung, between the lung and the diaphragm, or between the lobes of the lung. These walled-off collections of pus may be quite small. A case I saw recently in a child of six weeks after a pneumonia showed a small cavity at the back of the left lung containing about one ounce of pus. Five or six punctures were made before pus was drawn. Very small collections of this kind may possibly be absorbed.

In interlobar empyema the physical signs are apt to be indefinite, and the diagnosis is often difficult.

Lung Abscess and Localized Empyema.

An interesting point is the possible relationship between lung abscess and localized empyema. Abscess of the lung in lobar pneumonia is a rather infrequent clinical finding, but is rather commonly found post-mortem. Thus, of fifty-one cases in the Massachusetts General Hospital coming to autopsy, Lord states that fourteen showed abscess of the lung macro- or microscopically. A significant fact is that these abscesses are usually situated near the periphery of the lung near the pleura. Robinson found in two cases of interlobar empyema coming to autopsy, adjacent abscesses of the lung, and he is not convinced that uncomplicated empyema ever breaks into a bronchus.

There is certainly very strong evidence to support the belief that in the majority of cases in which a localized empyema breaks into a bronchus an abscess of the lung precedes and accompanies if it does not produce the empyema.

As a prognostic point I will mention for what it is worth that it has seemed to me that cases of pneumonia in which pain has been a prominent symptom are especially likely to be associated with or followed by empyema. If this observation is correct it is no doubt due to the greater severity of the associated pleurisy.

Diagnosis.

The diagnosis of empyema during the height of a pneumonia will rarely be made, nor would it be proper to subject the desperately sick patient to exploratory puncture unless the crisis were delayed beyond the usual time.

Any case of pneumonia, especially in a child in which convalescence is protracted beyond the usual time and in which there is a little fever, should be suspected. Symptoms which are apt to be present are: irregular fever, sweating, cough dyspnea, and failure to gain strength. Chills have not been present in metapneumonic cases, in my experience.

The physical signs are in general those of fluid in the chest. A point to be constantly borne in mind, however, especially in children, is the fact that bronchial breathing generally persists over the affected area and the physical signs may be the same as on the third or fourth day of the pneumonia. Failure to keep this fact in mind has often led to a wrong diagnosis of unresolved pneumonia. My first case of empyema was in a little negro boy who presented dullness and bronchial breathing over the entire right side, the physical signs I had been taught to associate with a consolidated lung. The patient had been carefully examined by a number of the other young internes before a diagnosis was made. So far as I was concerned, the diagnosis was a "retrospective" one. I agree with the statement of Sears that "unresolved pneumonia is a pathological myth." If the temperature and signs persist and outside complications, such as otitis media, endocarditis or pericarditis, can be excluded, the burden of proof is on the physician to show that the condition is not an empyema.

Of the diagnostic methods I regard percussion as the most important. Auscultation is of less value for the reason just given. Any suspicious dullness or flatness continuing after a pneumonia and associated with fever should be an indication for the use of the aspirating needle. It may be a fact that this procedure is not entirely free from danger, but the danger is so slight and its probable benefits so great that in most cases this hazard must be disregarded. Many punctures must sometimes be made before pus is drawn. Locating the pus is in some cases a much more

difficult and formidable procedure than the operation for drainage.

Treatment.

The indications for treatment in acute empyema are: (1) To evacuate the pus and fibrin; (2) to limit the collapse of the lung, or, if collapse has occurred, to secure its re-expansion.

A strong argument in favor of the early recognition and treatment of purulent pleurisy is the speedy recovery of the great majority of these cases by almost any method of drainage. A surprising amount of difference of opinion is found in the literature of the subject over the question of the importance or non-importance of attempting to exclude air from the pleural cavity while securing drainage, and a number of devices have been discovered and re-discovered from time to time to attain this end. I find that Erichsen, in his *Surgery*, published about seventy years ago, advised introducing a trocar and tying a bladder to the end of the canula. He also suggested attaching a rubber tube to the canula and placing the end of the tube in a pan of water, thus getting a syphon effect. This latter method has recently been employed by Brulau, T. T. Thomas, Kenyon, Perthes and others, modified only to the extent of placing the rubber tube directly into the chest either by means of a trocar or by a small incision. Robinson, hoping to prevent all leakage around the tube, trephines a rib and screws a thread metal tube into the opening, to which is attached a syphon or suction apparatus. A disadvantage of these methods is the fact that the fibrin often found in large masses in metapneumonic cases cannot escape readily through the small opening, and the tube is likely to become obstructed by it. To get good drainage and the immediate evacuation of the fibrin, an opening of fair size is essential, and to obtain this it is better to excise about one inch of a rib. To be sure, it is a fact that many cases of empyema, particularly of the localized form in children, will get well after simple intercostal incision and the introduction of a tube.

The Air Pressure.

Without going into a discussion of the physical forces which affect the air pressure within the thorax and which under normal conditions maintain the lung in its position against the parietal pleura, it may be observed that when an opening is made into the pleural cavity to evacuate a pus collection, the two most important factors in securing re-expansion of the lung and obliteration of the pus cavity are the negative pressure of inspiration and the positive pressure of expiration.

Under conditions of ordinary quiet breathing the maintenance of an unobstructed opening in the chest wall larger than the glottis would probably prevent indefinitely the re-expansion of the lung. A valvular action of some kind is therefore desirable. The pus-soaked dressing of gauze kept over the opening makes a very fair valve, and under this simple plan of treatment most cases of acute empyema will recover. This valvular action can be made much more effective by covering the dressing with some air-tight material, such as gutta percha or rubber dam, after the method of A. T. Cabot. Cotton uses a square of rubber dam, guyed under slight tension with an adhesive strip at each corner, and runs a little glycerine under it to make it adhere to the skin.

Mobilization.

DeBovis has pointed out that mobilization of the chest wall by the resection of a rib permits it to fall in under pressure of the air, so that when an opening is made low down, the chest wall shuts down over the convexity of the diaphragm and restricts the entrance of the air.

In order to further promote expansion by utilizing the positive pressure within the lung, it is very desirable that coughing be encouraged by employing very light general anesthesia or, if practicable, local anesthesia, in operating. Encouraging the patient to blow on some such device as the Wolff bottles does good in cases where the lung expands slowly.

Total Empyema.

In cases of total empyema I prefer to drain by resecting a rib quite low down and a little back of the posterior axillary line. At this point gravity favors drainage and there is the possible benefit of a valvular action between chest wall and diaphragm.

In localized collections of pus the opening must of course be made over the pus. I have found it a good plan to leave the aspirating needle in position when pus is found and follow the needle closely with the incision. If this is not done it is very easy to get a little to one side of the pus collection. The treatment of the empyemata due to other causes than pneumonia (aside from tuberculosis) does not differ from that of the metapneumonic cases, although the prognosis is not so good.

The Injection of Bismuth.

If the methods above mentioned fail to get re-expansion of the lung and healing of the sinus, as will rarely happen, except in neglected cases, we must resort to other measures, such as the injection of bismuth paste, or one of the more radical operative procedures may be considered.

Of these the operation of Oestlander, consisting of the resection of varying length of four to six ribs, allowing the chest wall to fall in, and that of Schede, who, recognizing the fact that granulation tissue never grows from pleural surfaces, sought to further favor the obliteration of the cavity by removing not only the ribs, but also the intercostal muscles and parietal pleura; and that of Delorme, consisting of peeling off the thick layer of fibrin, allowing the lungs to expand, are well known. All these operations, and especially the two last, have a considerable mortality and the results are not always satisfactory.

Tubercular Empyema.

Tubercular empyema, so far as treatment is concerned, is in a class by itself. Here we have the problem of a cold abscess containing a pus which is frequently sterile and causes very little constitutional intoxication and has little tendency to cause metastatic infectious processes else-

where. Drainage of such an empyema is likely to result in secondary infection and rapid decline in the patient.

That the prolonged existence of a tubercular empyema is not necessarily incompatible with a fair degree of health is shown in a patient I now have under observation, who has for nearly five years had a large collection of pus in the right chest, and who, when I saw him a few days ago, weighs as much as he ever did in his life, and is able to earn a living for his family. Without going into details of this case, I will say that I believe the development of an empyema has prolonged the patient's life several years. When I first saw this man, five years ago, he had an extensive tubercular process in his right lung and had had four or five large hemorrhages. The empyema has compressed the lung and allowed it to heal, just as the artificial injection of nitrogen gas does, after the method of Murphy.

The Therapeutic Value of Dynamics and Rhythmics.

By ELLA W. CUSTER,
CHICAGO, ILL.

After a long and careful study of rhythm and dynamics from the point of view of the musician, the present writer has come to the conclusion that a better knowledge of these subjects may be applied to the relief of physical weakness and of certain forms of disease. Scientific definitions of these terms are accessible to all. The musician knows that these do not cover the whole ground. He feels the psychological and artistic import of both subjects and intuitively comprehends their significance.

The time-sense and energy-sense are inherent in all normal human beings. They are the sources of much intellectual pleasure, and they may be used to improve physical conditions. There is an intimate connection between dynamics and rhythmics. They act and react upon each other. The gain or loss in one produces a corresponding gain or loss in the other.

Definitions.

Dynamics is the propelling force which is basic and elemental. It is the moving power which, when measured and controlled, becomes rhythmic.

Rhythmics is the regulating principle, and the use of it increases dynamic power. Hence, rhythm is an expression of vigor. As dynamics has an elemental quality, it does not always appeal to the individual, and for this reason does not receive much general study.

The dynamic sense is not often cultivated. The opposite is true of the rhythmic sense. The study of rhythm and the application of it to personal motion will inevitably increase strength and self-command. Increasing rhythmic sense gives strength, and those who need vigor may cultivate it by learning rhythmic sweep—by acquiring momentum. One feels this resistless power when watching a body of marching men. They illustrate a combination of dynamic force and rhythm.

Unconscious Energy.

Unconscious energy is the first principle. Conscious, directed, intelligent action is rhythmic. Herein lies the value of, and necessity for, training. The rhythmic sense is susceptible of cultivation to a marked degree—dynamic sense to a lesser degree. With an increase of personal energy (dynamics) which may come almost unconsciously, and from extraneous sources, an improvement of time-sense (rhythm) will follow naturally. This rule also works conversely. A voluntary cultivation of controlled motion (rhythmics) will develop energy (dynamics), and it has a therapeutic value.

Therapeutic Value.

Syncopation and "ragtime" are not properly considered under the head rhythmics, for they belong to the subject of accent, which is stress or emphasis within a rhythmic unit. They are normal and give expression to youthful exuberance.

Time-sense is always weak in young children.

Teachers recognize this and strive to cultivate it at an early age by means of marching, calisthenic and gymnastic exercises, which are usually carried on with music to mark the rhythm. Professional gymnasts in their spectacular work in a circus find music helpful most of the time. But it is worthy of note that whenever a difficult feat of *broken* rhythm is to be accomplished, like a long slide or leap, the music stops.

Broken rhythms are abnormal and in personal motion show a decline in bodily control and a loss of dynamic energy. Those who deal with abnormal physical conditions should study broken and irregular rhythms, learn to measure them, and know proportionate length of rhythmic beats and rhythmic units. The orthopedic surgeon should use this knowledge to aid his patients. Broken personal rhythm is indicated by uneven strength and unequal gait. When one side of the physical organism is crippled or weakened the motions of arms and legs become of unequal length. This inequality is in direct proportion to the physical rhythm of the patient. There must always be an arithmetical ratio. There is inevitably a proportionate rate of motion which can be measured and counted and put into figures. These figures may vary greatly and often, but they infallibly indicate pathological conditions.

In a patient whose steps are as two to three, or seven to eight, or fourteen to fifteen, or in any other abnormal ratio, it is certain that his habits of mind, his strength, are in the same ratio. If a patient is capable of comprehension of this and is willing to cultivate his rhythmic sense, he can raise his bodily efficiency and increase his dynamic power. A study of rhythm will enable a patient to distribute his strength and use it to advantage and such use of strength will accumulate in power.

Rhythmic motion is always controlled motion. A definite sense of this will relax nervous tension and systematize activity. All these points are of much value in a convalescent who is trying to regain his activity. [Say, after infantile paralysis.—Ed.] He should acquire, with conscious, directed systematic effort, and with the help of his physician, a rhythmic sweep.

In conclusion, it is well to emphasize the fact that dynamics and rhythmic react upon each other in a marked degree; that both react psychologically and physically upon abnormal conditions in a patient, and that a physician may use these forces with satisfaction to himself and profit in many cases.

Congress Hotel.

How To Be Pneumonia-Proof.

By A. W. HERR, B.S., M.D.,
381 Arcade,
CLEVELAND, OHIO.

Ten per cent. of the deaths in the United States result from pneumonia. During the winter months this rate in cities has often been doubled. Tuberculosis and heart disease, each causing one-ninth of all fatalities, are the only diseases which outrank pneumonia. In a bulletin, issued by the United States Public Health Service, we are told that seventy per cent. of all cases occur between December and May; that it is distinctly a cold weather infection, seemingly brought on by wintry blasts; that it is invariably a germ disease; and yet they state that these germs are constantly present in the mouths and throats of about seventy-five per cent. of healthy persons; and they acknowledge that it is only through the aid which we unwittingly extend to them that they are transformed from harmless organisms to one of man's most powerful enemies. The latter statement has volumes in it.

What aid is it that we unwittingly extend to them that transforms them from harmless organisms to most harmful enemies? We are anxious to get behind the scenes and learn just the nature of the aid that unwittingly rendered these harmless fellows dangerous criminals; and perhaps thereby we can learn how to avoid the disease.

The Etiology of Pneumonia.

In investigating the history of pneumonia, we find that there is invariably a prepared soil; that there are great predisposing factors; that the presence of other diseases are among these predisposing factors; and holding first rank in this category is influenza and other inflammations of the upper air passages, to which may be added whooping cough, measles and various other exhausting diseases. These are sufficient to so reduce our resistance that we are unable to cope with the organisms.

Debility from any cause, such as fatigue, overwork, overeating, intemperance, overheating of rooms, overcrowding in street cars, halls and other public places where foul air is prevalent;

mental or physical harassment, sexual or other excesses, all break down resistance. In other words, wrong habits of living are the debilitating influences or factors which prepare the soil for the growth of the pneumococci, diplococci, micrococci and other organisms that produce the toxins peculiar to this disease.

There is one condition in pneumonia which we believe will be found present in the majority, if not in all, cases as a furthestmost important factor. No one, I believe, will have pneumonia until after he is thoroughly food poisoned. You must have decomposition in the alimentary canal to furnish the infection necessary to develop the disease. Pneumonia comes from auto-infection.

In pneumonia we have a condition of the bowel where bacteria of the feces will multiply. These cases are invariably constipated. Here we see a condition wherein there is an excessive production of poison in the bowel, and instead of elimination being increased or normal, elimination is greatly reduced. The toxins and ptomaines of the bowels not finding exit through the normal channel of elimination, endeavor to find avenue of escape from the system through some other channel, which, in this instance, is the lungs.

The Pneumonia Type of Man.

We observe that it is a disease of apparently strong men. I say *apparently* strong. These subjects, unlike those of tuberculosis, are usually those of a plethoric type; their systems are habitually surcharged with superheated and impure blood and lack resistance. These persons are usually known as "high livers," who habitually overindulge in flesh meats, fermented drinks and highly seasoned foods. As a result constipation and putrefaction of the bowel ensues; there results absorption of fecal matter, plus the overproduction of waste products of tissue metabolism. The system becomes clogged, nerve sensibilities are blunted, the tone of the nerve centers is lowered, and there is a sluggish response to nerve stimuli; and thus, when the surface of the body is chilled by exposure to cold, the blood is driven inward, leaving the surface vessels empty and the skin blanched. The nerve centers governing circulation through their vasomotor branches cause a reaction in order to repel the cold. The blood is rushed to the skin in even greater quantities than before exposure, and there is presented that pleasing surface glow which one experiences after a brisk walk on a clear, frosty morning. In a "cold" these same vasomotor nerve centers have their sensibilities blunted by the presence of toxins in the blood, so that the full reaction does not take place.

There remains an excessive quantity of blood in the inner vessels, resulting in a congestion of some organ, such as, for instance, the lungs.

Pneumonia and Colds.

In pneumonia, due to the excessive putrefaction taking place in the bowels, we have an exaggeration of the conditions present in a cold. Therefore, pneumonia may be looked upon as merely an exaggerated cold, and be dealt with accordingly. The germs present are not the cause, but a mere incident of the disease.

These so-called harmless organisms present in the mouths and throats of healthy people and mentioned by the United States Public Health Service in their Bulletin of January 24, 1916, and which are transformed at times into enemies, are more in the nature of results than of primary causes. They are as weeds springing up and growing because they have found a neglected but suitable soil, with "no man with a hoe" to interfere with their rapid and luxuriant growth. Stated in other words, the toxins from the bowel have so saturated the lung tissue that normal protective agencies of the lung, such as blood serum, leucocytes and phagocytes, are overpowered and rendered inoperative.

In colds or pneumonia, if treatment is instituted immediately, say within a period of twenty-four hours, that is, before blood serum and corpuscles by diapedesis have penetrated the vessel walls, a treatment that suffices to restore the circulation, such as, for instance, a hot bath, will relieve the disease. But it is important to institute such measures as will correct the bowel condition.

The Bowel.

We believe that in pneumonia a sterilization of the bowel is "first aid to the injured." As an illustration of the latter point, we will refer to the case of our little daughter who was low with measles complicated with pneumonia. We realized the importance of this "first aid," and administered saline laxatives and castor oil as an eliminant. An older practitioner who had had considerable experience in the treatment of pneumonia cases was called in consultation. He inquired as to whether we had cleaned out her bowels. Receiving a reply in the affirmative, his only advice on three successive calls was to give her more oil. We observed, although we thought we had fully relieved the bowels, that there was with each dose given a further movement, and with each movement we observed a drop in temperature and an improvement in her case. Now she is well and is busily copying these notes.

Our further observation teaches us to look

upon pneumonia as a supreme effort of nature to eliminate excessive poisons; that it is, indirectly and primarily, a disease of the bowels rather than of the lungs; that it is a disease which can be wholly avoided by keeping a clean bowel and a pure blood-stream. In fact, when the blood-stream is kept free from toxins one should not catch cold or be overtaken with pneumonia.

Exposure to Cold.

I do not allow that cold weather, exposure to penetrating winds or chilling of the body surface as a result of exposure to wet, are *primary* factors in pneumonia; for, after fasting from heavy food a few days, during which time fresh fruits only were eaten and the body gotten into prime condition, I have frequently tested this matter by various forms of exposure. It is a habit with me and my children to sleep with heads exposed before an open window, even with a strong northwest wind, with snow blowing in our faces, and with no untoward results. I go without rubbers in the slush and snow, expose the back of my neck to drafts, sit on cold stones, plunge daily into a tub of cold water, go frequently without an overcoat or hat, sit by the hour in a cold room; and yet when in prime condition, that is, when all organs of elimination are functioning normally, and while subsisting largely upon a fruit diet, which I have done for months at a time, I am absolutely "cold"-proof and pneumonia-proof.

Hygiene.

In these days of modern invention and conveniences we are losing our motor function. If we wish to go anywhere we take the car, or ride in an automobile, and climb the moving stairs, or are lifted by an elevator. If every one walked as in the good old days, it is quite probable that pneumonia and bronchial troubles would not be showing such an alarming increase. It is little realized how much good the habit of walking in winter does for the physique, in toughening it to exposure.

Persons of the north temperate zone have actually become strangers to their own climate; instead of cultivating it, so to speak, they have, in a sense, de-acclimatized themselves. Spending most of the day and night in an artificial heat lowers the vitality of the system. An English writer tells us that, as the climate is here to stay, it is the business of those who live in it to keep in touch with it by a proper amount of exposure. There is a lot of medicinal virtue in "braving the elements," for they are really kind to one who values a certain intimacy with them.

Mercury as an Internal Antiseptic.

By M. L. DALTON, M.D.,
FLOYD, VA.

When I say mercury I mean one of its derivatives. I, as a rule, use bichloride because it is readily soluble and is borne well by the average patient. Calomel was formerly used by me in cases, say, like pneumonia. The biniodide, as well as other preparations, have been used by us in treating children.

Mercury is recognized by most surgeons and physicians as one of our best antiseptics for external use; and in this part of the country it is being used more and more as an internal antiseptic. A great deal of research work has been done along this line by H. E. Jones, M.D., of Roanoke, Va. In fact, he was the pioneer in the use of bichloride internally.

Bichloride is used by the mouth in doses of $\frac{1}{4}$ grain, and intravenously or intramuscularly in doses of $\frac{1}{4}$ to $1\frac{1}{2}$ grains. The usual dose with us is $\frac{1}{2}$ to 1 grain in all septic conditions. I find that the more septic a patient is the more bichloride he will bear. In syphilis $1\frac{1}{2}$ grains is not an unusual dose with us.

Typhoid Fever.

Bichloride is my sheet-anchor in typhoid fever, as well as in pneumonia. I give $\frac{1}{4}$ grain by mouth every two hours when patient is awake and $\frac{1}{2}$ to 1 grain, as needed, intravenously if possible; if not, in the muscle. Usually aim to get it in the areolar tissue beneath the skin but not in the skin. I have often had the temperature to drop two or more degrees following one of the huge doses. I give half to one grain as an initial dose, according to the amount of toxemia there seems to be present, and half to three-fourths grain every day for two or three days, as indicated. Considerable peristalsis is caused at times, and stools may be streaked with blood; but this may be controlled by sedative doses of opium or morphine. I watch the teeth, and if they get tender or gums are inflamed, I hold up on it for the time being.

Pneumonia.

In treating pneumonia I have been equally successful, using it in the same way. I have used it in scarlet fever, diphtheria, measles, ileocolitis and erysipelas with good results; in fact, in all types of septic trouble.

In septicemia the cause should be removed, and in pus formation the abscess should be drained, and then the systemic septic condition will soon respond to bichloride.

Case Records.

Now some cases in point. Last October I had a case of typhoid fever that had been discharged as cured but I was called back, and I found the temperature 103½ F. Gave one grain in the gluteal region and the temperature disappeared by next day. No more visits were made, as the reinfection subsided at once.

Case 2. Pleocolitis in bottle-fed infant 8 months old; was brought to hospital; had been sick 10 days, with two physicians in attendance. The usual remedies had been given, with restricted diet. Meningeal symptoms had developed the day before. Tried the usual remedies with no results. Meningitis increased, and for two nights slept very little and would keep the hand going in a wave-like motion over head on right side all the time. As I saw child would die unless a change was made, I decided to give ¼ grain bichloride in gluteal region, which I did. Within half-hour child was asleep and slept most of the time for the next 24 hours, being aroused only for nourishment. Improvement continued uninterruptedly to complete recovery, leaving the hospital in one week. This child weighed when taken sick 20 pounds, and you can see that this amount given was equal to two grains given to an adult weighing 160 pounds.

Case 3. Puerperal septicemia; temperature 104; gave douche and one grain of bichloride in vein, and next morning temperature was 100 F.

Case 4. Young man, 22 years old, returned from the coal fields of West Virginia, where he had contracted typhoid fever. He had been sick about 10 days. Gave ¾ grain in vein and next day temperature had dropped from 104 F. to 103 F. Gave ¾ grain more in vein next day, and temperature fell to 102½ F. Second day from that I gave ½ grain in hip; three days from that time ½ grain in the other hip, temperature running not over 102 F. during the day. Four days later gave ½ grain more in areolar tissue of abdomen. Temperature kept coming down, and he was discharged in fourteen days from time of starting treatment.

Limiting Complications.

Some one may say "I have done as well with other treatments." Yes, and so have I; but I had the coated tongue, becoming dry, sordes collecting on teeth, tympanites and delirium, and toxic facies, none of which you have as a rule with bichloride treatment. Now remember all these cases, except the little child, were taking ½ grain by mouth every two hours; it was taking ¼ grain every four hours.

I now am treating a case of typhoid. On first

visit temperature was 104½ F. Gave 1 grain in vein, and temperature at 4 p. m. was 100 F.; next morning 99½ F.; rested well during the night, but temperature went up in the afternoon to 102, the next afternoon to 103, when I gave ¾ grain in vein, and it dropped to 100 again and never run over 101 after. While not yet discharged, patient is doing well and has no troublesome symptoms, as is usual in this disease. This patient was unable to take the drug by mouth, so I have left it off for the present, as it causes some nausea. I sometimes avoid nausea by adding a little lemon or orange juice to the solution.

Syphilis.

In syphilis we often give as much as 1½ grains, with the happiest results. Often it does good, when salvarsan has failed.

This dosage may seem heroic to those who have not tried it out; but do not be afraid, and use it to effect. I felt my way along at first by giving it by the mouth and then ¼ grain hypodermically, until now I am not afraid of half to one grain in any septic case. I consider this a great field, and if properly developed and used will do, in the hands of the average man, more good than almost anything he could use, since he sees the cases that need antitoxic treatment and always has bichloride at his command. I have written before on this subject, and have had numerous correspondents in regard to it, but so far I have never convinced a man that it was harmless, properly given, unless he was on the spot and sees it given, and then he always goes away convinced.

An Antiseptic Formula.

A. To one quart of distilled water add one-fourth pound chlorinated lime and mark "Shake before using."

B. To one quart of distilled water add 15 drops of creolin. Shake well.

For use, mix one, two or three parts of A with three parts of B. The resultant is stable and ready for use, does not harm instruments or patients and is somewhat analgesic. I use it freely in open wounds, in the vagina, about the rectum, etc.

Omaha, Neb.

JAS. K. NEWMAN, M.D.

Probably the proportion of creolin might be made greater in many cases.—Ed.

The Physicians' Exchange.

The symposium on a Physicians' Exchange is rare good reading. Personally I am in full sympathy with Dr. E. N. Walker, of Springfield, Mo., and Dr. J. F. Roemer, of Waukegan, Ill.

M. A. TAYLOR, M.D.

New Hampton, Iowa.

OUR OPEN FORUM

Syphilis in the Pregnant Woman.

There usually occurs in every doctor's practice cases of syphilis in women that are pregnant, and the treatment becomes one of the most important items in obstetrics. The two cases that I am about to report will show that early, active and intensive treatment may cure the case, giving a negative Wassermann for a period of over three years, I am not bold enough to assert that this will be permanent.

H. P., married one year; husband had syphilis and still had a positive Wassermann. She came to see me on December 23, with two sores on the labia minor, and was pregnant five months. I examined the sores with the dark field illuminator and the *Treponemata pallida* were found. negative. I may say that the sores were two and one-half weeks old. She received on the 26th 0.6 grms. of salvarsan. Her Wassermann taken five days later showed strongly positive 2 plus. Her second injection was given on January 2, and Wassermann taken five days later was medium positive, showing that there was a reduction in the Wassermann after the second injection and the sores have healed by this time. On January 12 she was given the third injection and her Wassermann after that was weakly plus, and January 28 she was given her fourth injection and her Wassermann thereafter had been negative to date, taken at intervals of three months. She gave birth in April to a healthy baby boy, who has been apparently healthy since. The baby's Wassermann has been taken four times, and each time it was negative.

M. J., colored, pregnant seven months, came to the obstetrical clinic of the Polyclinic Hospital, Philadelphia. It being a routine in this clinic to test the Wassermann reaction in each case, and her Wassermann being strongly positive, she was urged to immediately take treatment. This occurred at the time when we were unable to get salvarsan for dispensary patients and we therefore gave her a dose of arsenobenzol, "Polyclinic," and she did not return for three weeks, when a second dose was given her, and at this time she, being in the last month of pregnancy, did not return at all but was delivered a few weeks afterwards. The child, however, has all the evidence of syphilis and whose Wassermann is positive.

The above cases tend to illustrative that if we hope to get any results in the treatment of women who are pregnant and who have syphilis, it must be early treatment, active and intensive, and until the Wassermann is negative and stays negative thereafter.

CHAS. H. J. BARNETT, M.D.

15 South Sixty-second Street.

Electrical Treatment of Opium Narcosis.

The case of morphine poisoning reported in October COUNCIL by Dr. Henry Beates attracted my especial attention because for years my treatment of opium poisoning has been somewhat different from that given in the text-books. About 1887, I think it was, I had a severe case of this kind. After trying all the usual remedies, it occurred to me for some unknown reason to try a faradic battery.

By the time the battery was procured the patient was nearly dead. She was black in the face, and pulse and respirations almost ceased. I applied one pole over the apex of the heart, and the other pole alongside the neck over the phrenic and pneumogastric nerves. In less than one minute she was better. In ten minutes the change for the better was wonderful. Then I tried leaving off the battery and in a few moments she would sink into deep stupor. The renewal of the current would at once revive her. I simply kept that battery going for hours until the opium had exhausted itself. She made a good recovery.

The last case I had was two years ago, a would-be suicide. After trying the usual remedies and treatment for such cases that we are all familiar with, she was slowly sinking. I procured a battery and applied the poles as above with immediate results for the better. We just kept the current on until she was out of danger. I have treated a number of cases in this manner and all with fine results. I always give them the usual so-called antidotes and stimulants, and follow this with the battery and results have been all that could be desired. The theory of this course of treatment is that the faradic current stimulates the two especial nerves that suffer most from the opium.

Bellingham, Wash. L. R. MARKLEY, M.D.

Antipyretics in Pneumonia.

I have just read in a leading medical journal that in pneumonia a learned doctor of course would abandon coal-tar antipyretics, as the fever is a protection process and depresses the heart.

Let me relate an experience. About twenty years ago, on a cold winter's day, a young lady was taken with a chill in church. It was about noon. She went home, a fever came on, there was oppressed breathing and cough. I was called in early evening and found a typical case of progressing pneumonia. I prescribed the best I could the usual remedies, but left two capsules, about five grains each, composed of acetanilid, soda bicarb., strychnia and codeine, in what I think to be of proper proportions. I directed that if the first medicine did not better the condition within three hours that the patient should take a capsule, and that, if needed, she should take a second in three or four hours after. The

first medicine did not stay the high fever, quick pulse, pain in lungs and cough. The capsules were resorted to; result—all the symptoms were modified; there was moisture of the surface and a nice sleep the latter part of the night. The morning visit found little fever, loose cough with bloody expectoration. The fever did not rise again; no more capsules were given and the patient recovered nicely. If the lung congestion had gone on for a day or two, so that there was consolidation, of course coal-tar remedies might have done harm instead of good; but the lesson taught in this case, is that there may be a place, even in pneumonia, for coal-tar remedies, even with "learned doctors."

The above mixture I always carry in my case—no better remedy in the world to stay initial fevers, la grippe, etc., where there is pain all over, headache and fever, on first call—usually in evening. A couple of good doses of above will quiet, lessen fever, give good sleep and find patient better in the morning.

Pierre, So. Dak. O. N. HOYT, M.D.

Selenium in Cancer.

Patient, male, Italian, age 21, laborer. I take the following notes from surgical records of Massachusetts General Hospital, Boston, Mass.:

"Admitted to hospital; diagnosis of gastric ulcer. Exploration showed typical posterior duodenal ulcer, with enlarged glands in vicinity, attaching it by a sort of root to the pancreas. Pyloric opening very small. Enlarged gland in submucous layer, causing tumor apparently inside stomach. Appendix bound down with old adhesions.

"Stomach opened and submucosal gland removed. Posterior gastro-enterostomy for duodenal ulcer with infolding of ulcer. Gastrotomy for removal of submucous gland. Appendectomy for chronic appendicitis."

Second operation one month later at same hospital. Surgical records:

"Exploration showed omentum adherent to old abdominal scar. These were clamped and tied. Posterior gastro-enterostomy explored and found all in perfect condition and functioning. Stomach clamped vertically just to right of stroma and divided between. Distal portion of stomach then freed. Whole pyloric end of stomach found to be adherent, and freed with great difficulty. Clamp applied over first portion of duodenum and stomach. Pylorus excised, with portion of stomach and duodenum. Duodenal and gastric stumps approximated. Diagnosis, microscopically, duodenal ulcer and carcinoma of stomach. Partial gastrectomy for carcinoma of stomach. Discharged from hospital, relieved, 1913."

The above are the hospital records and microscopical findings. The patient came under my care in 1915, about eighteen months after leaving the hospital, with all the clinical signs of recur-

rent carcinoma. Extreme emaciation, incessant vomiting (frequently bloody), almost constant gastric pain, etc. Physical examination showed a very sensitive indurated mass just below the ensiform. A rigid diet was enforced. The only medication was selenium in colloidal glyco-sulphur form. This treatment was continued for about one year, with intervals of cessation from all medication. Treatment discontinued since January, 1916. Examination October, 1916: Weight, 157 pounds, a gain of over 30 pounds; no pain during past year; good appetite and good color; no nausea nor vomiting; bowels regular. Unable to discover any tenderness or induration at the site of former trouble. He himself says that he is enjoying good health. For the past year he has been doing ordinary laboring work without losing one day's time. This, it must be remembered, is nearly four years after the operation in Boston, and one year and a half after the recurrent carcinoma, and the man is physically able to perform ordinary manual labor.

CHAS. H. WALKER, M.D.
327 West Eighty-sixth St., New York City.

Selecting the Child's Birthday.

I was called to see a lady who was expecting confinement in about two weeks. She was thirty-six years of age, and this was her first venture in this line. She had been told that she might expect a very severe and even dangerous labor. Her appetite had been great for over a month, and her general health good. Her home was sixteen miles from the nearest physician, and she was much worried for fear that at the time that he might be needed something might delay or interfere with obtaining his services. My advice was requested.

Examination showed that the child was active, not over-sized, and the presentation was then normal as far as I could determine. The os uteri was dilated and dilatable. My advice was that this day was a very suitable day for the confinement, and if she wished me to do so I would select this as the child's birthday.

I was told to proceed.

After making careful preparations deliberately, I administered a hypodermic of pituitrin with one-sixtieth grain of strychnia, using but one-half of the ampule of the pituitrin, and injecting it near the large veins in the flexure of the arm.

In fifteen minutes slight rhythmic pains commenced and the head began to descend into the pelvic canal. In two hours the os uteri was well dilated, and I administered a full dose of pituitrin.

Within ten minutes expulsive pains commenced, and forty minutes later the child was born.

Now what do you think of this procedure?

A. D. HARD, M.D. Marshall, Minn.

<p><i>While we, as physicians, desire to be scientific students and practitioners of medicine, and that is the primary purpose for which this journal is published:</i></p>	<h2 style="margin: 0;"><u>THE BUSINESS SIDE</u></h2> <p style="margin: 0;"><i>of Medical Practice</i></p> <p style="margin: 0;">"The laborer is worthy of his hire."</p>	<p><i>yet, for the welfare of our dependent ones and our standing in the community, we must secure a fair compensation for the services we render our fellowmen.</i></p>
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"GREATER EFFICIENCY, BETTER PAY."

Nerve and Business.

SOME MEN naturally lack the nerve to open a boil or repair a lacerated perineum, and such men should not study medicine; they are like the engineer who is afraid to take his engine apart and simply doctors it with oil. It stands to reason that the man who wants to tinker a machine must know the mechanism, and the man who proposes to tinker a man must know anatomy. Nerve comes naturally to a young chap, and if he begins doing nery things when he is young it is easy to keep at it when he grows old. But if he begins to welch and side-step when young it comes easy being a slacker and a nerveless routinist when he grows older.

Physicians are urged to be general practitioners until after all the jump is out of them, and then they may take up a specialty. And being a general practitioner, according to those thus advising, is to leave all surgery, all obstetrics, all the special work, to the specialists and surgeons. Even the laboratory work is a specialty. In fact, all doing-things practice is to be severely left alone until the average man has been giving pills and powders, and looking at tongues and feeling pulses, until he lacks the nerve for really *doing things* in his profession. Then, after he has lost his nerve, he may be a "specialist"—and starve at it.

Pick a Specialty Young.

The up-and-doing young doctor who does not discover his specialty after two or three years' practice, and begins to direct his studies in that direction, is not apt to make a real success later in a specialty unless he is forced into one by the community discovering his natural aptitude.

Of course all men cannot be specialists; it is not well that all physicians take up an exclusive line of practice. Fully three-fourths of all doctors should remain general practitioners, and probably seven-eighths should do so; but they are committing financial suicide by remaining

the *kind* of general practitioners they are urged to be and fairly frightened into remaining.

"Getting" Your Nerve.

Yes, we are told continually that such and such technic is for such and such a specialist, and that this and that procedure is for me and mine but not for you, until the general practitioner begins to wish advisers would cease from troubling and the technicians take a rest. Were it not for the necessity of the country doctor doing a little of everything, and thus keeping medicine alive, the profession would be so parcelled out among various technicians that the profession, as such, would cease to be. It has come to a pass that many city physicians hesitate to pass a catheter for fear of offending the G. U. man, and shy at opening a boil because the surgeon around the corner says it is a serious surgical operation belonging to the specialist. Does the Osteopath hesitate? Nay, Brother; he does not! Nobody "gets" his nerve.

Just so long as being a "general practitioner" consists in parceling out doses of drugs, attending the easy obstetrical cases the midwives do not get, filling out free certificates, and assigning all the profitable cases to the technicians, just that long will general practice fail to pay, and just that long will any man with a bit of nerve and get-up-and-go in him slip out of it into something worth while—if he gets a chance. And the man who sticks on at this little game will do so because he has lost his nerve, because his wife won't let him change, or because he is too tired to care. And how much the doing-things doctors and surgeons complacently pat him on the back and how much they admire his judgment—in sending cases to them!

The Coming General Practitioner.

The coming general practitioner will be a *general* man, as was formerly the case. Unfortunately for the point of view of the stand-patter

who wants to drift along in the practice of medicine as it was twenty years ago, *the technician is right*, so far as the value of his technic is concerned. Medicine has been reconstructed by modern technic. There is no doubt at all that there is now a minor medicine and a major medicine, and major medicine is largely a matter of technic, and the man who hopes to count in the internist field *must* be a technician; he simply *MUST* be. On the other hand, the man who insists upon practicing minor medicine exclusively must be content with a diminished and constantly diminishing income from practice. This is the *condition* confronting us: theories don't count in the face of the outstanding fact.

Specialists and Specialists.

There are two kinds of specialists, the scientists and the commercialists. The former splendid and perfect the technic. They are splendid men; they write books in which all details are given, and the publishing houses and medical journals are industriously spreading this vitally important information—spreading it among general practitioners, who are encouraged to employ the methods. The real and constructive specialists and technicians are *not* trying to limit the activities of any capable physician. The effort being made to limit the modern therapeutic technic to employment only by labeled and announced specialists is commercially conceived and selfishly promoted by commercialized so-called specialists.

Make Technic Ethical.

It is a great mistake to commercialize modern technic. The general public needs the prompt healing that good technic supplies in a major degree and that good medication along the old rational lines also supplies, though minor to more recent advances. And it is decidedly the province of the general practitioner to offer to the public *both* the major and the minor methods. And be it remarked, in passing, that the administration of salvarsan, the intravenous administration of crystallized strophanthin, the intravenous neutralization of acid intoxication, etc., are major methods, though drugs are used. Much hypodermatic and intramuscular medication, the rational employment of endocrine organ extracts, hypodermoclysis, and many other modern measures, are major therapeutics. Why, then, draw the line between these things and mechanical or surgical measures? If the general practitioner wishes to serve his patients, he should give himself proper training in these measures, and employ them to whatever extent he may be efficient therein. The rest he should leave to the real specialist.

After all, the matter comes right down to this

question: Am I possessed of the nerve and energy to practice medicine as it is taught today? Doctor, your interest in your beloved profession, your interest in your own patients' welfare, your interest in your own professional advance and efficiency, and last of all your interest in your own financial advancement, should cause you at once to ask yourself the question propounded above. Then, having reached a decision, it is up to you to show that you have the nerve. And, lacking it, we can't see much future for you in medicine.

Deficient Teaching of Medicine, a Liability and a Mortgage.

By E. P. CUTHBERT, M.D.,
EVANS CITY, PA.

In some colleges the practice of medicine is a much neglected subject, while other branches are pushed to the front. A year ago a third-year student helped me with a minor operation, and as we were coming home we got to talking about his college course, and he remarked something like this: "Yes, in a little more than a year we will be through, and I do not know just what we will be—scientists, pathologists, diagnosticians, or surgeons, certainly not medical men."

This man is a good student who is really trying to learn how to help the sick in the best way, and he felt that he was not getting what he really needed at college. He is a student in a "regular" college, but this lack of teaching the actual application of drugs in the alleviation and cure of disease does not apply only to "regular" colleges, as was recently brought to my mind by the receipt of a circular letter from the young man who is dean of a homeopathic college, and asking me if I could not send them some students, or the names of prospective students with whom they might take up the matter and influence them to attend their college.

Green Teachers.

I may be mistaken, but it seems to me that a college that is doing really good work and furnishing the right kind of teaching should be its own advertisement and should not have to beg the profession to send them students. It savors too much of commercialism. I felt constrained to write and tell this young dean that I felt his teaching staff was composed of men too young and inexperienced to make practical teachers, and that therefore I must conscientiously throw my influence to colleges where the teachers were men of years' of practical experience. I suppose this young dean thought me an old fossil when he read my letter, for he kindly wrote me that

while his faculty was composed mostly of young men, they had had scientific training and had attended large clinics. He did not mention whether they were medical or surgical clinics. He also does not mention the extent of their *experience in every-day practice of medicine*. He probably thinks that unnecessary and out of date.

Poorly Balanced Training.

Students turned out from these ultra-scientific medical colleges, will, I believe, be like one I knew some years ago. As both of the doctors in this story are dead, I dare tell it. My preceptor said to me one day that he wanted me to be "a good practical fellow and not like some of the young doctors they were turning out nowadays." I knew he had a story connected with the statement, so I waited until he could hold it no longer, and then he winked at me and called me over to him and said: "Don't breathe a word of it, and I will tell you something funny." The story was something like this:

He wanted to go on a vacation and was looking for a young doctor to look after his practice in his absence. A nice, bright young man living in the part of the city where he practiced had just graduated with high honors at one of the best colleges in the country, and that morning had applied to him for the position. The old doctor looked on him with favor, and proposed that he go on his rounds with him that morning. That was before the days when contagious diseases were placarded, even in Pittsburgh, and the first place they called the old doctor with great gusto introduced his friend, Dr. L. When they entered the sick room, the young man blurted out: "Oh, Doctor, don't that child look funny? How red he is! What is wrong with him?" The old doctor said that he felt like a plugged nickel and whispered to him that the boy had scarlet fever. At the next patient's home the old doctor said he did not think the young man would be interested in this case so he could just stay in the buggy and at all the other places he stopped Dr. L. kept the horse company. At the end of the morning the old doctor was non-committal whether he would get a substitute or not. The young man hung around the elder man's office for a few weeks for an answer or an offer to help with a case, but received no encouragement.

Students Who Fail as Practitioners.

Student that I was, I felt sorry for the recent graduate. However, another doctor did take him in and was away the greater part of the summer, while young Doctor L. looked after his office. I say his office, for patients become very scarce

under the tender ministrations of the young man. At the end of the summer the new hospital of his Alma Mater was completed and, as he stood high in his graduating class, he easily became a resident physician. I do not know whether he gained much practical experience there, but at any rate he never made a success at the practice of medicine.

Favor the Good Schools.

I believe it is the duty of the honest physician to throw his influence to the medical college where he knows they have as teachers men of long years' experience not only in teaching, but also in the actual practice of medicine under such circumstances as are found in the city slums or in the country, as well as in the homes of rich or poor, no matter where located. Well do I remember the homely illustrations with which Prof. J. B. Marvin, at the Kentucky School of Medicine, impressed on us the diagnostic points and important points in treatment, which we would not have remembered so well had he presented them in any other way.—*Experientia docet.*

Ethical Publicity.

By WALTER T. BROWN, M.D.,
WILSONVILLE, OREGON.

I know physicians who sincerely believe there is no such thing as ethical publicity; but any physician who has kept pace with current medical literature of the past few years can not but help know that many good, capable physicians are doing a lot of hard thinking along this line.

The bankers, the ministers and the churches advertise the good they can do. Our food, our clothing, everything that is used for health and comfort, is advertised, brought to our attention in every conceivable way, and those who do it have wealth and honors showered upon them. And I fear that down in our hearts we sometimes envy them.

For Glory and Honor.

I have sometimes wondered if some medical books were not written and published for the fame they would bring to the authors. I believe that *some* clinics, hospitals, even *some* medical colleges are conducted primarily for the publicity and aggrandizement of the doctors and professors in charge.

Commercializing Medicine.

When I began the study of medicine, I was employed by a leading physician in Hot Springs, Ark. My principal duty was to get photographs

and gather material for a booklet he was getting out to serve as a guide to tourists coming to the Springs. This booklet was full of fine illustrations, artistically bound, and rather expensive. Considerable space was devoted to the photogravures of the doctor's offices and equipment. There was a lengthy article in which he gave his views of the therapeutic value of the water, and the necessity of coming to the Springs for certain diseases. He gave me a list of nearly two thousand names to each of which I mailed a copy of this booklet. Yet if the editor of the evening paper had asked this doctor for a paid ad he would have fainted from the shock to his ethical soul.

Conversing with a surgeon, a capable man, I happened to mention the name of a specialist, also a capable man, and this surgeon spoke rather disparagingly of him. I knew this surgeon split fees, worked the County and State Medical Societies for all they were worth to advertise himself.

The Newspaper View.

A friend, a newspaper man, who called my attention to an article in one of his exchanges, asked: "Doctor, if I were to drop into your office, talk shop, get your diagnosis and treatment of a certain disease, obtain the remedies, and cure one of my friends without so much as thank you, what would you think of me?" I have never told him just what I thought, for I have serious doubts as to which of us is the better shot.

Conscientious newspaper writers feel their responsibility as educators of the people as much as we feel our responsibility as physicians for them. And nothing so disgusts a high-minded newspaper man as one of those ethical doctors who will resort to any kind of subterfuge to gain a little newspaper publicity and who would insult any newspaper man that asked him for a paid ad. Oh no; you must not splash his ethical reputation with printer's ink that is paid for!

Ethics and Advertising.

I maintain there is as much ethics in advertising as there is in the practice of medicine. The advertising fake doctor is no more reprehensible than the advertiser of fake foods and drinks; perhaps the latter is more insidiously injurious than the former. For either one to advertise a lie can not be too severely condemned, and the guilty ones should be severely dealt with, not by medical societies but by law, both State and Federal.

Ways and Means.

How, then, are we to get this ethical publicity?

I hardly think all of us will ever agree on the same plan; nevertheless I believe a plan will be worked out which we can all use to our advantage. I think the plan outlined in April MEDICAL COUNCIL a splendid one in many respects, but at this time and under a good many circumstances it is not practical. As one writer suggests, it throws too much into the hands of a few—those who control the medical societies.

Not long after I began to practice I located in a town in a thickly settled country where there were eight doctors. Three of us had our offices in the same building and another was close by. We four entered into an arrangement for each one of us to take some branch of medicine he liked and study it until he was as proficient as possible under the circumstances; then we would consult each other freely in our difficult cases. Every one's books and equipment were at the disposal of the others. We had agreement to settle with each other at the end of every month. While we did not advertise in the papers, we let all our friends and acquaintances know that we were associated, and that they could get the opinion and advice of all four for but a little more than they had paid one of us before. When one of us was away the people did not hesitate to call one of the others; even our patrons got so they would speak of us as their doctors instead of their doctor. For nearly two years this plan worked well, and we gained in practice and prestige. It was a decided advantage to the community as well as to ourselves.

If, in the long run, it were financially profitable for a physician to advertise, an ethical way would long ago have been evolved. But it is *not* profitable. The general experience of advertising doctors has proven this to be the case. It does not pay to advertise any one-man business unless the man has goods to sell and hopes to sell enough of them by advertising to build up a two-man business, and finally one with many employes.

Thirty centuries of medical practice has crystallized a sentiment that the best interests of the physicians and their patients is best conserved by the professional, non-advertising method; and the man who tries the experiment along other lines usually gains more in experience than in money. Over-competition is promoting several lines of advertising essentially unsound, as, for instance, the advertising of some *one* church. Group advertising may pay, and one reason why it does is because it is essentially honest. "Sunkist Oranges," for instance, is an illustration of profitable group advertising; and

group advertising of churches and possibly of medicine—not of certain named physicians—might pay well.

Authorship, as we well know, is a hard trade. Few men who write medical books and edit medical journals do it in the hope of making more money in practice; and if they do they are commonly disappointed. Generally speaking, the physician who knows enough to write acceptable medical books, will make more money by giving his whole time to practice. We have served many years in hospital work, and been paid some nice fees; but the same time and energy devoted to private efforts would have been much more profitable in dollars and cents. Many fellows in hospital work have expressed like opinions to us. Neither does working the medical society circuit pay in dollars and cents. Doctors soon size up a man, and if he is actually competent he will get consultation work, while if incompetent his “working” the medical societies simply advertises his incompetence. And assuredly a physician has just as good a right to be “a jiner” as has any other man. Some carpenters and some physicians are temperamentally inclined that way.

Don't worry about the rival who pulls every string he can find loose: he usually loses patients as fast as he gets new ones, and merely keeps even in the game.—EDITOR.

The Treatment of Gonorrhoea.

In an article upon proper and improper methods of treatment, in *Northwest Medicine*, Dr. F. L. Ashton, Seattle, Wash., makes some good points. It is important to know if the disease involves the anterior or the posterior urethra, or both. The laboratory study of a case is imperatively necessary to intelligent and successful treatment of all but very mild cases, and one does not know which is a mild case without such study, though he may have blind luck. We take too much for granted in these cases.

Non-specific urethral infections are shown by microscopical examinations to be common. We should devise our internal treatment upon more rational lines and individualize more in cases. Don't use inadequate medication or trifle with small doses, as oil of santal, for instance. Don't employ local applications in the very acute stage. Don't depend on small hand syringes. Posterior urethritis is not at all benefited by the routine treatment commonly followed. Don't use one variety of local drug too long if it is not giving results; change off to another one. Don't dismiss a case until after the microscope shows freedom from gonococci. Don't neglect to treat symptoms and complications.

Best CURRENT MEDICAL THOUGHT

Surgical Scissors

As wielded by Douglas H. Stewart, M.D.,
F.A.C.S.

Papaverin in Urology.

An editorial in *Southern Med. Jour.*, June, 1916, calls attention to the researches of Pal, Popper and Frankel, of Vienna, showing that papaverin lowers the tonus of all smooth muscle. Now Macht and Geraghty, of Johns Hopkins, take advantage of this action in the treatment of ureteral calculus. They cystoscoped and catheterized the patient's ureter, and injected below the stone 5 mils (cc.) of a 2% solution of papaverin hydrochlorid. The mouth of the ureter was observed to dilate. Later, a second injection of the drug resulted in the stone's being carried into the bladder. Of course, based on one case only, the drug is not advocated as being of established value.

Occupational Thecitis.

Adolph Cohn, M.D., Philadelphia, Pa., in *N. Y. Med. Journal*, Oct. 7, 1916.—Thecitis is a common result of such occupations as dress-making, cutting and pressing. But any focus of infection must be sought for and eradicated. Extensors are the more frequently infected in those using shears, while affections of the flexors are more common in those who use sad-irons. Untreated symptoms become chronic and result in impairment of both motion and function; but proper treatment will clear up matters in a short time.

Scissors sees many such cases which commonly appear as though the patient were infected and the traumatism decides where the sepsis shall manifest its symptoms. In all such conditions two things are unqualifiedly bad in their effects, viz., massage and motion. Whatever application may be employed one treatment stands pre-eminent and that is an anterior and posterior splint made from two wooden tongue depressors well padded and held in place by strips of adhesive plaster. Dr. Cohn suggests the application of an ointment containing tincture iodine, 1 drachm; ung. ichthyol, ung. belladonnæ, one-half ounce of each. And when the patients recover he has them wear a leather wristband or an elastic sleeve.

Prevention of Subinvolution and Retroversion.

A. C. Beck, M.D., Brooklyn, in *Am. Journal Obstets.*, July, 1916.—The expedient recommended is to require each patient to walk five or six yards upon her hands and feet; this was to be begun on the ninth day after delivery; the distance was to be increased daily and continued for twenty-one days. The exercise was to be undertaken before the woman put her harness (corsets, dress, etc.) on in the morning and after it was taken off at night. The results were retroversion 13½ per cent., subinvolution 0. This in comparison with a control group which gave 45 per cent. retroversion, and subinvolution rather usual. The idea is to have the woman walk (or crawl) on all fours with the knees as rigid as possible. If this expedient will do as much as it appears to perform it is a good thing for the woman but bad for the gynecologist.

Surgical Treatment of Goitre.

Miles F. Porter, M.D., Fort Wayne, Ind., in *Annals of Surgery*, Oct., 1916.—The immediate mortality of operation can be reduced by substituting boiling water injections, into the gland, for ligation as a preliminary to thyroidectomy in serious cases, and by using the injections to the exclusion of all operative methods; in mild cases with little or no enlargement of the thyroid, and also in extremely grave cases. One or two injections will cure the mild cases and will give as much relief in the extremely grave cases as thyroidectomy will, and at a much less risk. In some of these extremely grave cases one is surprised by getting a satisfactory result, while in others the result is satisfactory, save that the deformity is still disfiguring, and this can now be removed by operation without undue risk. I know of no way of distinguishing between the cardiac symptoms due to myocardial changes and those due to toxemia, but the inevitable mortality could be reduced by removing all simple goitres before they become either toxic or malignant.

Operations for Perforated Gastric and Duodenal Ulcers.

John F. Shea, M.D., Bridgeport, Conn., in *Annals of Surgery*, Oct., 1916.—Nine consecutive cases. All were given ether after a preliminary injection of atropine, gr. 1/150. The preliminary diagnosis was confirmed by an escape of gas or foul-smelling, yellowish fluid from the opened peritoneal cavity. The perforation was

found, cauterized with actual cautery and closed tight with a purse-string. Drainage was provided. When there was considerable escape of fluid then both pelvis and the site of the perforation were drained. Immediate gastro-enterostomy was not attempted. The added shock would prove detrimental and many cases of gastric ulcer recover after perforation. The majority of our patients have remained free from subsequent gastric disturbance after treatment. Drains are removed as soon as possible. At the end of two weeks the patient is allowed to sit up and is discharged two days later.

Acute Intussusception in Infants.

Benjamin T. Tilton, M.D., F.A.C.S., New York, in *N. Y. Medical Journal*, October 7, 1916.—The diagnosis of intussusception should be followed, without delay, by operation, at which the incision should be so placed that the surgeon's hand will come directly down upon the portion of intestine which is involved, thus insuring a minimum amount both of handling and its resultant shock. The incision should split the rectus at the junction of inner and middle third and should extend one-third above the umbilicus and two-thirds below it. When possible the tumor-mass should be brought out through the incision and further manipulation should be performed outside of the abdomen.

The formation of an artificial anus is attended with 100 per cent. mortality (practically). When reduction is complete the intestine, if viable, should be promptly returned into the abdomen. To prevent ventral hernia tension sutures of silkworm gut should be inserted through skin and aponeurosis; in addition to the usual layer sutures. And the mother should resume nursing without disturbing the infant more than necessary. Feces and blood are best carried off by a dose of castor oil.

Use of Oil in Post-Operative Peritonitis.

At a meeting of the Société des chirurgiens de Paris, August 25th, Chanton (*Presse médicale*, September 7, 1916) described his method of using camphorated oil in laparotomies whenever septic foci were discovered. As soon as the abdomen is opened, the operator begins to pour in the oil and subsequently he adds to the quantity from time to time. When, finally, the abdominal wall is sewn up, after there have been a dozen or so respirations, protective compresses are arranged so as to absorb the excess of oil. The oil obstructs the lymphatic ducts, prevents

agglutination, allows of prolonged drainage, and possesses a tonic action on the heart. Ampoules containing from ten to twenty-five c.c. are used, and 300 cc. of a 1 per cent. solution may easily be employed at one time. Chanton is greatly pleased with his results.—*N. Y. Med. Jour.*, Oct. 14, 1916.

Protracted Protoclysis in Treatment of Eclampsia.

Continuous rectal drenching is recommended by Dr. Geo. Massalon Murray, Atlanta, Ga., (*Southern Med. Jour.*) using a Kemp's return tube, as a valuable auxiliary in the treatment of eclampsia. The foot of the bed is elevated and the position of the patient changed every few hours. The water is used at a temperature of from 105 to 120 F. and should contain salt—normal or decinormal saline. Dr. Murray reports gratifying results with, of course, the usual medication.

The Relative Value of Tests for Occult Blood.

T. C. Terrell, M.D., Fort Worth, in *Texas State Jour. of Med.*, May, 1916, regards the Van Deen test as unreliable, since many vegetable drugs and some enzymes give a positive reaction—most any drug containing chlorophyl.

The Weber test interfered with by iron, copper salts and potassium iodide.

The Benzidin test will also react positively to potato, copper and iron salts, scale pepsin, water, starch.

The Hematin test is interfered with by a number of substances, but none gives the characteristic reaction.

The Aloin test interfered with as is the Weber test.

The Modified Meyer's reagent test is interfered with only by copper salts and scale pepsin. This latter test is reliable. It is made as follows:

The modified Meyer's reagent consists of phenolphthalein, 4 gms.; potassium hydroxide (sticks), 35 gms.; distilled water, 200 cc. Mix and let stand 3 minutes and add pure powdered zinc dust, 20 gms., then boil until decolorized. Decant into a dark glass stoppered bottle, seeing that the remaining zinc goes into the bottle. This zinc prevents the solution from turning pink. Take, in a test tube, equal parts of the solution and the material to be tested. Shake and add a small amount of hydrogen peroxide, 3 to 5 cc. If positive there will be a pink color, varying in intensity according to the amount of blood present.

Practical Therapeutics

Giving in concise usable form the therapeutic points from current medicine that are really of value to the busy practitioner.

The Treatment of Pneumonia in Children.

Dr. H. Brooker Mills, Philadelphia, in *Therapeutic Gazette*, insists upon the importance of fresh air and a maximum amount of liquid diet, with a daily bath and colonic irrigation. Dry-cupping and the application of hot camphorated oil are commended. Frequent and thorough cleansing of the nose is considered important.

An initial purge is recommended, but inhalations of compound tincture benzoin is preferred over the usual expectorant medication. Children stand antipyretics poorly, and hydrothrapy is better for the reduction of temperature. Good food is the best stimulant, but 1/200 to 1/150 grain doses of strychnine may be required, or nitroglycerin in 1/300-grain doses. Bacterin therapy has given no striking results in his hands, so far as children are concerned.

The Fasting Treatment of Diabetes.

Dr. E. I. Spriggs, in *The British Med. Jour.*, June 17, 1916, reports an experience with the method and concludes that fasting up to several days was well borne in both mild and severe cases of diabetes; that the urine was made free from sugar, the blood sugar reduced, and acidosis greatly diminished; that all of the patients felt better for the fast; that the treatment made a more liberal diet possible, after some interval; that the treatment had an excellent mental effect; that skilled dietetic management is necessary in resuming feeding; that it takes courage on the part of the patient, who must expect to be undernourished for a time, to succeed; that regular estimations of the blood sugar should be made; that it is necessary to know the temperament of the patient, and that the method offers advantages in a great range of cases.

Yeast Infection of the Throat.

Dr. W. F. Wilson, Lake City, Minn. (*The Journal-Lancet*), after laboratory verification of cases, reports that swabs of copper sulphate twice a week, similar swabs of Löffler's solution two or three times daily, and the free internal use of potassium iodide, cleared up his cases.

The growth of yeast fungi in the throat is apt to be hard to eradicate and may lead to a fatal issue. This treatment should be remembered.

"HITTING THE LINE

The World Line-Up in 1917

The political, social, business and international relations line-up—will be one of hard hitting. The issues of the ages are being settled; big questions are being solved. "Keep your eyes on the ball and hit the line hard" is good football tactics—tactics that enable the players to smash through.

But It Demands Efficiency to Win

Doctor, if *you* want to smash through and win—win professionally and materially, with greater knowledge and increased income—you must "keep your eyes on the ball."

Now, Boys, All Together!

We are making a fresh start for 1917—*You and the Medical Council*—and we must pull together, you for us and we for you, and all together for the same thing, a steady-going efficiency in all parts of the game, the scientific phases, the everyday clinical phases, the serve-the-public phases, and the economic phases. Let's have no weak links in the chain, for it must stand a heavy strain in 1917.

And Hit the Line Hard!

Spit-balls are for children; spent balls won't kill a sparrow. Soft gloves never win first blood. So THE MEDICAL COUNCIL won't fire any paper wads or go back to 1880 for ammunition. We don't want, and you don't want, a lot of weak, inconsequential, puerile and back-number stuff; we all want the live, workable and practical information that 1917 is going to supply in abundant measure and that, if you are keen to grasp it and use it, will make YOU an efficient, representative, influential and successful physician.

It's Up to You

Just read the impressive list of worth-while, practical, *truly helpful* articles announced here for 1917.

The able, busy and distinguished physicians—professors, general practitioners, city and rural doctors—who go to all the trouble to prepare these papers do so because they have a *real message*, each one of them, for the profession and for *you*.

These papers are either in hand or in process of preparation. You can definitely count upon them.

They are *only a part* of MEDICAL COUNCIL's service to *you* in 1917.

Can any up-and-doing practitioner afford to miss MEDICAL COUNCIL for 1917 when he can get so much worth-while, *truly practical help* for just a dollar?

With Clean Hands

MEDICAL COUNCIL gives a *full value* of clean and progressive service for every dollar we receive. We have no side-control, are not commercially dominated by any faction or interest.

We have only one interest—to give *you*, our subscribers, the fullest measure of constructive service of real practical value in *your* everyday work that can be crowded into each issue.

Our advertising pages are on a *service-to-readers* basis. Only advertisers who have that same point of view—"Service"—are wanted in MEDICAL COUNCIL.

When a subscriber writes in a "kick" about any advertisement, we *willingly* listen to what he has to say, and if he makes good his complaint, out goes that advertisement.

That's good business as well as good ethics because it is helping to make MEDICAL COUNCIL the most *resultful* medium for *high-grade advertising* in the medical journal field. Patronizing *high-grade advertising*, Doctor, is helping yourself and your patients, for there's a host of good things advertised these days.

Advertising pages on a *service-to-readers* basis makes them one of the most valuable parts of the journal to *you*, the reader.

War Babies

Gee, how those kids do eat! They are eating hard into profits in journal publishing, and into your profits, Doctor. You can't afford to hand out drugs for nothing or wait too long for your pay. With paper, ink and all other supplies up, we can't afford to, either. We used to pay tribute to our "Infant Industries," but now they have become exacting grandmothers who are demanding tribute for the "War Babies." Instead of whining and cutting down, we are going to smash through—*with your help*—and give *you* in MEDICAL COUNCIL in 1917 the biggest year's

HARD IN 1917"

service we have ever given and at the same old subscription price—*one* dollar.

Your help consists in sending us *your* dollar for 1917 *promptly* without putting us to the considerable expense of sending you several bills and statements.

So, "ball up, Doctor; ball up!" We want to catch that dollar for *your* 1917 subscription before it gets lost in the "tall grass."

PEDIATRICS

"The Child's Welfare at and Immediately After Delivery," by D. S. Hanson, M.D., Cleveland, Ohio.

"Physiological Therapeutics in Paralysis Following Poliomyelitis," by Prof. Albert C. Geysler, New York City.

"The Orthopedic Surgical Treatment of Infantile Paralysis," by Prof. James K. Young, Philadelphia, Pa.

"Anterior Poliomyelitis," by S. W. Robertson, M.D., Sulphur Rock, Ark.

"After-Treatment of Cases of Infantile Paralysis," by A. Bruce Gill, M.D., Philadelphia, Pa.

"Pertussis," by Edward J. Lorenze, M.D., New York, N. Y.

"Simplified Artificial Feeding in Infants," by Jacob Rosenthal, M.D., Detroit, Mich.

"Gastric Ulcer or Osteomyelitis in Children," by Mayer Shoyer, M.D., Havensville, Kans.

"Benefits and Ill-effects of Braces in the Treatment of Infantile Paralysis," by John J. Nutt, M.D., New York, N. Y.

ACUTE INFECTIOUS DISEASES

"The Origin of Toxic Substances in the Body, and a Method of Extruding Them," by Bayard Holmes, M.D., Chicago, Ill.

"The Treatment of Acute Rheumatic Fever," by W. A. Marner, M.D., Miles, Iowa.

"Smallpox," by Charles E. Rémy, M.D., Ainsworth, Neb.

"Pulmonary Tuberculosis from a Common Sense Standpoint," by Bittle C. Keister, M.D., Savannah, Ga.

"The Clinical Use of Tuberculin," by Leon De-Ville, M.D., Ph.C., San Diego, Cal.

"Treatment of Pulmonary Tuberculosis With Tuberculin," by Paul E. Bain, M.D., Pleasant Plains, Ill.

"Tonsillitis, its Pathology and Treatment," by D. Cassidy, M.D., Jerome, Ariz.

GASTROENTEROLOGY

"Chronic Gastritis: a Vexed Problem," by Geo. M. Niles, M.D., Atlanta, Ga.

"Gall Bladder Infection," by Harvey F. Smith, Ph.B., M.D., Harrisburg, Pa.

A series of brief papers by Samuel Floersheim, M.D., New York City, as follows: "The Influence of Sodium Chloride Upon the Gastric Juice," "In-

testinal Obstruction," "Borderline Cases of the Upper and Lower Abdomen."

"Mesenteric Abscess," by Frank R. Fursey, M.D., Spokane, Wash.

"Mushroom Poisoning," by C. E. P. Thompson, M.D., Fairhaven, Mass.

"Gastric Hyperacidity: its Recognition and Treatment," by John Leverett, M.D., Yonkers, N. Y.

NUTRITIVE DISORDERS

"Diseases of the Suprarenals," by J. C. Davis, M.D., Boise, Idaho.

"Health and Hard Water," by Prof. R. B. Smith, Hamilton, N. Y.

"Picric Acid in Treatment of Pellagra," by W. T. Wilson, M.D., Navasota, Texas.

"Diabetes: a Rational Line of Treatment," by Adolfo Luria, M.D., Chicago, Ill.

"Constipation, Its Significance and Treatment," by B. W. Stearns, M.D., Unadilla, N. Y.

"Constipation, Causes, Effects and Cure," by O. B. Surface, M.D., Indianapolis, Ind.

"Acidosis, Cause, Consequence, Treatment and Prophylaxis," by R. L. Combs, M.D., Cooper, Texas.

ADDICTIONS, INTOXICATIONS, ETC.

"The Treatment of Pain, with Reference to Drug Addiction in the United States," by S. H. Monell, M.D., New York City.

"Animal and Vegetable Parasites," by Jas. W. Miller, M.D., Cincinnati, Ohio.

"Narcotic Drug Addiction Disease," by Ernest S. Bishop, M.D., New York City.

"A Plea for Greater Thoroughness in the Treatment of Drug and Alcoholic Addictions," by C. B. Pearson, M.D., Arlington, Md.

DIAGNOSIS AND NEW METHODS

"Roentgen Diagnosis," by A. Winfield Perkins, M.D., New York City.

"Manual Therapy, a Rational and Scientific Medical Adjunct," by J. F. Ritter, M.D., Maquoketa, Iowa.

"Importance of Care and Thoroughness in Diagnosis," by J. J. Coffman, M.D., Scotland, Pa.

"Practical Electrotherapeutics," by S. H. Monell, M.D., New York City.

"The Skin an Aid to Diagnosis," by S. C. Parsons, M.D., San Angelo, Texas.

"The Operative Treatment of Ascites," by Prof. John J. Gilbride, Philadelphia, Pa.

"Goiter and Its Surgery," by Prof. John J. Gilbride, Philadelphia, Pa.

"Mistaken or Careless Diagnosis," by C. M. Rickert, M.D., Millersburg, Pa.

"Diagnosis, Especially from the Standpoint of the General Practitioner, and What Medicine of To-morrow Really Means to Those Who Desire to Keep in Sight of the Marching Line," by Charles R. Bird, M.D., Greensburg, Ind.

"The Mechanical Factor," by Wm. Brady, M.D., Elmira, N. Y.

"How to Make Better Life Insurance Examina-

tions," by Henry Jacobson, M.D., St. Louis, Mo.

"Safety First" (dealing with the material side of the medical profession), by Herman Nahin, M.D., Milwaukee, Wis.

"Tropical Disease," by John L. Marchand, M.D., Pittsburgh, Pa.

OBSTETRICS AND GYNECOLOGY

Two papers by Frances A. Harper, M.D., Pittsburgh, Kans., upon "Simple But Ideal Equipment for the Treatment of Gynecological Cases," and "The Vaginal Douche."

"Retrodisplacement of the Uterus," by L. I. Bogen, M.D., Lincoln, Neb.

"Lumbar Puncture in Puerperal Eclampsia," by W. T. Wilson, M.D., Navasota, Texas.

"Protection of the Perineum with Especial Consideration of Episiotomy," by Prof. J. O. Arnold, Philadelphia, Pa.

"Uterine Displacements or the Surgical Treatment of the Laceration of the Perineum and Cervix Uteri," by Prof. Harry E. Myers, Columbia, Ohio.

"The Law of Sex, Its Use and Abuse," by J. C. Bateson, M.D., Scranton, Pa.

NEUROLOGY

"The Occurrence and Treatment of Pain in Locomotor Ataxia," by Prof. Edward Livingstone Hunt, New York City.

"Brain Hemorrhage: Cause and Effect," by E. C. Henry, M.D., Omaha, Neb.

"A Plea for the Fuller Recognition of the Importance of Psychological Disorders," by Prof. W. W. Young, Atlanta, Ga.

"The Psychology of Puberty," by J. B. Edwards, M.D., Batesburg, S. C.

"Hysterical Paralysis," by J. J. Coffman, M.D., Scotland, Pa.

PROCTOLOGY

"Internal Hemorrhoids," by Chas. J. Drucek, M.D., Chicago, Ill.

"Rectal Reflexes and Neuroses," by Atwater Lincoln Douglass, M.D., Denver, Colo.

"Fistula of the Rectum," by Chas. J. Drucek, M.D., Chicago, Ill.

A paper on "The Standardizing of Urinalysis," by E. G. C. Williams, M.D., Danville, Ill.

"Incontinence of Urine in the Female," by Chas. W. Delaney, M.D., Altoona, Pa.

"Urinary Findings in the Various Types of Nephritis," by B. G. R. Williams, M.D., Paris, Ill.

MALIGNANCY

"A Calm Survey of the Cancer Scare," by William P. Cunningham, M.D., New York.

"Cancer of the Iguinal Region," by J. T. Denton, M.D., Sanford, Fla.

"The Theory for the Physiological Treatment of Malignant Growths," by Prof. Albert C. Geysler, New York City.

"The Value of Coley's Toxins in the Treatment of Sarcoma," by A. L. Blesh, M.D., Oklahoma City, Okla.

"Spasmodic Stricture of the Oesophagus, Complicating Gastric Carcinoma," by Prof. L. Napoleon Boston, Philadelphia, Pa.

"Inoperable Cases of Malignant Diseases Treated by Roentgenization," by Charles A. Pfender, M.D., Washington, D. C.

SPECIALTIES

"Diseases of the Ear and Their Treatment by the General Practitioner," by Mayer Shoyer, M.D., Havensville, Kans.

"Practical Geriatrics," a series of papers by I. L. Nacher, M.D., New York City.

"Chronic Atrophic Rhinitis," by Alexander Sterling, M.D., Philadelphia, Pa.

"Arteriosclerosis of the Retinal Vessels," by Edw. W. Wright, M.D., Brooklyn, N. Y.

"Ionic Medication," by William L. Clark, M.D., Philadelphia, Pa.

"The Several Reasons for Wearing Glasses," by H. W. Champlin, M.D., Towanda, Pa.

"The Doctor's Competitors," by Ernest F. Robinson, M.D., Auburndale, Mass.

"A New Interpretation of Medical Publicity," by Jos. Lebenstein, M.D., New York, N. Y.

"The False Claims of Eddyite Healers," by Albert H. Burr, M.D., Chicago, Ill.

"American Slavery in 1917 and the Result," by George H. Tichenor, M.D., New Orleans, La.

Other papers will be announced from month to month.

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As physicians we are too exclusively submerged in the professional phases of our work, and it prevents our economic development in this business age. Business ideals are no longer mere commercialism; they foster "Service First and Foremost," and they are constructive and more and more coöperative.

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THE NEWER MATERIA MEDICA

AND

ARMAMENTARIUM.

The New Pharmacopeia from the Physician's Viewpoint.

By M. CLAYTON THRUSH, Ph.M., M.D.,
PHILADELPHIA, PA.

The U. S. Pharmacopeia IX became official September 1, 1916, as did also the National Formulary IV.

The new Pharmacopeia describes each separate revision, the eighth one having been modified by the Food and Drugs Act by establishing limits of legal standards of purity and strength; it increased the number of assays, average doses were appended, and a Spanish translation was issued.

The scope of the new Pharmacopeia includes only medicinal substances of proven value, while all secret formulæ and substances used only technically are excluded. Average doses are given, as in the U. S. P. VIII, the metric system is used, but equivalents in apothecaries weight given as regards dosage; official abbreviations of titles are appended; the purity rubric was continued; international standards were followed so far as possible, as is also general formulæ; alcoholic percentages and assay processes are given; the term "milliliter" is used in the place of "cubic centimeter;" various scientific constants and standards are adopted; polypharmacy was eliminated, the complex formulæ being relegated to the National Formulary; diagnostic agents, serums, etc., are described, and the publication of supplementary matter provided for.

The Revision.

The Board of Trustees (four pharmacists and three physicians engaged in teaching) *managed* the revision, the actual Committee of Revision consisting of fifty members, eighteen being physicians. The more immediate work was undertaken by the Executive Board (five physicians and ten pharmacists).

The U. S. P. and the N. F. being now legal standards, the revisers of the U. S. P. were enabled to pass over to the N. F. complex and more or less obsolete formulæ and wholly to delete others, while it also gave opportunity to include many serums and synthetic chemicals in wide clinical use. Wines, brandies, whiskeys, and preparations based on them, were deleted.

Comparisons.

The number of articles, reagents and assays in the new Pharmacopeia is 1,436, as compared with 1,297 in the eighth revision; there are 782 articles in the text as against 958 in the eighth revision, while the number of assays, test solutions, diagnostic reagents, etc., are largely increased. There are 243 deletions and 67 additions.

Important Admissions.

Derivatives of opium admitted are ethylmorphine hydrochloride (Dionin), and diacetylmorphine and its hydrochloride (Heroin and its hydrochloride). Indirectly derived by oxidation from narcotine, one of the minor alkaloids of opium, cotarnine hydrochloride (Stypticin), used systemically against uterine hemorrhage, is admitted. This is a valuable agent given in doses of $\frac{3}{4}$ to $1\frac{1}{2}$ grains, in pill or capsule, as it is intensely bitter. The hypodermatic dose (in urgent cases) is 2 cc. of a 10 per cent. sterile solution.

Caffeine sodio-benzoate, a mixture of caffeine and sodium benzoate, is given by mouth in an average dose of 5 grains, and hypodermatically 3 grains. The reason for the admission of this mixture is that caffeine and citrated caffeine are decomposed in the presence of water, whereas this mixture is stable in solution, is freely soluble and is suited to hypodermatic administration.

Emetine and its hydrochloride, of late so well known, are admitted.

Quinine dihydrochloride, a very soluble salt, is valuable for subcutaneous use. The anti-malarial dose is that of the other salts of quinine; but the better way to use it hypodermatically is in the form of prepared sterile ampuls. Otherwise from $3\frac{1}{2}$ to $7\frac{1}{2}$ grains in 1 cc. sterile water may be injected. Quinine and urea hydrochloride is used in the production of local anesthesia, 0.25 to 1 per cent. by injection, being especially careful with the stronger solutions. For application to mucous membranes, use from 10 to 20 per cent. in solution. Quinine tannate is an insoluble and nearly tasteless salt valuable

for administration to children. Average dose 3 grains to adults, which is low. As a matter of fact, it is one-half as strong as the ordinary sulphate and apt to be uncertain in action.

Theobromine sodio-salicylate has the cardiac and diuretic action of caffeine, but has less influence on the nervous system. It is fairly soluble and is given in 15-grain doses five or six times a day, well diluted, or it will produce gastric irritation.

Theopylline, made from tea and synthetically, is dimethyl-xanthine, more powerfully diuretic than caffeine but not so lasting in effect. It is used for *prompt* effect, but is a gastric and renal irritant if long kept up. Average dose 4 grains. The best way to give it is in a cup of warm tea.

Vegetable Drugs Admitted.

Aspidosperma, or quebracho, is a vegetable drug most valuable in the treatment of spasmodic bronchial asthma. Dose of the fluidextract, 1 fluidrachm.

Petroselinum, parsley seed, is used in the form of the oleoresin, known as liquid apiol. Average dose, 8 minims in capsule. It is used in the treatment of amenorrhœa due to functional inactivity of the ovary and should be given only *before* the expected period. Never combine with ergot, as the mixture is irrational and useless.

Synthetics Admitted.

Betaeucaine hydrochloride, is much less toxic than cocaine but with the same general indications, especially in ophthalmology. It does not dilate the pupil, nor contract the blood-vessels, as does cocaine. It is stable even on prolonged boiling, an immense advantage. Use 2 or 3 per cent. solution in the eye, 5 to 10 per cent. for nose or throat and in ointment for hemorrhoids.

Trinitrophenol is the pharmacopeial name for picric acid, too familiar to require discussion.

Phenolphthalein, a purgative, is used in an average dose of 2½ grains. It is the active ingredient in many proprietary laxative wafers and confections.

Chemical Salts Admitted.

Many chemical salts have been admitted, but only the more important ones are here noted. Bismuth betanaphol, some of the newer glycerophosphates, mercury salicylate, a very soluble sodium-saccharin, sodium cacodylate, sodium perborate, exsiccated sodium sulphite, uranium nitrate (a very toxic salt), and a few used pharmaceutically are the ones of most interest.

Diastase, from malt, is now official, the average dose being 8 grains.

Pharmaceutical Preparations.

Cantharides plaster, largely displacing the old

cerate in clinical usage, is the only important new plaster. There are several new extracts, modern assay processes making such products more certain and reliable. Those of aconite, gelsemium and hydrastis being the more important.

Fluidextracts are now made by four varying processes, each drug being extracted by the process adapted to it; and, so far as possible, fluidextracts are assayed and physiologically standardized. The result is a great improvement along the whole line.

Toxitebellae Hydrargyri Chloridi Corrosivi is the official name for the common bichloride tablet. These tablets must be angular in shape and have "Poison" and the skull and cross bones stamped upon them. This is a wise safety-first precaution.

Creosote carbonate, paraformaldehyde, nitrous oxide, oxygen gas, desiccated pituitary body, and various serums largely used are now official.

Deletions.

A very extensive list of drugs and preparations have been deleted, a large proportion being those which have been passing out of professional use due to modern advances. However, nearly all of them have been simply transferred to the National Formulary and are just as available on prescription as they ever were. Physicians accustomed to using these products need not necessarily designate "U. S. P." or "N. F." in writing prescriptions, as both of these books are legal standards and the druggist is equally bound to both of them. The National Formulary is really a secondary list to the U. S. Pharmacopeia. The processes designated in the N. F. are the same as those in the U. S. P. It would take too much space to outline here the deletions and the changes in official titles.

Part II of the Pharmacopeia contains a wealth of data largely of pharmaceutical interest but helping to assure the medical profession that official drugs and preparations in the United States are based upon one of the most modern books of standards extant.

3705 Spring Garden St.

Paralysis Agitans.

Parathyroid gland deficiency is believed by Dr. Wm. N. Berkeley, New York (*Med. Record*, July 15, 1916), to be the cause of paralysis agitans. Hence, in his view, the remedy is to supply the deficiency. The dose will depend upon the strength of the preparation used and the amount of parathyroid deficiency.

Desiccated Glandular Products.

Internal secretion therapy, like the older therapy, depends upon whole products and active principles thereof. Both classes are useful. Such substances as adrenalin and pituitrin are definite and of determined value; but there are no parallel substances separated from other glands of internal secretion. Thyroid gland substance has made such an impression upon medical practice that other desiccated gland products promise to be brought to the fore very rapidly.

Armour & Co., Chicago, have centered much thought upon the problem of preparing and marketing dependable animal-organ remedies. "New and Nonofficial Remedies" recognizes the following products of their make: Mammary Substance, derived from sheep, is used in the treatment of menorrhagia in doses of 2 to 5 grains. Ovarian Substance, made from the fresh ovaries of the hog, inclusive of the corpora lutea, is a valuable remedy in ovarian insufficiency, which is marked by dysmenorrhea, intermenstrual pain and certain manifestations of the menopause. The dose is 1 to 3 grains, in tablets.

Desiccated Corpus Luteum is allied in action to ovarian substances, but the dose is smaller— $\frac{1}{2}$ to 1 grain only twice in a day. Desiccated Parathyroid Gland, made from the exterior parathyroids of the ox, has attained quite a reputation in the treatment of tetany, and it is now being advocated in the treatment of paralysis agitans, eclampsia and chorea in adults. It is a very active substance, the dose being only $\frac{1}{10}$ grain four times a day. Desiccated Thyroid Gland is too familiar to require discussion.

Desiccated Pineal Gland, made from the glands of normal young cattle, as yet upon a somewhat experimental basis, promises to be of value in diseases of nutrition and affections dependent upon irregular sexual development. Dose: $\frac{1}{20}$ to $\frac{1}{10}$ grain.

Desiccated Pituitary Substance (both from the anterior lobe and the posterior lobe), the former being valuable in the treatment of acromegaly in its *later* stages, and the posterior lobe in uterine atony, are each given in doses of 1 to 4 grains, in tablet. A product representing the whole body is also offered. Desiccated Thymus, from the calf, is used in hyperthyroidism, rickets, and hemophilia in doses of 2 to 4 grains.

Armour & Co. also make other organ remedies, an important one being Extract of Red Bone Marrow, active on account of its contained iron and lecithin. From personal experience with them, we wish to commend these products to the

profession, but with the reservation that only their discriminating use by observing physicians is apt to give satisfactory clinical results. Empiricism has little place in endocrine organ therapy.

An Auxiliary Remedy in Treating Cancer.

"Plantex" is the trade name given by The Wm. S. Merrell Chemical Company, of Cincinnati, to their product composed of the extracts of white mustard, hepatica, violet, anthemis, buckbean, melilot, mint, colocynth, quassia wood, nettle, rhubarb and hedge hyssop. This formula has been in quite a little empiric vogue in the treatment of inoperable cancer, and clinical records which have accumulated show an improvement in a fair proportion of cases and surprising results in some. The firm offers it with little claim made except that it has shown itself, thus far, as helpful in a respectable proportion of inoperable cases of cancer and as an auxiliary in the surgical treatment of other cases. It is offered to the profession at a very reasonable price, and conservative literature is supplied on request.

Frankly recognized as a too complex formula, research workers are endeavoring to determine which one of the ingredients gives the results attained, so the mixture may be simplified.

It impresses us that the plant used in the greater proportion, white mustard in 20 per cent., would appear the more promising agent therein. As is well known, thiosinamine is derived from mustard, and it has attained quite a reputation in the treatment of lupus, scar tissue, glandular tumors, etc., and it is quite within reason to credit to it actions that may serve well in the treatment of other neoplasms. Then, too, the chromoproteins, stearoptenes and ferments of plants, when injected, have quite an influence upon the blood; and therefore some of the other ingredients may possess a certain value.

The action of vegetable extracts injected into the tissues has not been sufficiently worked out to dogmatize, for or against. Cancer is so discouraging a problem that physicians should try out any reasonable treatment offered and that affords any hope of being beneficial. We believe the makers of Plantex are coming out fair and square in the matter, leaving the determination of its availability to decision from clinical experience.

Assay processes and other forms of standardization are common requirements in the new U. S. P., which is quite an improvement over the old one.

The Value of Iodine in Gonorrhoea.

In *N. Y. Med. Jour.*, Aug. 26, 1916, Dr. M. Abramovitz, of Baltimore, commends the use of iodine to combat round cell infiltration and connective tissue formation in the deeper lesions of gonorrhoea. But most iodine products are too irritating for this purpose. Electro-Colloidal Iodine [Marketed by David B. Levy, 96 Warren St., New York.—Ed.] was finally used with satisfactory results.

He uses a double bulb syringe and injects 5 or 6 cc., driving the solution into the posterior urethra. In cases where there was great swelling and pain, previous irrigation of the canal with a 0.2 per cent. sodium chloride solution made the application of the drug painless. He reports 51 cases, the technic, after the first injections, being carried out by the patients themselves. Results were highly favorable.

Oxypinene.

In a former issue we said something of this new drug. Henry C. Blair, in an extended paper in *The Jour. Am. Phar. Assn.*, summarizes as follows:

Oxypinene is an ozonide of pinene, a chemical compound consisting of one or two molecules of ozone (O₃) linked to one molecule of pinene (C₁₀H₁₆) the active and chief constituent of oil of turpentine.

It is produced in two forms, a vapor and a pale yellow liquid of honey-like consistency.

On contact with moisture it breaks down into hydrogen peroxide, oxides, aldehydes, and ketones or pinene.

Exposed to high temperature auto-oxidation takes place.

It is useful in treatment of tubercular affections, wounds, ulcers, diseases of the mucous membranes, eczemas, hemorrhoids, etc.

It is an expectorant, stimulant and oxidizing agent.

Mixed with diatomaceous earth, one part to two parts, it makes a suitable powder for dressing ulcers, old wounds, etc.

Made into suppositories with stearate from cocoanut oil, about 1 per cent. strength, it is very useful in treating diseases of the membranes when a stimulating, mild antiseptic is required.

In a compound ointment combining astringent and drying properties with its antiseptic and stimulating effect, it is useful in eczemas and in certain cases of hemorrhoids.

The vapor may be inhaled from a generator or indirectly mixed with air.

The liquid may be applied to wounds in its strongest form.

"Synthetic Milk."

A demonstration of a process of synthetic milk making was given recently at the Melco Laboratories, 56 Great Peter street, Westminster. The casein and albumin of the new product are supplied by the ground-nut, called in America the peanut (*Arachis hypogoea*), which is extensively cultivated in many tropical and subtropical countries. This nut, which is admittedly rich in proteins and fat, and has been used as a diabetic food, is skinned and minced into a porridge-like meal, to which alkaline water is added, as well as the sugar principle in the form of malted dextrine, and the salts associated with cow's milk. The mash is stirred in double-jacketed pans at a temperature well below boiling point, and the product then passes through certain strainings, and is treated with fatty acids, the whole process lasting two hours. A culture is added in the form of a special growth of lactic bacteria which has been acclimatized to the new milk. The cost price of the milk, including labor, is said to work out at 3d. a gallon, as against 8d. a gallon for cow's milk on the farm; the residual meal after the extraction of the milk-white fluid can also be used as a foodstuff. The fluid certainly has all the appearance of cow's milk, but the flavor of the nut, which to many tastes would not be agreeable, is somewhat pronounced. If the milk is allowed to stand for a short time, all the solids sink towards the bottom, but recombination is quickly obtained by a slight shake of the vessel. The total solid content of the milk is 13 per cent., as compared with the government standard of 11.50 per cent. in the case of cow's milk. The process is ingenious and interesting.—*British Medical Journal*.

Is Mistletoe an Active Drug?

Long ago mistletoe had a reputation as an anti-spasmodic. It is quite a little used in France as a remedy in hemoptysis. Recently the claim is made that mistletoe contains a volatile alkaloid, a glucoside and a resin. It is claimed that the fresh plant and its preparations will, in large doses, cause neuro-muscular depression with loss of sensation. Death results from bulbar paralysis, according to Gimp sine. The drug is being advocated for the relief of arterial hypertension. There is some confirmation available, but the drug is far from established.

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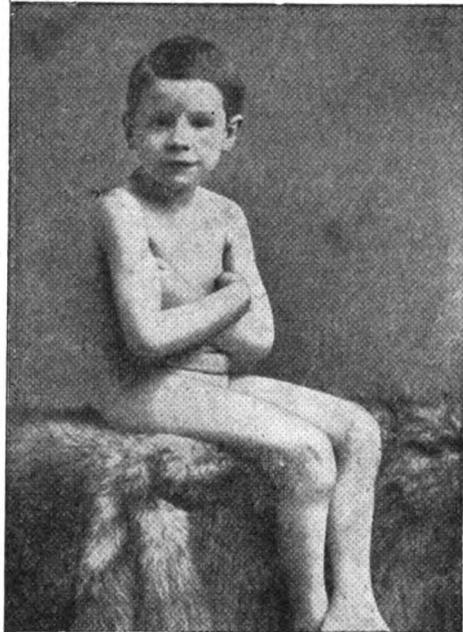
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Weight 28 lbs.



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Weight 49 lbs.

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A Valuable Food in all Wasting Conditions.

VIROL

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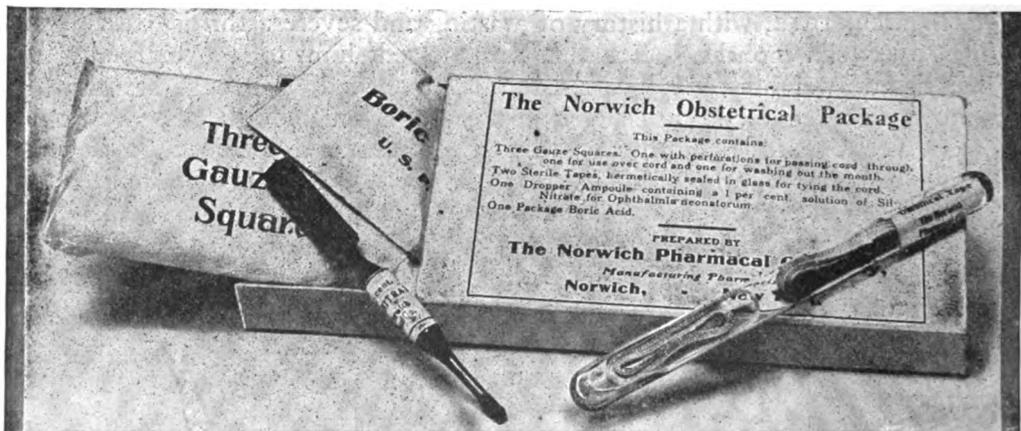
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Advertisements must be honest, of course, and of a character promotive of the interests of our readers and the public they serve. Advertising copy is subject to revision by the editorial staff.

MEDICAL COUNCIL agrees *heartily* with the principles of the Council on Pharmacy and Chemistry of the American Medical Association and we exclude from our advertising pages such Pharmaceutical products as they have definitely shown to be unworthy of professional confidence and the manufacturers of which have not removed the cause of objection; but we do not accept such findings as are based on academic data without due recognition of general clinical experience.

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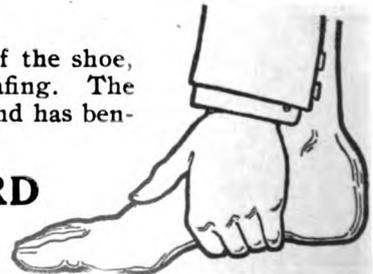
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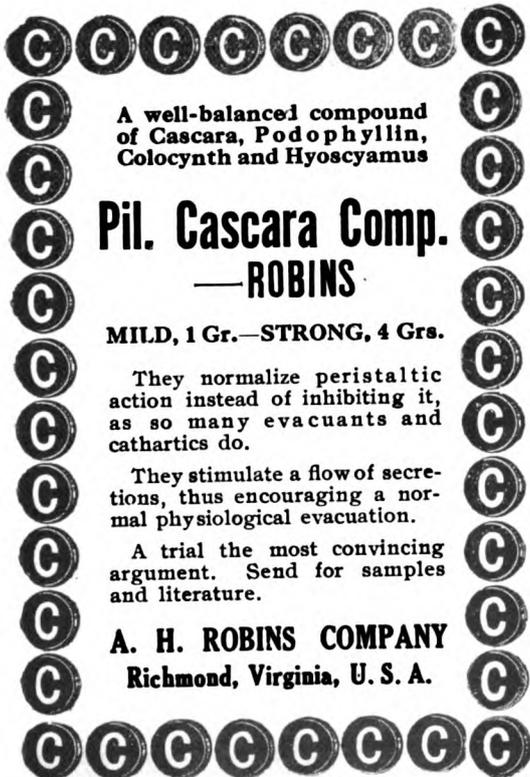
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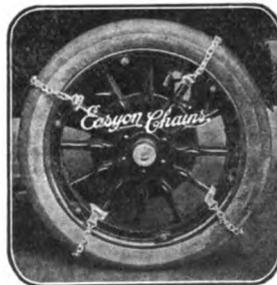
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Gould and Pyle's *Cyclopedia of Practical Medicine and Surgery*.

Edited by R. J. F. Scott, M.A., B.C.L., M.D., assisted by numerous special contributors. Third edition, revised and enlarged, with 653 illustrations. A volume nearly the size of an unabridged dictionary of the English language, and bound in heavy cloth. P. Blakiston's Son & Co., Philadelphia, Pa. Price, \$12.00 net.

Having been worked over three times, all sections harmonized, and the whole text brought up to date, this cyclopedia of all branches of medicine and surgery actually employed by the working clinician constitutes a most valuable work of reference. There is a vast deal of data not available in the average medical library but incorporated in this volume, and it is so arranged as to be of the utmost practical usefulness in answering the problems of practice. The immensity of scope embraced renders a detailed review impossible; but we have carefully examined the work and take pleasure in commending it as one admirably serving its purpose.

Christianity and Sex Problems.

By Hugh Northcote, M.A., Boulougne-Sur-Mer. Second edition revised and enlarged. Cloth, 478 pages. F. A. Davis Company, Philadelphia, Pa. Price \$3.00 net.

"If a non-ethical, non-Christian science of sex is inadequate and dangerous, scarcely less so is an unscientific, poorly informed hortatory teaching seeking to arm itself with the ægis of Christianity." This quotation represents the point of view of the author of this admirable treatise; and he presents a thoroughly scientific and analytical study of sex in well selected language free from pedantry on one side and from suggestion on the other, while crediting the theological and religious aspect of the matter in a way that is refreshing after the avalanche of purely biologic sex literature with which we have been all but engulfed. The book is one of the few sex books of the day that may be said to be constructive.

Modern Medicine and Some Modern Remedies.

By Thomas Bodley Scott, with a preface by Sir Lauder Brunton. Cloth, 159 pages. Paul B. Hoeber, Publisher, 67-69 E. Fifty-ninth street, New York City. Price \$1.50 net.

A series of essays, principally on disorders of the heart, arterio-sclerosis and the endocrine organ remedies. One-third of the book is upon "Speculations and Doubts," and, while suggesting some admirable points, leaves the reader speculating over the problem of whether modern medicine is the more engaged in tearing down or in building up. The preface starts out with a denunciation of Germany. The English are awfully good chaps; but things are on their nerves just now, and it shows in some of their books.

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Clinical Disorders of the Heart Beat.

By Thomas Lewis, M.D., D.Sc., F.R.C.P., Lecturer in Cardiac Pathology, University College Hospital; Physician City of London Hospital for Diseases of the Chest. Third edition. Cloth, illustrated, 116 pages. Paul B. Hoeber, Publisher, 67-69 E. Fifty-ninth street, New York City. Price \$2.00 net.

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Practical Massage and Corrective Exercises.
By Hartvig Nissen, President of Posse Normal School of Gymnastics; Lecturer on Massage, Harvard University Summer School, etc. Cloth, illustrated, 211 pages. Revised edition, 1916. F. A. Davis Company, Philadelphia, Pa. Price \$1.50 net.

This volume is practically a treatise on mechano-therapy, and a vastly better one than is usually used by the average cultist who antagonizes the medical profession. A study of this and other credited works on massage and Swedish movements makes it a problem, in the mind of the reader, whether the modern cultist who "adjusts" has really added anything at all to science or the practice of the healing art not already embraced in works of this type. This book is full of useful suggestion.

A Manual of Practical Laboratory Diagnosis.
By Lewis Webb Hill, M.D., Graduate Assistant, Children's Hospital, Boston. Cloth, illustrated, 90 pages text and an equal number blank pages for notes. W. M. Leonard, Boston, Mass., Publisher.

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(Helpful Points begin on page 66)

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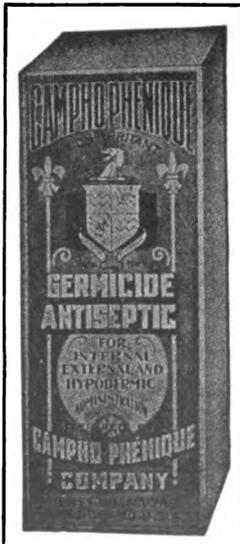
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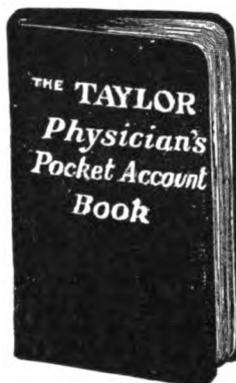
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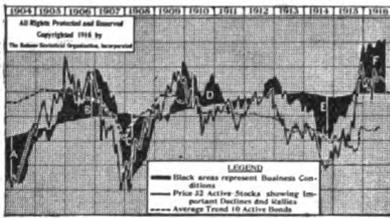
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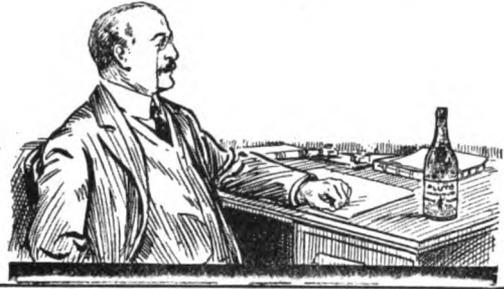
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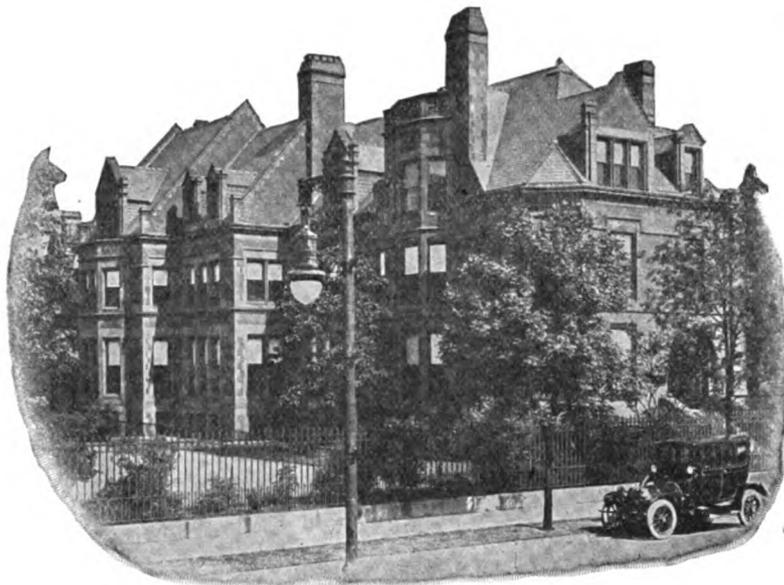


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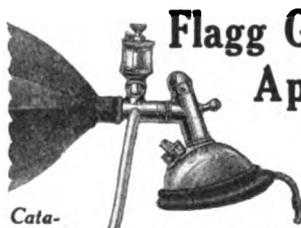
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(Helpful Points continued one leaf over.)

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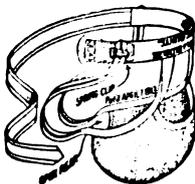
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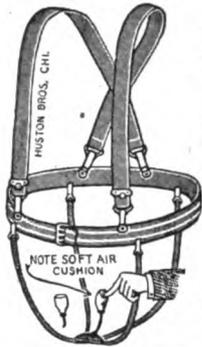
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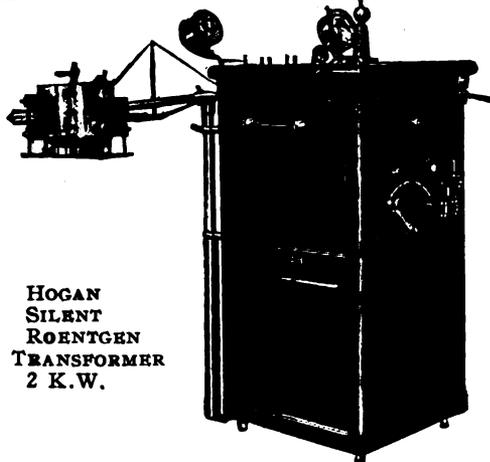
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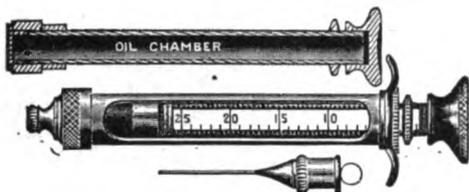
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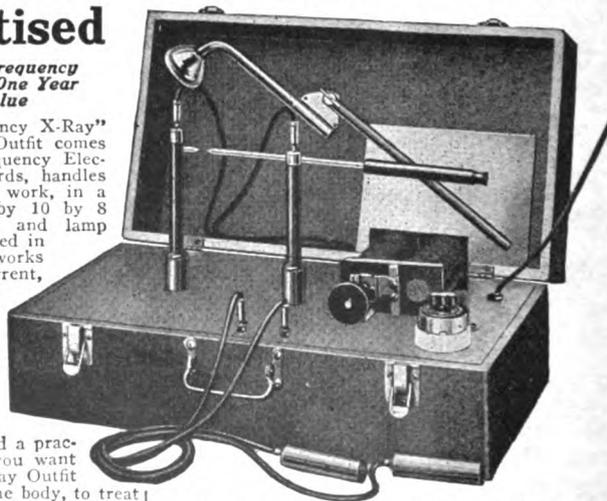
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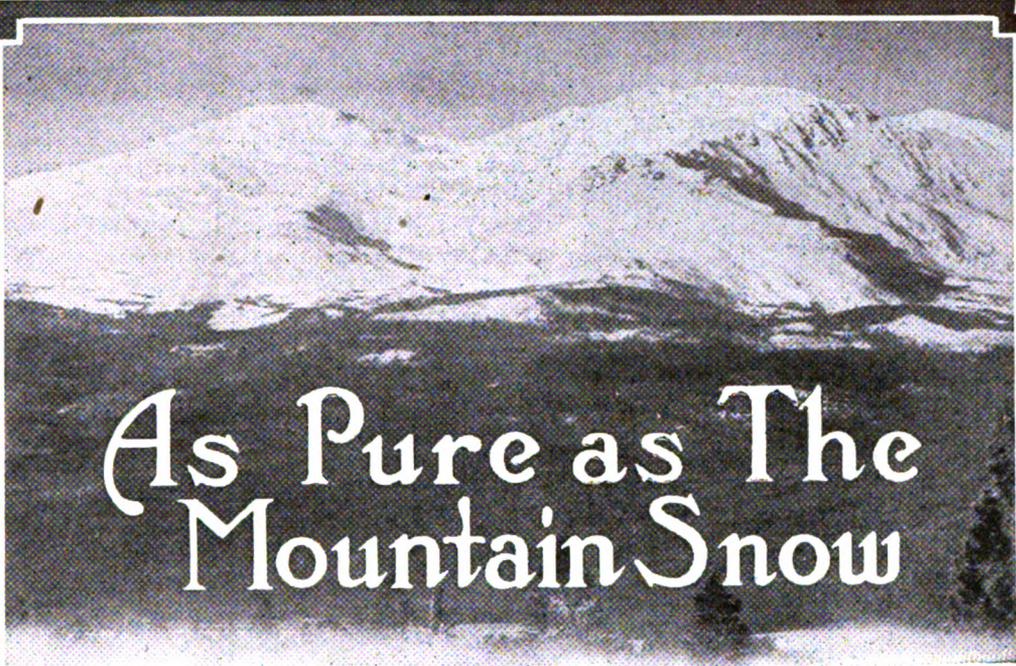
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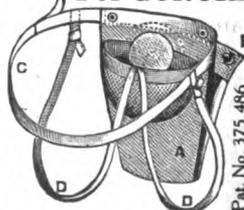
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