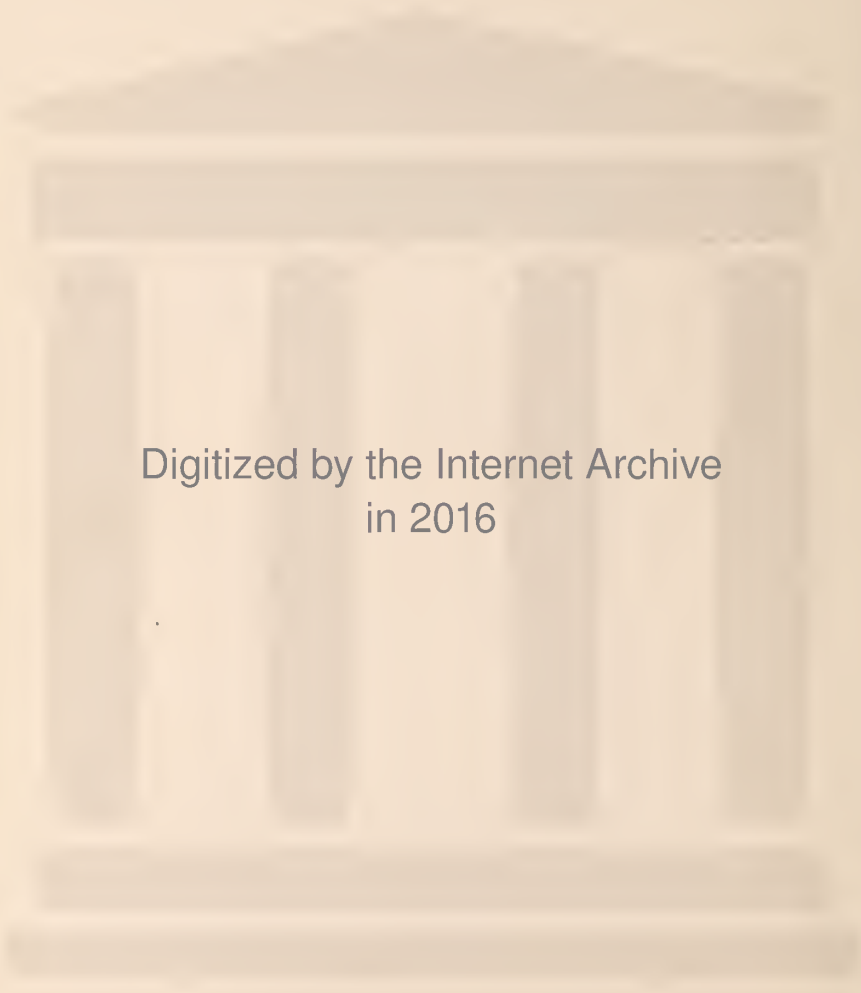

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CONTENTS

INFANT DIET MEAD'S MATERIALS

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VOL. XX—No. 1 HUNTINGTON, W. VA. JANUARY, 1925

SOME BORDERLINES IN GENERAL MEDICINE.

By DR. C. A. RAY,
Charleston, W. Va.

Read before the West Virginia State Medical Association, Wheeling, May 13, 1924.

Mr. President and Gentlemen:

In explanation of the above title, which occurred to me on the spur of the moment, I could probably have better expressed the idea I wished to convey by saying I would enumerate some of the differential symptoms of a few of the most common diseases we encounter in our daily round.

There comes a time in the career of every person, although he may never have been sick a day, when he approaches the top of the hill on life's pathway where he can see the inevitable borderline of his earthly existence. This is the time for him to "check up" and if possible, by the help and assistance of his physician, prolong the journey upward to the point where he begins to slip down on the other side. The idea of checking up is becoming common with the laity and more often are they saying to their doctor, "You spend most of your time and energy trying to keep the general public from getting sick, why not keep me as an individual, from dying?" If we are on the alert for an obscure and seemingly unimportant symptom in an apparently healthy person, we will often be able to prolong the life of our patient. It might be a tooth or tonsil, an innocent papule, or mole on the face, a lump in the breast, a uterine discharge, earache, urinary cast, a rapid pulse or a cramp in the stomach, which, if taken in time, might set up another mile post for our friend. The average life of the physician might be materially lengthened if he would take his own advice along this line.

There are two phases to this borderline subject which we will discuss; one where a condition or disease of a mild nature may drift into

a serious proposition, and the other where primarily a medical case will drift into a surgical condition. Time will not permit more than reference to many cases and the two phases will be jointly dealt with.

When spasmodic croup in a child does not promptly respond to an emetic, cold to larynx and a sedative and there is the slightest rise in temperature, a large dose of dyphtheria antitoxin should be administered and if that fails, tracheotomy or intubation resorted to, before it is too late. Pleurisy with effusion is not a surgical condition before twenty days unless the accumulation of fluid reached the third rib, interferes with respiration or results in empyema. Too early aspiration may result in adhesions of the pleural surfaces and deformity of the chest. But, with aseptic precautions, you will do no harm with a hypodermic needle every two or three days to determine if there are any changes in the fluid. The moment pus forms in the pleural cavity, it should be referred to a surgeon. Whether after pleurisy with effusion or a complication of pneumonia, your patient has a severe rigor, high temperature and profuse perspiration, no time should be lost in ascertaining by aspiration, the character of the fluid.

The mortality of pneumonia is so high that the mildest form of bronchitis should not be overlooked or considered unimportant. Bronchitis and bronchial pneumonia are so closely related that, after a slight rise of temperature and rate of respiration in the former, a careful examination will disclose physical signs of the latter. A persistent rapid pulse with the slightest afternoon temperature rise following either bronchitis or pneumonia may be the initial symptom of pulmonary tuberculosis.

The insiduous nature of tuberculosis requires constant vigilance when from any cause the natural resistance to infection has been lowered.

The cardinal symptoms to gastric and duodenal ulcer are pain, hyperacidity, gas eructions, vomiting, blood in stools and vomitus. These are essentially medical cases and become surgical only after persistent medication for weeks or months in the absence of severe or repeated hemorrhages. Operation for removal of an acute ulcer I consider dangerous and unwarranted.

Appendicitis is a surgical condition when the diagnosis is made. If a person has abdominal pain, constipation, nausea and sometimes temperature and the appendix is not considered, someone is negligent. I have seen so many people with appendicitis made worse by indiscriminate prescribing that I sometimes long for the good old days of the old time "belly-ache," when such mistakes were at least not recognized.

I know I am approaching dangerous territory in advocating anything but surgery of the gall bladder, whether it be diseased or not, however, I venture the assertion that far too many gall bladders are being drained or removed. The theory that the gall bladder is a vestigil organ is untenable at this time. While its function is not clearly understood, we do know at least that within its cavity bile is stored and concentrated while the organs of digestion are at rest. We also know that bile in large quantities in the intestinal tract is one of the requisites of the proper digestion of a diversified diet and as the presence of food in the duodeum accelerates the activity of the liver

in secreting bile, the cencentrated contents of the gall bladder empties and mixes with the fresh secretion. Because we do not definitely know the function of the gall bladder does not justify the belief that it is vestigial and has no function. On the other hand, the changes taking place after cholecystectomy show that the gall bladder does have some function for the loss of which nature is trying to compensate. That all gall bladders are not infected is well demonstrated by the investigations of A. Wagner. He examined the biliary tract bacteriologically in four hundred sixty-five patients out of five hundred thirty-one patients operated upon for biliary lithiasis. In 55% of the cases, the contents were sterile. In acute cases 51% were sterile as regards bacteria, while in the chronic cases, 61.6% were sterile. But, when a chronic case becomes acute, the figure of sterility falls to 38.5%. He found in 209 cases the flora to be colon bacillus, in 109 streptococcus, in 39 paratyphoid, and an association of colon bacillus and streptococcus in 14. According to Wagner's investigation the theory that all inflamed gall bladders are a menace and should be removed is not well founded. Many patients who have cholecystitis might and could be saved months of suffering and ultimate operation if it were recognized and properly treated in its early stage. Cholecystitis is easily and frequently overlooked because practically all of the symptoms suggest some form of gastric disturbance. A feeling of distress in the stomach after eating, without much pain, eruction of gas, very rarely vomiting, and acid eructions, constipation and languidness, colics and cramps are rare, but usually tenderness is found over the gall bladder. A simple analysis of gastric contents will demonstrate that you are not dealing with any gross pathology of the gastric mucous membrane. Recognized early, and gaining the confidence of your patient by explaining to him that by constant and persistent treatment for a period of sometimes months, he may escape an operation, you will be able to cure many. We often have patients in whom a focus of infection is obscure. Keep in mind the gall bladder. When a gall bladder becomes infected and does not respond to medical treatment, the gastric symptoms will become more annoying, occasional vomiting, more or less pain along with the tenderness, probably slight jaundice, and low type of hectic fever.

I might mention at this point, in cases of *obscure focal infection*, it is well to keep in mind the possibility of the gall bladder being the offending organ and surgery of the gall bladder should be advised. Whether it is opened, stones removed and sewed up, drained or removed, must of course, be left to the judgment of the surgeon. If the organ is contracted, walls thickened, high grade of infection, gangrenous and signs of malignancy, removal is justifiable, but otherwise we think drainage should be done and the organ left.

In the *Journal of Surgery, Gynecology and Obstetrics*, Nov., 1923, Dr. H. L. Warner of Baltimore, Md., reports the end-results in nearly 300 cases in which the gall bladder was drained, not removed, in the service of Dr. Thos. H. Cullen, of Johns Hopkins, covering a period of 25 years. To be exact, 296 cases operated upon by one man over a period of 25 years, during which different methods have

been advocated and technique improved, is well worth consideration at this time. His records show 29 died shortly after operation, 14 were not located, 19 were unimproved, 26 markedly improved, but had some symptoms, while the remaining 202 had no gall bladder symptoms after operation and were either well or died of some other disease. His conclusions are, "What would have been the results had cholecystectomy been the routine procedure? One might venture to say the immediate mortality would have been much higher in the hands of the average surgeon and the percentage of recoveries no better."

Recurrences are possible, even after cholecystectomy. In every case in which the gall bladder should be removed the patient's condition or the nature of the lesion may make its removal impossible. In the very cases in which the gall bladder can be readily and is most frequently removed, one gets excellent results from drainage. In 1915, C. H. Mayo reported that 53% of the patients on whom cholecystectomy had been done for cholecystitis were without symptoms. W. H. Martin of New York, says, "Although patients after cholecystectomy maintain excellent nutrition and are free from symptoms, adhesions often follow the removal of the gall bladder. These adhesions occasionally derange the normal operation of the pylorus and duodenum, causing pain and vomiting. Injury to the common ducts has occurred often enough to suggest that cholecystectomy has at times technical difficulties."

The most modern advice to a patient who has goitre is that if the goitre doesn't bother you, don't disturb it. The prophylaxis of goitre has revolutionized the treatment of hyperthyroidism in its early and less toxic stage. In the opinion of M. E. Bircher, the condition of the thyroid gland can be gauged with comparative precision by the basal metabolism which should be the guiding indication in iodine treatment. We see many cases of hyperthyroidism without the occular symptoms and nervous syndrome of true exophthalmic goitre which Plummer designated as "toxic non-hyperplastic goitre," or "hyper-functioning adenoma," however, further study of this type of hyper-thyroidism by Boothy demonstrated that even though th occular symptoms and nervous syndrome were absent there was a moderate degree of hypertrophy and hyperplasia of the parenchymatous cells of the gland and the secretion resulting therefrom in this group of symptoms but with a basal metabolism less marked than in true exophthalmic goitre.

Far fewer patients with goitre go to operation today than a few years past and the measures responsible are prophylaxis in the young, search for and removal of obscure foci often responsible and the judicious application of x-ray. I can recall a number of cases which subsided after removal of badly infected tonsils. In one the toxic symptoms disappeared as a cystitis cleared up and another, after removal of wisdom teeth, which were giving the patient great pain and annoyance. With the perfecting and use of the metabolism apparatus, we are inclined to the belief that it is a safe guide as to the progress of hyperthyroidism and materially aids in deciding when our patient should go to operation, if tak-

en into consideration with the myocardial changes, the time and extent of the operation, together with the amount of fear manifested by the patient.

The modern tendency is, and rightly so, to treat the patient maintaining his resistance and eliminating rather than fighting his disease. The few specifics we have should be administered unhesitatingly and in adequate dosage but it is no less important that we see that the waste products of his infection is being promptly and properly eliminated by the excretory organs. Any acute infection, no matter what the organism, may result in acute nephritis, and although we sometimes overlook our surest safeguard, the proper functioning of the kidneys, skin and bowels. It may seem a tiresome routine, but the daily examination of urine will quite often give you warning of the most dreaded complication and sequela.

Pus in the urine may mean a simple pyelitis which can be readily corrected by medication, or it may be the result of diseased prostate, ureteral or nephritic stone, tuberculosis, or neoplasm of the kidney, which are essentially surgical conditions from the beginning, and best results are obtained if operated early. Modern genito-urinary technique has made it possible, if not easy, to arrive at a definite conclusion and pus in the urine should not be looked upon as insignificant.

I close with this quotation: "Doctrines beget difficulties." Experience makes it manifest that many interpretations dissipate truth. Not often do two mere men make the same judgment of the same thing, and it is impossible to find two opinions exactly alike. We are most apt to stumble in an even country like some horses I have known that trip most on a smooth road.

Regardless of your ability as a diagnostician, surgeon or therapeutist, you should forget all selfish ambition and adhere to the doctrines founded on a thorough knowledge of the case. If what is best for this particular patient, that will I do, sometimes you will go wrong when conscience is not asleep. Remember that you are dealing with a human being like yourself who has but one life to live or give and the surgeon whose technique and skill are perfect, requires and should exercise a keener sense of judgment than a less fortunate brother. The same maxim applies to the internist who for any reason whatever hesitates or delays calling a surgeon when his patient's condition requires his services.

In this fast age of "here he comes and there he goes," it is dangerous to exceed the speed limit of 25 miles per hour. If you escape the surgeon or undertaker, the police are liable to get you.

DISCUSSION

Dr. H. H. Hall, Wheeling:

I believe that if it were left to me, if Aladdin came and told me to rub the lamp and ask for what I wish most in the world, I believe I would ask for ability to diagnose in borderline cases. I do not believe there are such serious diseases as the borderline diseases, nothing that tries a man's experience, his ability, his training, and, most of all, his philosophy, as they do. I do believe that no tyro, no amateur, no beginner, can possibly diagnose borderline diseases. We can tell when a man is normal or when he is abnormal, but to de-

termine when he is sliding from the normal into the abnormal requires experience in a hospital or in everyday practice—and I believe the everyday practice gives you the better training.

Now, as to the gallbladder, I am one of those benighted beings who still believe in drainage of the gallbladder. There are only a few of us who still hold that view. A fellow physician the other night when we had this discussion at the Ohio County Society, said a Norwegian had discovered that the gallbladder is not responsible for the stone; the liver is responsible for the stone. I hope that is not true, because it makes the gallbladder a good deal more respectable. I believe, with Dr. Ray, that a good many of the diseases coming under "indigestion" are caused by the gallbladder. You may have noticed in the last few years it is more and more difficult to fasten anything on the stomach at all. Some of it is mental, and some of it gallbladder. Of course appendicitis is concerned, too, but we can usually readily diagnose that.

As to the lungs, I believe incipient —beginning—tuberculosis has very few signs. Even the x-ray plate shows very little. If some one were to ask me how I knew certain cases had tuberculosis, all I could say was that I had a hunch. The ability to diagnose these cases early depends entirely upon a man's training and experience and ability to size up things.

As to goitre, I feel that we still do not know enough about basal metabolism, and we want to perfect this apparatus.

As to focal infection, I think it is very easy, of course, to get up and say a person has a focal area. I do not know what you people think about it, but I believe that after you leave the tonsils and teeth it is one of the most difficult things we have to take up. After all the teeth have been pulled out, the tonsils removed, and our friends the specialists have gone over all the sinuses, and the patient still has the trouble, I believe there is some organ that is offending. Whether it is in the bone marrow, as I am sometimes inclined to believe, or where it may be, I do not know. After you have done all these things and still are persuaded you have a blood stream infection, I feel there is some organ that is giving rise to the infection. Just what it is I do not know, but I think there are some organs more offensive than we are giving them credit for.

Dr. Bowers, of Cleveland, gave me some facts as to nephritis. He said it had not been proved whether infection comes by the blood stream or travels upward from the bladder to the kidney by peristalsis. He said most of the observations led to the latter conclusion. He seems to think —and he has made a good many investigations on the subject—that the kidney can not stand any virulent injection for any length of time without being infected. He says sometimes when you think you are getting excretion from the kidney you will get a nephritis, and we ought to get the infection out in some other way. Sometimes the pus that you get from ureteral catheterization, etc., is not from the bad kidney, but from the good kidney, by back fire.

I think this is a very valuable paper, and we all ought to be especially careful in these borderline cases, which tax all our ability.

Dr. F. LeMoyne Hupp, Wheeling: Dr. Ray has given us so very many

interesting topics for discussion that in the five minutes allotted it would be quite out of the question to touch only the high spots.

In the study of all of these borderline cases I shall touch upon only one, i. e., gastric ulcers, and it seems to me there are two outstanding things to guide us from error into a definite diagnosis.

First, the history should be painstakingly sought for with the same cross questioning zeal as characterizes the lawyer and his victim in the witness box. Next of importance is an intelligent reading of the roentgenogram and fluoroscopic findings. Another point, remember, as Gibbon has pointed out, that all the gastroenterostomies, with their finished technique, will not cure gallstones or gallbladder infection, appendicitis, utereral kinks or strictures, renal calculi or floating kidney, or the crises of locomotor ataxia, and until a careful survey has excluded all of these and other borderline possibilities we have absolutely no license to use our aseptic scalpel, or to inflict upon our trusting patient with a normal pylorus an unphysiological anastomosis with the jejunum.

Again, I quite agree with Dr. Joe Blake when he said we should never, as surgeons, commit ourselves to any one surgical procedure. Every man doing surgery, when he opens up one of these abdomens for borderline conditions, should have at his fingertips the tested and tried, rational procedures which have been known to relieve or cure. Remember the unconscious man before you on the table has a soul and body, as you have, and when you undertake to operate for suspected ulcer or any other obscure condition you must have the courage to close the wound and get out if you have been mistaken. The gastro-enterologists have taught us a valuable lesson, that some of these patients with suspected ulcer and borderline gastric pathology can be treated by Einhorn's duodenal feeding, thus resting the stomach, unless there has been bleeding or perforation. Let us remember that there is a medical management of these cases, as Dr. Ray has so well said, but not forget, as Dr. Will Mayo has aptly said, that only the rich can make a pet of a stomach ulcer. The best clinics teach that with medical treatment the mortality is from 10 to 20 per cent; the untreated cases have a mortality of from 20 to 50%; the mortality from operation from benign diseases of the stomach and duodenum is from 1 to 5%. The Mayo Clinic, out of 3,480 cases, had 53 deaths, or a mortality of 1.5%.

Dr. Ray's paper was so helpful that each of us can take his message home with us and use it daily in our work.

RELATION OF CLINICAL TO LABORATORY WORK.

By DR. CHAS. E. GABEL,
Charleston, W. Va.

Read before the West Virginia State Medical Association, Wheeling, May 14, 1924.

The history of medical and related sciences is a wonderful story. It is interesting to follow in our imagination the birth, growth and fruition of new ideas which contributed to the advance of civilization. We of this generation who are blessed with many advantages our forefathers did not enjoy, often fail to appreciate the long and arduous struggles the pio-

neers of a science had in establishing their ideas, the opposition they met from indifference, ignorance and superstition. The laity is sometimes decades or even centuries behind in accepting ideas and practices which experience has convinced experts in the subject to be the best. In the early days of civilization the tendency was to theorize too much, to discuss to argue and to philosophize about an idea. The man who seemed to have the best or most readily comprehended argument or did the most talking had the best chance to win. Such conditions have in part survived to this day. Behold the chiropractors and certain other advertisers.

However, a time followed when men demanded to be shown, when they wanted proofs instead of assertions, when they wanted to see results instead of hearing arguments. Thus the stage of experimentation and exact science was ushered in. To prove or disprove the theories about them, bodies of plants, animals and human beings were dissected, the functions and activities of their various parts in health and disease were studied, and the reputed therapeutic action of various agencies tested by experiments on many cases. Physical and chemical forces were investigated and these sciences were reduced to mathematical accuracy. The increased knowledge obtained from these and other sciences were applied in efforts to understand, study and properly treat our bodies in health and disease. Wonderful progress has been made along this line, the study of which is most instructive and fascinating. In order to make experiments to try out different ideas laboratories were established. Their small beginnings and development and great things accomplished would be interesting and profitable subjects for consideration. However, as art and science is long and time is fleeting, I must omit a historical review and proceed to discuss the present relation of clinical to laboratory work as it affects us. In doing so I hope that we will not lack in appreciation of the many earnest and untiring physicians and scientists who have labored to advance our knowledge of clinical medicine, who have sought to improve methods of diagnosis and put them on a firmer, more exact and scientific basis.

Considering venereal diseases, a physical examination and history of the patient is first made. The Clinician may diagnose the case as chancroid, syphilis or gonorrhea. However, many lesions whose etiology was ascribed to Ducrey's bacillis were subsequently found to be due to a treponemal infection. Cauterizing the supposed soft chancre did not cure the infection as the infecting organism of a hard chancre quickly penetrated the tissues and multiplies in the blood. Certain skin eruptions or sores of various kinds are sometimes ascribed to other than syphilitic origin but eventually found to be of a venereal nature. Such cases should receive laboratory examinations. The findings may occasionally even be negative in positive cases yet the clinician does not do justice to the patient if he neglects to have a microscopical examination made of the lesion which may possibly be syphilitic. When no dark field apparatus or microscope is available he can at least make a smear and send it to the laboratory. Some physicians send their patients, which is the best method for making a dark field examination. The

latter is by far a better method than the examination of stained smears or India ink preparations. Out of town physicians sometimes send their patients to the State Hygienic Laboratory for these and other examinations. However on account of the expense involved it is often not advisable to do so. Any physician should be able to prepare a slide for gonorrheal examination as well as we can. But we sometimes get poor, carelessly taken or prepared specimens which needlessly increase our work.

Any physician should also be able to get good specimens of blood for complement fixation tests. But we sometimes get spoiled specimens due in a few cases to the fact that the blood was not taken asceptically and kept too long or at too high a temperature. Other circumstances over which we have no control may cause the blood to be hemolyzed or anticomplementary so that neither the physician nor the laboratory should be blamed in every case. The Wassermann test is not yet 100% accurate. How many clinicians are perfect in all their diagnoses? This is an example of the close relation between clinical and laboratory work where we must cooperate to the fullest extent to give the greatest benefit to the patient.

As some physicians object to women technicians I will say that most of the Wassermann tests done during the past year at the State Hygiene Laboratory were made by a young man, a graduate of your State University. We hope our results will be found correct. If they do not coincide with your views please let me know directly. I say directly because I sometimes hear indirectly after some interval that someone at sometime was not satisfied with the laboratory report he received. In such cases please notify me immediately with complete data so that the matter may be investigated and adjusted. If we are at fault we shall be glad to acknowledge it as we do not claim to be infallible. We sometimes get weary, forgetful, disgusted or sick like the rest of humanity. But we are earnestly trying to do the best under all circumstances. e.g. Recently one of the laboratory force in trying to get to the guinea pigs broke her arm, another sprained his ankle. The laboratory was moved to a new location but the work kept coming in and had to be attended to.

We receive specimens without the physician's name or address or even a legible post mark or other information needed. Or we receive a bottle and make a urine analysis on its contents and then learn from the sender that it was a medicine of which he wanted to know how much of everything was in it. We receive a specimen which looks like water and examine it as such and then find that a urine analysis was wanted. We make a urine analysis on another specimen and later learn that a test for T. B. or gonorrhea only were desired. A Wassermann test is made on a blood specimen and then we are asked what the Widal reaction was, etc. We realize that a physician is often very busy, but we would rather try to interpret some illegible data than to have none at all. These, of course, are only a few exceptional cases in the many we handle and for the great majority we have only words of commendation. We realize and appreciate the great work you are doing for humanity and want to cooperate and be of service to you in every way we

can. On a smear submitted to us we can report the presence of a Gram-negative intra-cellular diplococcus, but you must decide whether it is M. gonorrhea or M. catarrhalis. To diagnose a case as gonorrhea without a microscopic examination or with only a Methylene blue stain might lead to error. Likewise we may report a complement fixation test as pus-minus one plus or two plus, but it is for you to decide whether or not the patient is infected and the treatment necessary. To guess at the diagnosis when laboratory tests are available is unscientific.

We do not advocate laboratory tests first in all cases; e.g., in suspected rabies although the customary procedure is to kill the dog and have an examination made for Negri bodies, a more accurate diagnosis can be made as follows: Keep the dog under observation to see if the characteristic symptoms of Hydrophobia develop. If the dog is mad, paralysis and death occur in from two to three weeks. You are thus observing an experiment better than if another animal were innoculated with the suspected material. If you think the dog died from some other cause, then its brain should be sent to the laboratory for examination. If you believe it died of hydrophobia then the bitten patient should be given the Pasteur treatment. You can give the injections and it is not necessary for the patient to go to a Pasteur institute. Symptoms in an infected person appear after an incubation period of usually, twenty to sixty days.

A lesion in a patient's mouth may be the secondary stage of syphilis. The primary stage may be readily diagnosed by a dark field examination of the secretion from a hard chancre or from the aspirated fluid from a swollen inguinal gland. The mouth sore is more difficult to diagnose and even if spirochaetes are found they may not be those of syphilis. Spirochaeta microdentium which may be found in the mouth of a non-syphilitic case can hardly be distinguished from treponema pallidum, the causative organism of syphilis. Another spirochaete, which can be readily distinguished from it however, is considered to be the cause of Vincent's angina and is usually found associated with the B. fusiformis. Other pathological conditions in the mouth and throat which the clinician may not recognize definitely, a microscopic examination may reveal to be diphtheria. Laboratory methods can also distinguish between Klebs-Loeffler's bacillus and Hoffman's or pseudo-diphtheria bacillus and determine whether the cause of a fever is typhoid or malaria.

When a physician suspects his patient to be tubercular, a microscopic examination may reveal Koch's bacillus in the sputum, urine or feces depending on the part affected. While its presence confirms his suspicion, its absence does not indicate freedom from the disease. Only when a lesion opens outwardly so that the secretion or excretion can be examined microscopically can we expect to find the causative organism. If present in small numbers it may take many specimens to find it. Specimens from phthisical patients may not show it if saliva instead of material coughed up from the lungs is submitted. Similarly in cases of diphtheria or other oral lesions we may not find the etiologic cause if the specimen was taken or handled carelessly. A diphtheria culture may be carried in your vest

pocket to incubate. Recently I received a blood specimen for a Wassermann test similarly treated "in order to keep it near the blood temperature," the idea being to cause the syphilitic organism to grow. This procedure would be correct if we were looking for B. typhosus in the blood, but in making complement fixation reactions, we test for anti-bodies and not for organisms. The former are chemical substances which do not grow, but deteriorate on incubation. No result could be obtained on the above specimen on account of the formation of anti-complementary substances. The latter restrict or prevent the guinea pig complement added during the test from acting just as an alkali will neutralize an acid solution.

Serologic investigations have shown that the blood serum is not the simple substance it was thought to be but that it contains a large number of complex bodies whose composition chemists have not yet been able to determine. Some of these play an important part in immunity. Their determination and administration may be useful to therapeutics in the future. Vaccines and sera are used successfully now, but if we know the active chemical constituents we can more readily prepare and use them. There are many such problems awaiting solution and when we can get the facilities to solve them another step will have been taken in the beneficient onward march of medical science.

SPASMOPHILIA.

By JOHN T. THORNTON, M. D.
Wheeling, W. Va.

Read before the West Virginia Medical Association, Wheeling, May 14, 1924.

In selecting this subject for your consideration I felt that it would be of interest and benefit for two reasons. In the first place spasmophilia is frequently unrecognized, and therefore proper treatment is not instituted. This is all the more regretable because there is a very definite treatment for the condition, one that usually results in a speedy cure if promptly given. In the second place, thanks to the large amount of research work devoted to spasmophilia within recent years, knowledge both of its etiology and of its treatment has been notably advanced. Without pretending to any originality, I purpose to outline the important diagnostic features and the rational treatment of the disease.

What is spasmophilia? It may be defined as a condition occurring in infancy and early childhood, characterized by increased irritability of the nervous system to mechanical and electrical stimuli, and manifested by local or general muscular spasm. The term tetany is used by some writers as a synonym for spasmophilia, by others to distinguish one variety.

The clinical manifestations may be classified under three leading types, carpopedal spasm, laryngo spasm and generalized convulsions.

The first type, carpopedal spasm offers no difficulty in diagnosis, as it presents a picture so typical that, once seen, it is never forgotten. The upper extremities are always involved, the lower frequently. There is a persistent tonic spasm of the muscles, lasting for hours or for days at a time; there may be remissions. The hands are held in the so-called "obstetrical position," the wrist is flexed, the thumbs adducted and covered by the fingers, and the whole hand drawn slightly to the ulnar side.

The hands are voluntarily moved sometimes, but soon return to the original position. The feet are extended and usually held in a position of equino-varus. Continuation of the spasm eventually produces edema of the hands and feet, and the child gives evidence of suffering pain. The facial muscles may be affected likewise, giving rise to a puckering of the mouth.

The second type, laryngo-spasm, is characterized by closure of the larynx by muscular spasm, and presents mild, moderate, or severe forms. The mild form is characterized by an occasional peculiar crowing sound heard on inspiration, to which the mother attaches little importance. In the moderate form the child for a short time is unable to inspire, becomes slightly dyspnoeic, but soon the spasm relaxes and air enters the larynx with the same peculiar crowing sound. In the severe form the duration of the muscular spasm and consequent obstruction to respiration is prolonged. The child makes an unusual effort to inspire, becomes cyanotic, then unconscious and pallid. The child's condition is so alarming that death seems impending, and in fact sometimes does take place. Fortunately, however, in the vast majority of cases respiration is re-established, usually with the characteristic crowing sound. Without treatment these attacks tend to recur at irregular intervals, at times being precipitated by nervous excitement, at times with no apparent provocation.

The third type, generalized convulsions, presents the greatest difficulty in diagnosis, though there are certain distinguishing marks. The convulsions resemble those of epilepsy, for which they are often mistaken. The convulsion usually starts in the eyes and face and extends to the extremities, becoming general. At first tonic, it soon becomes clonic. The child is completely unconscious, the breathing is labored and cyanosis may develop. The duration is variable; it may be momentary or may last for several minutes. The number of attacks likewise varies greatly. In one child under my care the nurses counted one hundred and fifty convulsions in one day. The most characteristic feature is that after each convulsive attack the child quickly recovers and appears none the worse for the experience, except for pallor and languor following frequently repeated attacks.

Abt has described a fourth type which he calls the asthmatic type or broncho-tetany. In this form there is a tonic spasm of the bronchial muscles, resulting in closure of the bronchioles and minute air vesicles. The alveoli are collapsed and atelectasis occurs. The muscular spasm may last for hours or for days. Pathologically, there is no evidence of inflammatory changes—no round cell infiltration and no exudate in alveoli or bronchi. The x-ray gives a distinctive picture. The symptoms comprise difficult and labored breathing with developing cyanosis, over the thorax dullness posteriorly and increased resonance anteriorly, slight fever, and cardiac weakness. The condition is serious, death occurring in the majority of cases.

In addition to the clinical picture presented by the patient, there are certain latent conditions of importance which may be made manifest by physical and chemical examinations.

The first of these is a measur-

able increase in the electric irritability of the nervous system, which is a constant finding in all cases of spasmophilia. As is well known, when a galvanic current is passed through a motor nerve, there occurs a contraction of the muscles supplied by the nerve. Using a suitable apparatus, it is possible to measure the least amount of electric current that will produce a contraction. In any given case the current measured in mille-amperes will vary, depending upon whether the positive pole (node) or the negative pole (cathode) is placed over the nerve, and whether the contraction is caused by the make or the break of the circuit. Now with the negative electrode over the nerve and the contraction caused by opening the circuit (the so-called cathode opening contraction or C. O. C.) it has been demonstrated that in healthy children under five years of age a muscular response will never be obtained with a current of less than five milli-amperes; whereas, if the child is in a spasmophilic state, the muscular contraction will be produced by a current less than 5 ma. This is known as the Tiemich sign[2] and is found in no convulsive condition other than spasmophilia. Von Pirquet has claimed that the A. O. C. is the more reliable measure of the irritability of the nerve, and that A. O. C. less than 5 ma. and less than A. C. C. is the sensitive index.

The second latent condition is hyper-excitability of the facial nerve to mechanical stimuli. If one taps lightly over the facial either at a point about midway between the Zygoma and the angle of the mouth, or at the point where it emerges from the parotid gland, the facial muscles supplied by the nerve respond with a quick contraction. This is known as the facial phenomenon or Chvostek's sign. Its value is limited for the reason that it is frequently not obtainable and that it may occur in children over five years of age or even in adults.

The third latent condition is hyper-excitability of the nerves of the arm, which is made manifest by compressing the upper arm sufficiently to interrupt the arterial circulation. The compressing force may be exerted either by the hand or by an elastic band, and must be applied for from a half to three minutes. The diagnostic response to this procedure is a tonic contraction of the muscles of the forearm and hand which assume the typical obstetrical position. This is known as Trousseau's sign and is found in only a small proportion of cases. The test should rarely be made for the reasons that it is painful and that sometimes general convulsions are produced by the procedure.

The fourth latent condition found in spasmophilia is a definite diminution of the blood calcium. Within recent years the development of comparatively simple analytical methods for the quantitive estimation of the various constituents of the blood has resulted in a remarkable advance in our knowledge of blood chemistry. Methods for the estimation of blood calcium, suffciently accurate for clinical purposes, have been worked out by Howland and Marriott,[3] Kramer and Tisdale,[4] and Lyman.[5] These workers and others have conclusively proven that in children with manifest spasmophilia the calcium content of the blood is reduced from the normal level 10 mg. to 11 mg. per 100 c.c. of serum to an amount varying between 7.5 and 3.5 mg. per 100 cc. of serum. The level of blood calcium at which

active evidences of spasmophilia will develop varies with the individual—with some when reduced to 7.5 mg., with others it may be as low as 5.5 mg. So long as the calcium remains at this low level, symptoms recur in outbursts, only to cease when the calcium rises to a higher level. The level at which active symptoms disappear likewise varies with the individual.

In considering the etiology of spasmophilia there are a number of points of interest and importance. The most common age incidence is between the beginning of the sixth month and the end of the second year, the vast majority occurring between these limits. However, active symptoms may occur as early as the third month and as late as the end of the third year, or perhaps even later. The oldest patient in my experience was three and a half years of age.

The influence of season is likewise worthy of note. It is a matter of common observation that the great majority of cases occur in the late winter and early spring months. McLean[7] in a study of forty-seven cases, found thirty-six (77%) to occur in the months of March, April and May, while there were none in July, August and September.

The character of the feeding undoubtedly has to do with spasmophilia. Breast fed infants rarely show symptoms, though at times they do so. In my experience the breast milk in such cases has evidently been of inferior quality. Certainly mal-nourished infants are the ones that most frequently have attacks.

A large majority of spasmophilic children have signs of rickets. Brown[8] states that he has not yet seen a case of spasmophilia that did not show some clinical signs of rickets. Good observers have maintained that spasmophilia is merely a complication of rickets. However, while there is marked similarity between rickets and spasmophilia, yet there are essential differences. One point of distinction is the composition of the blood. In spasmophilia the calcium is considerably reduced; on the other hand in rickets the calcium is normal and the phosphorus markedly reduced.

Spasmophilia has been classified by many as a diathesis, very recently by Schultz[9], who defines a diathesis "as an individual congenital condition, or predisposition, frequently transmitted, which manifests itself by abnormal reactions to physiologic stimuli." Howland[10] takes the opposite view and says that it is not a diathesis, giving the following reasons: If a diathesis it would not be found within definite age limits, it would be found earlier, it would persist longer, it would not show the definite chemical changes in the blood.

The influence of disease of the parathyroid glands is another controversial subject. The removal of the parathyroids will produce symptoms almost identical with those of spasmophilia, including electric hyper-excitability and lowered blood calcium. But studies on the parathyroid glands of children dying with spasmophilia have failed to demonstrate any characteristic pathologic changes.

At present the essential pathogenesis is unknown. If the diminished blood calcium is the most important factor in the causation of manifest spasmophilia, and such would appear to be the case, what is it that causes the lowering of calcium? The answer to this question belongs to the future.

The diagnosis of spasmophilia may be easy or difficult. Carpo-pedal spasm and laryngo-spasm are recognized easily. The third type, generalized convulsions, is more difficult of diagnosis. Measurements of electric reactions and of blood calcium are available to very few, so that we must dispense with these aids. In making a diagnosis of spasmophilic convulsions it is necessary first of all to exclude organic disease of the brain, such as meningitis, encephalitis, hemorrhages, developmental defects, old birth injuries, etc. Next exclude various functional causes of convulsions—as uremia, severe intestinal disease, lead poisoning, enlargement of thymus gland, epilepsy, hysteria, etc. Epilepsy is likely to prove the most confusing as the convulsions of epilepsy resemble closely those of spasmophilia. Gowers states that 12% of the cases of epilepsy begin in the first three years of life. However, at that age epileptic convulsions as a rule do not recur at frequent intervals, and the prompt improvement seen in spasmophilia under appropriate treatment soon decides the diagnosis. The association of convulsions with sources of reflex irritation may be explained by assuming such irritation to be the precipitating cause of an outbreak in a child with latent spasmophilia. It is helpful to remember that approximately 90% of convulsions occurring in early childhood not due to organic nervous disease are spasmophilia.

Having determined that a child has spasmophilia, what treatment should be instituted? Recalling the fundamental pathologic condition found in spasmophilia; namely, hyperexcitability of the nervous system due to diminished calcium in the blood, the indications for therapeusis are clear. Anything that will increase the amount of calcium in the blood will cure the attack. It has been demonstrated repeatedly that when the blood calcium is below normal, it can be increased by the administration of calcium salts. The salt of calcium that has been found most efficacious is the chloride. A sufficient amount must be given, sixty to ninety grains every twenty-four hours, continued for a week or more, and then generally diminished. If calcium lactate be used, double the amount is required. Howland and Marriott state, "We know of hardly another drug which acts in disease with the promptness and with the regularity that calcium does in tetany." In my own experience I have given calcium in a number of cases of spasmophilia in which the attacks had been recurring at frequent intervals with the result that they stopped either immediately or within a few hours. Again, I have seen a few cases in which the attacks continued for sometime in spite of calcium chloride. The calcium is given by mouth, preferably in the food. It has been given intravenously, but the results do not justify the administration by that route.

A second therapeutic agent of proven value is the ultra-violet ray. These rays may be obtained from three sources, direct sun light, the carbon arc lamp (with white flame carbons) and the air-cooled mercury vapor quartz lamp. A number of workers, Tisdale,[12] Kramer, Carparis and Howland[13]; and others, have demonstrated an increase of both blood calcium and blood phosphorus following ultra-violet irradiation. Within the past year I have had the opportunity to employ the quartz lamp on several

spasmophilia cases with results apparently beneficial so far as could be ascertained by clinical impressions.

A few points regarding the technique of ultra-violet light therapy may be of interest. Using the mercury vapor quartz lamp, exposures are made at a distance of thirty inches, measuring from the tube to the surface upon which the patient is lying. The child is naked, the eyes only being protected by a black cloth. The duration of the first exposure is from a half to one minute to both front and back, the time varying with the complexion and with the age of the child. Exposures are made once daily, increasing the time a half a minute a day. Marked redness of the skin is an indication for omitting one or more treatments and possibly diminishing the duration of exposures. If the carbon arc lamp be used, the time of exposure is much longer, half an hour at a distance of thirty inches, increasing to one hour. It is said that this lamp does not cause burns. If the sun rays be utilized, it is essential that the unobstructed rays should fall upon the patient without the intervention of glass; therefore, exposures must be made out of doors. At first only the ankles and legs are exposed for about fifteen minutes. The extent of the body surface exposed and the time of exposure are gradually increased until the entire naked body is exposed for one hour or more. W. P. Lucas[14] has published a table giving the exact method of timing the exposures. Incidentally, it might be mentioned that ultra-violet irradiation is of value in other diseases, notably in bone tuberculosis and in rickets.

A third agent for increasing the blood calcium is cod liver oil with or without phosphorous. Brown[8] states that "cod liver oil and phosphorous produce an increase in the blood calcium with reduction in mechanical and electrical signs of tetany within a period of from ten to seventeen days." One drachm of cod liver oil should be given three times daily; if phosphorous is given the dose is about a half minimum of the oil of phosphorus three times daily.

I can see no objection to the conjoint use of these three methods of treatment, and such has been my practice.

During the time required to raise the level of blood calcium treatment directed to sedation of the nervous irritability is in order. This line of treatment is familiar, and need not be given in detail. Briefly, it consists in the administration of various sedatives, such as chloral hydrate grs. II-V by rectum or by mouth, morphine sulphate gr. 1-60 to 1-20 by hypodermic injection, magnesium sulphate grs. V to XV by hypodermic injection; these to be repeated according to indications. Warm baths every three or four hours are quite helpful. Avoid the giving of sodium and potassium salts, as these are directly opposed to calcium, increasing nervous irritability. The time honored catharsis is of value and finds a rational explanation of its mode of action in the fact that, according to Holt[15], in diarrheal stools there is a much greater loss of sodium and potassium than of calcium.

Proper regulation of the diet is essential. Cow's milk, on account of its relatively high sodium and potassium content, must not be given until some time after active symptoms have subsided and even then with caution. Protein milk is an appro-

priate food for the reason that it contains a relatively high percentage of calcium. I have found that a low fat butter milk can be safely given. Best of all is human milk when obtainable. Dunn[16] says that "the most certain and effective cure for spasmophilia is human milk." If spasmophilia has developed in a breast-fed infant, it would perhaps be inadvisable to continue the mother's milk. With older children the diet, after active symptoms have disappeared, may consist of cereals, bread, meat, fruit juice, and vegetables, cow's milk being excluded.

In case of laryngo-spasm when respirations are not re-established promptly, the child should be sprinkled with cold water; if this is not effective artificial respiration should be employed.

In persistantly repeated attacks of generalized convulsions lumbar puncture may be helpful.

The prophylactic treatment of spasmophilia is about the same as that of rickets. Maternal nursing should be encouraged, but the mistake should not be made of allowing the infant to continue nursing the breast when the milk is deficient in quality. If the baby is fed artificially, the increased loss of calcium that results from fat intolerance should be guarded against. During the winter months cod liver oil should be administered routinely to artificially fed infants. Hess[17] suggests the use of egg yolk in the milk mixture and states that its value has been amply demonstrated. Children should receive the benefit of the maximum amount of sun light and should not be shielded unnecessarily from the unobstructed direct rays.

DISCUSSION

Dr. Claude Holland, Fairmont:

The portion of Dr. Thornton's paper that I heard has convinced me that Dr. Thornton is what I have always believed him to be, a thorough student. He has covered the subject thoroughly and I do not think I could add much of interest. Of course, spasmophilia is one of the so-called diathetic conditions, and when we get into the subject of diathesis we tackle something that is very big and very broad and very imperfectly understood. We speak, then, of the spasmophilic diathesis, etc. This condition certainly has a familial tendency, though the exact situation in that regard we are not able as yet to understand. However, we see the manifestations of this peculiar predisposition. In the way of treatment, Dr. Thornton certainly covered the subject very thoroughly, and I am sure there is nothing to be added.

Dr. A. A. Shawkey, Charleston:

I can only commend this splendid paper by Dr. Thornton. He has left very little to add in the way of discussion. It is interesting to note that what several years ago were regarded as three or four separate diseases are now gathered under one head. What might be interesting to mention is the time of occurrence, that is, within the first three or four years of life. Between seventy and seventy-five per cent of the cases occur in artificially fed children, and it probably has a relation to the high percentage of sugar in the artificial foods. On the other hand, only about twenty per cent occur in breast-fed children, and these are probably cases in which the mother's milk is deficient. It takes large doses of calcium in these cases, and we can not be guided entirely by

the textbooks, as it sometimes takes two or three times the maximum dose given therein.

There is a possibility in the very young child of mistaking a spasmophilic condition for a trouble due to enlargement of the thymus gland. Enlargement of the thymus gland is a good deal more common, and we have to watch that carefully.

There is really nothing to be added to the splendid paper, and I just wanted to stress these two or three points.

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STUDIES OF LIVER FUNCTION.

By WILLIAM R. LAIRD, Jr., M. D., and LEROY H. LANDON,
Montgomery, W. Va.

Read before the Fayette County Medical Society, December 9th, 1924.

There is a common syndrome, familiar to the internist as well as to the surgeon, that goes with hepatic insufficiency following operations on the biliary tract. As a rule, the first seven or eight days following operation the course is apparently uneventful. Quite suddenly the bile becomes thin and pale and there is marked increase in the flow; the patient becomes restless and irritable, there is muscular weakness with exhaustion and frequent waves of nausea and vomiting. Jaundice does not become more marked but the patient rapidly fails and dies. During this stormy course the urinary output remains normal and frequent chemical examinations of the blood show nothing abnormal.

During the past few years considerable attention has been given to the incompetent liver as a serious problem in patients with obstructive jaundice. Friedenwald[1] claims that the liver has such great reserve capacity and power to develop compensatory hyperplasia that it is difficult to obtain exact data with reference to hepatic insufficiency. Any test that offers even only presumptive evidence of liver impairment must obviously be of great value.

We are running as a routine on all patients with upper abdomen lesions the following tests with reference to liver function:

The urobilin test, the hemoclastic crisis test of Widal and the phenoltetrachlor - phthalein test of Rosenthal.

In advanced lesions of the liver the hemoclastic crisis test of Widal has been found of some value, checking accurately with the phenoltetrachlorphthalein test. Cases with obvious liver dysfunction, with a moderate retention of dye, showing slight liver impairment, have given negative findings. We have found a retention of phenoltetrachlorphthalein of 13% at the end of an hour in a case of obvious liver dysfunction, yet a negative hemoclastic crisis test. From our

studies we have concluded that this test is of no real practical value.

In all cases of upper abdomen lesions we have given particular attention to the presence of urobilin in the urine. Bile pigments are converted into urobilin in the intestines. This is absorbed and carried to the liver and reconverted into bile pigments.[2] In diseases of the liver the liver cell loses the power to convert the urobilin and it is then excreted in the urine. The presence of urobilin in the urine therefore may be considered an index of functional liver incapacity. It is well to bear in mind that in most infectious diseases, such as erysipelas, malaria and scarlet fever, the urobilin is also increased. In our studies we have observed urobilin in the urine in amounts corresponding to the percentage of retention of phenoltetrachlorphthalein in the blood stream.

The phenoltetrachlorphthalein test for liver function was devised by Rosenthal[3] and depends upon the intravenous injection of a dye stuff which is removed rather rapidly by the liver and excreted in the bile. Phenoltetrachlorphthalein, when given in doses of 5 mgm. per kilogram of body weight, leaves the blood stream rapidly. In normal cases only 3 or 4% of the dye is found at the end of fifteen minutes and not even a trace at the end of an hour.

In our series we have found a retention of 6% at the end of fifteen minutes and 1% at the end of the first hour in cases we consider normal. When there is an impairment in the liver function the dye cannot be removed from the blood at a normal rate. The amount of dye retained in the blood indicates the degree of liver impairment.

It is claimed by Fontaine[4] and others that the liver has a peculiar selective action for phenoltetrachlorphthalein and is the only organ that removes this dye from the blood stream.

Rosenthal's method has not been of great interest to us in cases of obvious liver dysfunction but we are using this test as a routine procedure in cases of doubtful liver impairment. When the liver is found of normal size, when there is no jaundice or symptoms indicating impairment of the liver function, but when the lesion is such that liver dysfunction is likely to be found, this test has been found invaluable. This test has been a great aid to us in cases of carcinoma of the stomach in determining before operation whether or not there is metastasis to the liver.

CARCINOMA OF THE STOMACH

Two cases of carcinoma have been studied. The left supra-clavicular space was free from glands in both cases. Neither case showed mediastinal metastasis. The rectal shelf was free from glands in both cases. Both cases were considered good subjects for gastrectomy until the liver function was studied.

Abstract of Cases

Case No. 25,429: Age 54. Comes under observation complaining of vomiting and epigastric distress of six weeks duration; marked muscular weakness; tarry stools. Physical examination negative save for moderate oral sepsis, poor muscular tone of heart, mass in epigastrium and evidence of rather marked secondary anemia. Laboratory examinations are as follows: Urine amber, reaction acid, albumen negative, acetone

negative. R.B.C. 2,000,000, hemoglobin 30, W.B.C. 10,300, polys 83%, small lymphocytes 9%, large lymphocytes 4%, transitionals 4%, Poikilocytosis; anisocytosis. Blood sugar 124.2, urea nitrogen 16.8 and non-protein nitrogen 34.3 mgm. per 100 cc. Co^2 combining power of blood plasma 61.7 cc%. Wassermann negative.

Phenoltetrachlorphthalein liver function test: 15 minutes after injection 5%; 1 hour after injection, absent.

X-ray showed dilated stomach with extensive neoplastic involvement of the pylorus.

Operation: Nitrous oxid-oxygen analgesia plus local anesthesia. High, right rectus incision. Neoplasm size of an orange found involving pylorus and antrum posteriorly. Liver carefully examined and no evidence of metastasis found. Findings such as to justify Polya-Balfour excision. Operation followed by transfusion of 500 cc. of blood from universal donor, group 4. Tissue report: Adenocarcinoma of stomach. Recovery uneventful.

Case No. 25,369: Age 49. Comes under observation complaining of epigastric distress of five months duration, muscular weakness, loss of appetite. Physical examination shows nothing of interest other than oral sepsis, hyper-resonance over entire chest, palpable mass in epigastrium. Laboratory examinations are as follows: Urine amber, reaction alkaline, sugar negative, albumen negative, acetone negative. Urea nitrogen 15.4, non-protein nitrogen 31.1 mgm. per 100 cc. R.B.C. 3,485,000, hemoglobin 58%. Gastric analysis; hydrochloric acid none, total acidity 12%, lactic acid none. Wassermann negative.

Hemoclastic crisis test negative.

Urine positive for urobilin, + +.

Phenoltetrachlorphthalein liver function test: 15 minutes after injection 20%; one hour after injection 13%.

X-ray showed extensive neoplastic involvement of pylorus. Pylorus partially absent.

Operation: Nitrous oxid-oxygen analgesia plus local anesthesia. High, long, right rectus incision. Pylorus shows malignant neoplasm size of croquet ball. Glands in gastro-hepatic and gastro-colic omentum. Carcinomatous masses of all sizes throughout the liver. Posterior gastroenterostomy to relieve obstruction. Stormy convalescence. No improvement.

COMMON DUCT OBSTRUCTION.

Two patients with common duct obstruction resulting from operative injury during cholecystectomy were tested. Both cases were jaundiced, emaciated, dehydrated; poor liver function was obvious in each case. One case came to operation.

Case Abstract

Case No. 19,122: Age 37. Came under observation complaining of upper abdomen pain, chills, sweats, fever, nausea and vomiting; vomitus frothy, without taste. Physical examination shows a slightly jaundiced and emaciated patient with marked oral sepsis. Liver three finger breadths beneath costal margin. Scar of old cholecystectomy in upper abdomen with sinus at upper angle. Laboratory examinations are as follows: Urine amber, reaction acid, albumin trace, sugar negative, acetone

negative, occasional hyalin and granular cast. W.C.B. 10,200, polys 67%, small lymphocytes 20%, large lymphocytes 2%, transitionals 1%. Wassermann negative. Urea nitrogen 19.6, non-protein nitrogen 42.0 mgm. per 100 cc. Coagulation time 8 minutes.

Urine positive for urobilin, + + +

Hemoclastic crisis test of Widal negative.

Phenoltetrachlorphthalein liver function test: 15 minutes after injection 9%; one hour after injection 9%.

Operation: Nitrous oxid-oxygen analgesia plus local anesthesia. After the method of La Grande Gurry, the old scar was excised and the fistulous tract followed to the bile duct. The upper abdomen was a mass of adhesions; the liver was enlarged, congested; marked hepatitis. The hepatic end of the duct was freed, the duodenum mobilized, anastamosis of the hepatic duct to the duodenum was done over a Sullivan tube. Rather stormy post-operative course with evidence of liver insufficiency. Recovery. Marked improvement in symptoms.

GASTRIC CRISIS OF TABES.

Three cases of gastric crisis of tabes, referred to us with suspected surgical lesions, were tested. Impairment of liver function was not suspected. One case was untreated. The other two had received active antiluetic treatment over a long period. No arsphenamine jaundice in either case. The average test of the three cases is as follows:

Phenoltetrachlorphthalein liver function test: 15 minutes after injection 3%; one hour after injection 7%.

CHLOECYSTITIS WITH CALCULI.

Many cases of cholecystitis with calculi were tested. Many cases tested were obviously normal and the findings were normal. Two cases of doubtful liver impairment gave an average at the end of fifteen minutes of 7%, at the end of the first hour 3%. One case of obvious dysfunction was studied.

Abstract of Case

Case No. 25,690: Age 50. Entered hospital complaining of upper abdomen pain, chills, sweats, fever and slight jaundice. Physical examination showed nothing of interest other than a light tinge of jaundice, tenderness on deep palpation under right costal margin. Laboratory examinations were as follows: Trace of albumin in urine, some granular casts. Urea nitrogen 18.4, non-protein nitrogen 37.7 mgm. per 100 cc. During her pre-operative treatment a month prior to operation her white cells ran from 12,000 to 21,400; polys from 72% to 89%. Blood cultures were sterile. Coagulation time 6 minutes. One month after pre-operative treatment, W.C.B. 8,000, polys 71%. Urine negative.

Phenoltetrachlorphthalein liver function test: 15 minutes after injection 3%; one hour after injection absent.

Operation: Nitrous oxid-oxygen analgesia plus local anesthesia. High, long, right rectus incision. Stomach normal. Duodenum normal. Liver, hepatitis 1 basis 4. Gall bladder distended, filled with stones; gall bladder thickened, 2½ basis 4. Rapid cholecystectomy. Uneventful course for one week. On the seventh day patient became restless, irritable, frequent wave of nausea with vomiting;

no abdominal pain; no distention; the abdomen remained soft and flat; urinary output remained normal. Blood chemical examinations showed nothing abnormal. Duodenal tube passed, judging from the duodenal drainage the flow of bile was tremendously increased, apparently paler and thinner than normal. Patient rapidly failed and died from exhaustion. Clinical course of patient was very suggestive of hepatic insufficiency. Phenoltetrachlorphthalein study refused. No autopsy. Probable cause of death, hepatic insufficiency even though pre-operative phenoltetrachlorphthalein test was normal.

CARCINOMA OF LIVER.

We have observed two cases of hepatic carcinoma. One case was moderately advanced and liver impairment was obvious. This case had marked retention of phenoltetrachlorphthalein, the urine was positive for urobilin and the hemoclastic crisis test of Widal was negative. The other case was an early one and the liver function tests were of real practical value.

Abstract of Case

Case No. 27,384: Age 62. Comes under observation complaining of pain in the epigastrium just beneath the xyphoid. Pain was dull and constant with only short intervals of relief; pain usually worse thirty minutes after eating at which time there was nausea but no vomiting. Physical examination showed some increase in the retro-manubrial dulness; heart otherwise normal save for a soft, systolic murmur. There was a mass in the epigastrium which extended 7 cm. beneath the xyphoid and about 5 cm. on either side of the midline. Laboratory examinations showed W.C.B. 9,000, polys 56%, small lymphocytes 28%. R.B.C. 4,300,000, hemoglobin 80%. Gastric analysis: free hydrochloric acid 15 cc%, total acidity 22 cc. %. Wassermann positive. Urine negative. X-ray negative. Urea nitrogen 14 and non-protein nitrogen 28 mgm. per 100 cc.

Urine positive for urobilin.

Hemoclastic crisis test of Widal positive.

Phenoltetrachlorphthalein liver function test: 15 minutes after injection 6%; one hour after injection 4%.

Operation: Nitrous oxid-oxygen analgesia plus local anesthesia. High, long, right rectus incision. Liver showed carcinomatous masses of all sizes. Uneventful recovery. No improvement.

Blood chemical studies have been proven invaluable in the pre-operative survey of surgical patients. From our studies of liver function, we believe that the urobilin test and the phenoltetrachlorphthalein test of Rosenthal are of almost as great value in determining the liver function as blood chemical analyses are in the estimation of renal function.

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TREATMENT OF HIP FRACTURES.

By J. M. SALMON, M. D., Ashland, Ky.

Read before the Ninth Ohio District Medical Society, Portsmouth, Ohio, October 13, 1924.

For the purpose of the present discussion, a hip fracture may be de-

fined as a solution of continuity of the femur involving that portion of the bone between the head and the base of the neck. Since the attachment of the capsule of the hip joint is not coincident with the inter-trochanteric line, more of the anterior and inferior portions of the neck are intracapsular than the posterior and superior portions. It is apparent, therefore, that fractures of the femoral neck are frequently intra-capsular and extra-capsular. For this reason Stimson's classification, fractures of the neck, or sub-capital, and fractures of the base of the neck, is both sensible and sufficient.

The difficulties attending the treatmentof hip fractures have long been appreciated. Briefly, these are as follows. 1. The fracture is in the largest joint of the body and callus formation is deficient, or possibly dissolved by synovial fluid (Cotton).

2. The line of direction of muscle pull is at a right angle to the long axis of the cervix.

3. In elderly people osteogenesis is a slow and imperfect process.

4. Union is frequently prevented by interposition of capsular reflexion between the fragments.

5. The cross-section of the neck, which represents the area for approximation, is small.

6. The blood supply to the head and neck of the femur is poor and for this reason atrophy and absorption are common after fracture.

7. The period of immobilization is long and irksome. Weight bearing is not safe for a period of six months following fracture.

8. The immediate mortality in the aged is about ten per cent and there is grave danger of pneumonia and other serious complications.

It is generally conceded that the results obtained by the older methods of straight extension were unsatisfactory. Heubner[2] in analyzing 135 cases of pure fracture of the femoral neck at the Hildebrand Clinic from 1912 to 1921, found 74.8% of uncured cases. The period of observation varied from three months to thirty-two years.

Of sixteen cases, tabulated by Scudder[3] which had been treated by traction and immobilization for varying periods, only two had functionally useful results.

The British Fracture Commission concluded that from 23% to 28% of cases under all forms of treatment, gave good results.

Of 112 cases studied by Walker[4] from Bellevue Hospital records of 1906 and 1907 only fifteen cases, 13% recovered good function.

Eggers[5] finds 36.3% of good results by conservative treatment in a study of 89 cases treated at Rostock University Clinic from 1913 to 1922.

Jancke[6] analyzing 123 cases of fracture of the neck of the femur, found that 87 were able to walk with one or two canes, 27 could walk without canes and of these 12 were impacted.

In many of these unsatisfactory reports it is probable that premature weight bearing contributed largely to the failure. It is evident, however, that until recently, the treatment of hip fractures has been far from satisfactory.

The chief disabilities in hip fracture have been loss of the normal angle of the neck and shaft (coxa vara) and non-union. The normal angle of the neck and shaft of the femur is about 127 degrees and any serious reduction of this angle will greatly

limit abduction and impair the function of the hip.

In complete abduction of the femur the great trochanter is in apposition with the upper rim of the acetabulum and the lower part of the capsule, particularly the lower fasciculus of the ligament of Bigelow, is tense. It is apparent therefore that when the thigh is abducted to the normal limit the neck of the femur will be fixed between the acetabulum. The tension of the capsular ligament with its strong anterior and posterior bands contributes to the fixation of the head and neck.

The deformity of hip fracture is characteristic. The limb is everted and shortened. In fractures of the narrow part of the neck the shortening is slight, usually not more than an inch. Shortening in fractures at the base of the neck may amount to two or three inches. Eversion is due largely to the weight of the limb but partly to muscular action.

The line of fracture may be transverse, oblique or irregular and may extend to the head of the bone internally or may involve the intertrochanteric line or trochanters. The periosteum is usually preserved, in part at least—a fact that is not sufficiently appreciated by those who advocate immediate operative fixation. This periosteal bridge preserves the blood supply to the neck and affords a supply of osteoblasts. The angularity at the seat of fracture is anterior as a rule.

The indications for treatment are the following:

1. To correct the deformity with special attention to proper alignment of the fragments and to the restoration of the normal angle of neck and shaft.

2. To immobilize the fragments and maintain the immobility until union has occurred.

3. To provide for the comfort of the patient and to prevent the common complications.

4. To mobilize, as soon as possible, the knee and ankle of the affected limb and to restore muscular tone by massage.

5. To prevent weight bearing for at least six months.

The same method of treatment will not be applicable to all cases. 27.5% of fractures of the femoral neck occur in the sixth decade and a wise surgeon will have due respect to the tendency of old people to develop pneumonia, bed-sores and cystitis. Good results are largely dependent upon the proper method of treatment selected for each patient.

The first indication, the correction of the deformity, is met by full extension, full abduction and slight internal rotation. If there be impaction as shown by radiogram and by the preservation of function, and if the patient be well advanced in years or greatly debilitated, no attempt at reduction should be made. If, however, the position is manifestly faulty and likely to cause serious disability if uncorrected; if, in addition, the patient is young or of middle age and in good condition, the impaction should not be considered.

The second indication, maintenance in corrected position, has been the subject of much controversy. Three methods of treatment are worthy of consideration:

1. Fixation by plaster spica, which includes the affected extremity, the pelvis and the trunk to the nipple line.

2. Suspension of the extremity in a Hodgen or Thomas splint from an

overhead frame with traction, counter-traction, abduction and internal rotation.

3. Operative fixation.

A very distinct advance in the treatment of hip fractures was made by Whitman[11] when he advocated and demonstrated the so-called abduction treatment. The principles involved have been mentioned and the method is familiar to all surgeons. Briefly stated, the procedure consists in correcting the deformity by extension, complete abduction and internal rotation of the thigh. The corrected position is maintained by the plaster spica from the toes to the nipple line. By this means the upper part of the shaft is opposed to the rim of the acetabulum; the capsule is made tense; the fragments are accurately apposed and the angle of the neck and shaft restored to normal. Theoretically, the method leaves nothing to be desired. Practically it is followed by results far superior to those obtained by former methods.

Campbell[7] reports 227 cases of fracture of the femoral neck since 1910. Of these 67 were ununited subcapital fractures. The remaining 160 were fresh fractures of which there were 75 of the neck, 19 impacted, 59 trochanteric, 2 impacted trochanteric and 5 capital.

Incidentally it will be seen from these statistics that the number of fractures of the neck was 30% greater than the number of fractures of the base of the neck.

The Whitman method was used in 205 cases. Of 21 of these personally examined by Campbell after periods of from 1 to 5 years there were 16 cases of solid bony union (76%); 2 doubtful union with good function; 2 fibrous union; 1 non-union.

The Whitman method necessitates a prostrate position in bed with the affected limb extended and abducted and this is the chief disadvantage. The patient may be rolled from one side to the other within restricted limits, thus minimizing the danger of hypostatic congestion of the lungs. The method is especially adapted to the young and to adults who are not debilitated by age or disease. The application of the spica requires special skill but this is not a valid objection.

The introduction of the Balkan frame by Borchgrevinck in the first Balkan war greatly facilitated the application of traction in any direction and also added much to the comfort of the patient. By means of this device or a similar overhead support and a Hodgen or Thomas splint, a measured amount of traction may be applied in any desired line. Counter traction may be made by elevating the foot of the bed. The patient may sit up in bed and may even rest the foot of the uninjured limb on the floor without disturbing the relation of the fragments by altering the pull of the traction apparatus.

A weight of from five to ten pounds with counter extension, will be sufficient to overcome the shortening. The traction is made with the limb in moderate abduction and it will be noted that the pelvis will be tilted to the affected side by the traction, thus increasing the abduction and fixing the fragments by making the capsule tense. By means of a vertical foot piece and also by a rotator of adhesive plaster the limb is rotated inward. The knee is slightly flexed by the splint.

This method of combined suspension, extension, abduction and inter-

nal rotation admirably meets the requirements and has given excellent results in selected cases. It greatly facilitates the nursing of the patient; permits upright position of the trunk, allows moderate movement of the knee and ankle of the affected limb and is the most comfortable appliance for the treatment of hip fractures.

The objection to the method is that it does not insure perfect immobilization. This objection is well-founded. One must consider, however, that no method insures perfect immobilization. Moreover, unless the head is completely detached, a moderate amount of motion will not prevent union. If there be a periosteal bridge the fragments will be sufficiently agglutinated after the first three or four weeks to render unlikely any serious motion at the seat of fracture.

A more serious objection to the method just described is that it does not maintain sufficient abduction to prevent reduction of the normal angle of the neck and shaft. In this respect it is inferior to the Whitman method.

It is however, the method of choice for aged and debilitated patients and the result obtained in this class of patients is often very gratifying. As an illustration of this, I present the radiogram of an old lady who, at eighty-three years of age, sustained fracture of the neck of the femur Two years later there is solid bony union with moderate reduction of the angle and with excellent function.

Operative fixation of fresh fractures has been advocated by men of recognized ability.

Recently Martin[8] has advised the immediate fixation of the head by means of two wood screws, No. 6, 3½ inches long, driven through the trochanter into the head. This is done through an incision over the trochanter and the direction is determined by the finger which locates the head and neck. The accuracy of direction of the first screw is checked by radiogram and the second screw is introduced one inch above or below as indicated by the radiogram.

Martin reports 12 cases so treated with three deaths; two improved ununited fractures; two not heard from and two cases too recent to be of value. There were three perfect results (25%). Martin states that, of the four cases which he personally treated, there was one death and three perfect results. It is evident these statistics are not sufficient to demonstrate the superiority of the method.

In this connection, Trethowan[9] states that many attempts have been made to fix the head of the femur and draw it to the neck by means of screws driven through the trochanter. It is very difficult however, to unite the fragments in perfect apposition. Bony union is not increased by such measures and the functional results of non-operative treatment are quite as good. Nails were used by Murphy[10] for the same purpose and with about the same success.

Axial bone grafts have been advocated by Albee and others. Albee recommends the procedure in most unimpacted fresh fractures of the femoral neck and in all ununited fractures. Unquestionably, an autogenous bone graft stimulates osteogenesis and provides a framework for the development of a new blood supply. The bone graft peg is the best resource for the treatment of non-union. At the present time, how-

ever, the immediate operative fixation of hip fractures is not advised.

Removal of the head of the femur in subcapital fracture, as practiced by Kocher and Koenig is not favorably considered in this country. In the event of non-union, a bone graft offers a good prospect of success.

For non-union, one may resort to excision of the head of the femur; apposition of the head to the trochanter after the method of Brackett, or to the bone graft peg.—*Albee.*

SUMMARY

1. The treatment of fractures of the neck of the femur by the older methods of extension is unsatisfactory and should be abandoned.

2. The Whitman method offers the best hope of good function in patients not seriously debilitated by age or disease.

3. The combined suspension and extension method, using the Balkan frame and Hodgen or Thomas splint gives excellent results in selected cases; is the most comfortable method and especially adapted to the aged and debilitated.

4. Operative fixation should be reserved for cases of non-union and exceptional subcapital fractures with complete separation.

5. The general care of the patient is highly important and is largely influential in obtaining a good result.

6. Massage and passive motion of the knee and ankle of the affected extremity should be practiced as early as possible.

7. Weight bearing should not be permitted under six months following fracture.

8. Non-union should be treated by operative measures preferably by bone-graft.

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CARCINOMA OF THE LIP.

By C. J. BROEMAN, M. D.
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Clinically we divide Carcinoma of the lip into varieties. True epithelioma of the lip is the lesion that begins on the vermillion border of the lip. It is an epidermoid or squamous-cell form of epithelioma. The other variety is the basal-cell epithelioma which is not a true epithelioma of the lip as it does not originate on the true mucous membrane of the lip but originates from the cutaneous surface beyond the muco-cutaneous junction.

The epithelioma of the lip is divided into two varieties, superficial and deep. The superficial form usually appears as a flat, scaly patch covered with a crust which drops off and continues to reform periodically for months and in some cases even years. This variety usually covers from one-third to two-thirds of the lip surface. This form is mildly malignant and glandular involvement is rare in the beginning. If the disease invades the deeper structure of the lip, glandular involvement is most apt to occur. The deep infiltrated type of epithelioma as a rule involves only a small area of the mucous membrane of the lip, ulcerates early, is raised

and has hard indurated edges. The center may be soft and covered with a yellowish slough. After carefully inspecting this growth it should always be gently palpated between the fingers when you will find a distinct, circumscribed nodular tumor. Merely inspecting the growth and not feeling it may give one a false sense of security since the surface ulceration gives you no idea of the extent of the growth, therefore always palpate it. It is much more malignant than the superficial type; the cervical glands are usually involved earlier and more frequently, and it is naturally more difficult to eradicate. The lesion should always be handled with the utmost care and should never be squeezed or roughly manipulated as the disease is always localized in the beginning and such ill treatment will cause it to spread and metastize sooner.

The history and the clinical examination in the great majority of cases is all that is necessary for a positive diagnosis. In the early cases a biopsy to be of any value, would mean the removal of a considerable portion of the growth. This removal for microscopic examination is always painful, if done without novocain. If novocain is injected, a considerable amount of handling and bruising of the lip is bound to occur. This whole procedure means the opening up of blood vessels and lymphatics with the dissemination of the cancer cells. In the more advanced case a biopsy is seldom necessary. Here the removal of a small piece from the center of the growth that is already well ulcerated, of course, can do no harm.

In connection with diagnosis and treatment of lip cancer, the patient should be carefully questioned as to ever having had syphilis and a serological examination should always be made in every case before treatment is established. The importance of this routine is self-evident when we realize how slowly mucous membrane ulcerations heal in persons with active lues or those who have a positive Wassermann. I personally do not recommend intensive anti-syphilitic treatment as injections of arsphenamine at the time of treatment of the epithelioma, but rather a milder treatment such as small weekly injections of mercury and sodium iodide in 15-drop doses. Such treatment acts often as a tonic in an old syphilitic and is a decided benefit to nature in the healing that follows the destruction of the cancer. After the lip is cured then a more active treatment can be instituted but never as intense as given in younger subjects. The intense treatment in those of advanced years is likely to do more harm than good. b

Today there are three recognized methods of treating cancer of the lip, namely,

1. Surgery.
2. Radiation.
3. Surgery and radiation.

I feel positive that few will dispute the fact that radiation preferably with radium is the method of choice in the treatment of the epidermoid form of carcinoma of the lip. While the glands of the neck are not very often involved in this variety, nevertheless the entire region of the lymphatic drainage should be thoroughly irradiated, paying particular attention to the submaxilliarry and sub-mental triangles.

The treatment of true epithelioma of the lip, the basal cell type, is a more serious problem and here is

where we must decide whether surgery or radiation is the best method to follow. If it was up to the patient to decide it would be easy; the majority would choose radiation as few patients prefer an operation if they can be cured by another method. Besides the loss of time, the usual annoyance that go with such an operation, the uncomfortable deformity that is bound to follow a radical removal (all admit that the growth if operated, the V incision must extend well beyond the diseased tissue) is not a particularly pleasant outlook, especially if the patient knows that it is not necessary.

Another point worthy of careful thought that is against the surgical procedure has been emphasized by Douglas Quick in his writing. Briefly, he says the base of the incision is upward, the spreading infiltrating growth is downward, therefore the V incision is not as scientific as it appears. His own words are, "To say the least, the method is both awkward and unscientific."

My personal experience leads me to believe that radium is the treatment of choice in all primary cases of cancer of the lip and this view is strengthened when I study my results with the method alone. In over 200 cases treatment with radium we have had but two failures. One was in a case that had had extensive x-ray treatment and was absolutely hopeless when I first examined him. The other patient was a case of true syphilis and cancer of the lip of six months duration, a young man 35 years of age that had never been treated for his syphilis. This case will be reported in detail in the near future.

The radium technique that I use is rather simple and while some of the details vary in different cases, in the whole it is the same. The basal cell epithelioma of the lip in almost all cases can be cured with one application of a carefully applied 10 milligram one-half strength radium plaque. The plaque is covered with 0.3 mm. brass filter and is allowed to remain in situ for six hours and then one-half hour is given without the filter. If for any reason the six hours cannot be given in one sitting the dose can be divided into two three-hour sittings or three, two-hour sittings.

Although I feel that this is sufficient radiation for this type of growth yet I realize that we cannot always be positive that our case is of the basal-cell type and for this reason I always give a heavy filtered application to the lip besides using the plaque since it can do no harm, may do much good and save a life in the end. The cervical glands are also irradiated, even though they are not as a rule involved and are not palpable. In this form of lip epithelioma the dose to the primary lesion and to the cervical region is not as large as in the squamous cell variety.

The importance of thoroughly treating the basal cell variety for the beginning is illustrated by the following case: Mr. J. Whisner referred to me by Dr. Francis on May 29, 1923, with a typical basal cell epithelioma involving about one-third of the surface of the lip to the right of the median line. Patient was only able to remain in the city for a few hours. He was treated with 10 mg. radium plaque 0.3 brass filter for two hours and, one-half without any filter. At the time of treatment patient was advised to return not later than one month as the amount of radium given

was insufficient for a cure. Patient did not return as told but showed up eight months later with a typical clinical squamous epithelioma of the deep infiltrated type and a distinct palpable submental gland. When he was asked why he had not returned he gave the characteristic answer, "My lip healed over and I thought it was all right, besides I was busy and had not time to come to Cincinnati," Intense radium treatment was instituted at once to both the lip lesion and cervical glands. The exact method will be described below. This patient is clinically cured today, but if he follows the advice given him he will be under careful observation for sometime to come and be examined at least every two months for a year. The lesson to be gained by this case is, had the patient taken the proper radium treatment in the beginning he had every chance to be cured with one treatment, whereas, the insufficient radiation only healed the surface and in the end it was necessary to give him over ten times the original dose of radium to produce a satisfactory result. My experience leads me to believe that all uncomplicated cases of epithelioma of the lip are curable with radium if seen early, before the infiltration is extensive, if properly treated and they have not been previously treated with some other methods such as cauterization, poor surgery, improper or insufficient x-ray or radium treatment. Even if the growth is non-malignant, proper radiation can do no harm since it leaves a very slight, if any, scar and no deformity. The treatment is not painful, it is only necessary to be in the hospital over night when the glands are treated, so very little time is lost by the patient. A biopsy is not essential so there is not a single reason why all suspicious growths on the lip should not receive early and proper radium treatment.

If every physician will see that these cases receive treatment just as soon as they come under his observation and not treat them by superficial cauterization and what not, I am convinced that we would have few if any deaths from cancer of the lip.

The radium technique that I have found most satisfactory in the treatment of squamous cell epithelioma is as follows: Before treating the lip lesion, the lymphatic glands in both sides of the neck from ear to ear should be thoroughly irradiated. This procedure is followed whether glands are palpable or not. If palpable the individual glands receive in addition special attention. My reason for treating the neck before the primary lesion is:

1. Because there are fewer cancer cells present in the glands at this time than after the lip has been treated by any method. Any form of treatment that causes trauma to the lip or even a low grade of inflammation is apt to send cancer cells into the lymphatics.

2. Radium tends to block the lymphatics, preventing cancer cells from spreading.

3. It causes an increase in the fibrous tissue of the glands by walling off and imbedding the initial cancer cells.

The radium is applied to the cervical region on felt pads, one inch in thickness, all the radium being in brass tubes, radium needles directly in the brass tubes, radium tubes in silver and brass. The 25 mg. radium tubes are placed one-fourth of an inch apart. The radium is allowed to remain in position from 12 to 15 hours,

depending on whether the patient's skin is unusually sensitive to radium or not. Experience has shown us that the light complexioned person stands less radiation than the dark skinned individual. Glands that are distinctly palpable receive individual attention, as localized radium packs, later radium needles or radium (emanation) seed are used, if necessary. The above routine is repeated in one or two months depending on the case. We always treat the primary lesion first by gamma radiation of at least five-eighths inch distance, using the method known as cross firing in every way possible. Separate three-eighths inch felt pads each covered with 25 to 50 milligrams of radium in brass tubes are applied inside the lip, on top the lip, and over the mucocutaneous junction and are allowed to remain in position for eight hours. This distant gamma radiation causes the mass to shrink and kills off the cancer cells in the periphery as well as in the center of lesion. The skin outside of the border of the growth must always be radiated. This preliminary distant radiation I consider of the utmost importance as it tends to prevent the growth from spreading. We next use a 10 mg. radium plaque with 0.3 brass filter for six hours and then give one-half hour without filter. The surrounding skin is always protected so that the mucous membrane does not receive this intense radiation. Now if the lesion does not disappear satisfactorily under this treatment, needles, 5mg. each of radium should be inserted into the lip for from 6 to 8 hours. These needles cause more or less slough and I have not found them necessary in very many cases. The needles always cause a well marked infiltration of the area treated which may not disappear for months and which is sometimes impossible to differentiate from the original infiltration. This is very annoying and becomes a serious problem in some cases. The severe inflammation from the needles also usually causes the cervical glands to enlarge and become painful, which is not at all consoling to the patient, who naturally thinks he is getting worse. Ordinarily the original lesion is entirely healed in about two months time. If needles are used it takes from three to four months or longer.

In closing let me briefly review some of the reasons why radium is the treatment of choice in epithelioma of the lip.

1. A larger proportion of cases are cured with radium than any other method.

2. No deformity, little loss of time, not a painful treatment.

3. Glands can be handled as successfully with radium as with the knife.

4. When doctors and patients realize what the above facts mean, then the former will urge his patient to be treated the first time he examines him and the latter knowing that he can be cured without the knife, will come early for treatment.

TUBERCULOSIS

THE GREAT WHITE PLAGUE.

By DR. G. D. LIND.

Whether started in the Bible, the New England primer, or somewhere else, it is nevertheless a well known fact that—

Death comes to all,
Both great and small.

But the manner in which death comes to all, or even to the majority,

is not so generally known, in fact it is not easily ascertained with any degree of exactness, because complete and accurate statistics cannot be obtained.

Someone has truly said—there are three kinds of lies—common everyday lies, infernal lies, and statistics. Notwithstanding the recognized fact that statistics do not approach accuracy, yet in a general way they may be good enough for practical purposes, for while many cases are undoubtedly wrongly reported, there is approximately an equal number not reported at all in every community.

According to statistics more people die of tuberculosis, which has aptly been called "the great white plague" than of any other disease. A recent German authority estimates that in round numbers there are—

DEATHS FROM TUBERCULOSIS EVERY YEAR.

Germany	130,000
Russia	383,000
Austria	90,000
Hungary	57,000
France	121,000
Sweden	11,000
Switzerland	6,000
Ireland	10,000
Denmark	3,000
Holland	9,000
Italy	6,000
Belgium	10,000
Norway	3,000
England	39,000
United States	100,000

making a total of nearly a million deaths every year in these enlightened countries.

Other authorities make the death rate from this disease even higher—nearly one in every nine of the population of the world, or about one hundred and fifty million deaths annually according to some estimates. At some ages the death rate is certainly alarming. Between the ages of 15 to 24 it is said that one in every four dies of this disease, and between the ages of 25 to 34 one in every three dies of it, and between the ages of 35 and 44, one in every four again falls victim to this dread disorder.

It is estimated that there are one million and a half people in the United States today afflicted with the disease, along with two and one-half million head of cattle. Whether the form that afflicts cattle is the same as that which afflicts human beings, and whether man caught it from the ox is not yet a certainly settled question. Dr. Koch has maintained that the two diseases are different and not intercommunicable. Eminent authorities, however, do not agree with the eminent German physician. The Bureau of Animal Industry at Washington has done a great deal of careful work, in order to determine the question. They say: "The facts thus far ascertained not only justify, but show the desirability of a rigid enforcement of public regulations, looking to the control and regulation of tuberculosis in cattle." Dr. Newton of Montclair, N. J., says: "We can no longer screen ourselves behind Koch's fallacious, albeit comforting pronouncement that bovine tuberculosis is not communicable to man. That it is communicable has been proven beyond all reasonable doubt."

A bill has just passed the New York legislature, providing for payment by the state for cattle killed to prevent the spread of tuberculosis.

In former times the disease was no respector of persons, the rich and the poor, the wise and the otherwise were alike liable to become its victims. But today the rich man stands a little better chance than the poor man, and the intelligent a better chance than

the ignorant, because the disease is preventable, and the rich man can easily, and the intelligent man may by a little sacrifice, adopt preventative measures. Physicians are now so thoroughly convinced of the preventability of this disease that they are confidently predicting the time when it will be unknown among civilized nations, as cholera and yellow fever are now things of the past in the United States.

Dr. Stuart McGuire, in one of his lectures quotes from a Frenchman, who says: "When man first learned to protect himself from wild beasts, he made the first step in civilization. Today man is learning how to defend himself from microbes. It is a step of equal importance. A day will come when in Berlin, in London, in Paris, a man will not die of diphtheria, of typhoid fever, of scarlet fever, of cholera, or of tuberculosis, any more than he dies in these cities today of the venom of snakes or the teeth of wolves."

The International Cigar Makers Union has reduced the death rate from tuberculosis from 51 to 24 per cent since 1888, and increased the average length of the lives of their members 31 years to 47 years. The edition of the *Journal A. M. A.* gives six reasons for this wonderful change.

1 Shorter hours of labor.
2 Better sanitary condition.
3 Better treatment.
4 More independence.
5 Better education.
6 Better wages.

So I repeat, the rich and the intelligent stand a better chance than the poor and the ignorant.

Now, my friend, you may not be able to take yourself out of the poor class and place yourself among the rich, but you can come out of the ignorant class and into the intelligent class by heeding the teachings of science, and by avoiding bad habits of life—by economy and industry you may come out of the very poor class and enter the class to which the good man of old longed to belong.

But the worst part of this terrible disease is that it attacks people mostly in the productive age—not in early infancy before they are able to add to the world's wealth, not in old age when their work is done—but in the prime of life, and in the hale time of youth when they should be adding to the wealth and knowledge which has been so slowly accumulated through the ages. Is it a disease of modern times? No. For all proof that can be had to the contrary, we may safely say that some of the numerous brothers and sisters of Cain and Abel may have died of tuberculosis at the age of 100 or 150. Whether the germs came with Noah's family into the Ark, or like the boasting Irishman, had a boat of their own, it is certain that they survived the deluge. The earliest literature of medicine recognizes the disease. Hippocrates, the Father of Medicine, who lived over 400 years B.C., said that the majority died of tuberculosis in his day. During the seventeenth and eighteenth centuries historians tell us that one-third to one-half of all deaths in England were caused by this disease.

(*Continued in February Journal*)

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THE NEW YEAR

The vision is before us of great things which we will accomplish during the coming year.

The one just passed has been a great one. Our Association is bigger and better than it was a year ago. The steps taken to have a full-time man devoting his attention to the business affairs of the organization was probably the greatest thing accomplished.

Now we have this coming year to get to work and make the greatest progress we have ever made. This can only be accomplished by having each one of us put his shoulder to the wheel and push with all his might.

The increase in dues and the executive secretary may not have been the unanimous wish of the entire membership. In this though, let us all show good sportsmanship and help. We will find that we are not paying more for the same article which we had had for less but that we merely pay a little more for an article several times as good. Still

the output of any plant depends upon the enthusiasm, the esprit de corps, of its personnel. If we but help enthusiastically the dividends paid in 1925 will be several hundred per cent over those of any previous year.

In this connection the attention of the local secretaries is called to the fact that the State dues are increased Five Dollars this year. Do not forget this in your collecting.

So here's to a Happy New Year, may it be the best of all for the physicians of West Virginia.

PHYSICIANS AND POLITICS

The usual pyrotechnics will begin in our state capital this month. The legislature will meet for the purpose of introducing bills, etc.

Of course they will have to consider some pertaining to health questions, the licensing of those entitled to treat the sick, and so on.

We physicians will come in for our share of consideration and cussing. The experiences of two years ago will be gone through with again. It is to be hoped that our legislative committee will secure more whole-hearted support than it did previously. In this past election greater interest was taken by the profession than ever before in trying to elect men who might be depended upon to safeguard not only the financial interests of the state, its tax problems and so on, but its health as well. How far we have succeeded remains to be seen.

Physicians do have the right to demand proper laws governing health and sanitation and the qualifications of those entrusted with the care of the sick and injured. It is not a selfish motive which activates us. The Lord knows we are busy enough, but a desire to protect those who do not know the dangers of untrained care. Yet we are criticised for this desire to do good and our motives decried.

In spite of all we may do, still ignorance is imposed upon and the innocent suffer. We can not but blush when we think how a man who did pass the state board examination in the fundamental branches with a high average, who is (or was) well grounded in these branches and who was licensed by the State Board, takes up the Abrams treatment, which the *Scientific American* terms, "The greatest single piece of organized quackery in the history of medicine," and takes money from a gullible public. Thank God he is not a physician!

These things but prove that safeguard the healing of the sick and the protection of the health of our state as we have, still it is not enough. The protection is not strong enough.

So again we do have responsibilities in politics, as good citizens who are better informed along certain lines, than are other citizens, we must take part in shaping the laws governing the health of West Virginia.

THE GORGAS MEMORIAL

Literature concerning this project comes to the Editor from time to time from the executive committee of the Gorgas Memorial Association.

We have not felt that it was hardly the time to put this before the members of the State Association, since the committee has not seen fit to present the matter to the organized profession through the State Association.

The fact that the committee presented the names of the state executive committee in the way they did (with the information that you were to pay $100.00 for this honor thrust

upon you) in some way did not appeal to one so strong for organization as is your editor, as being just the proper move.

That a memorial to Dr. Gorgas should be given we all admit. His great work for his fellowmen through out the whole world should be recognized in some lasting memorial which will go on, as he would wish it, advancing the cause of sanitation and preventive medicine.

To establish a school for tropical medicine in Panama, where his greatest victory was won is a fine thing and to carry on a campaign of education along health lines in connection with the first is a fitting memorial to our great Gorgas. It is a memorial such as would make him happy.

All physicians are interested; all should have some part in the establishment of this project and the carrying of it through to a successful accomplishment. It is big and fine.

Still we can not but feel that it should be done by the organized profession, and until it is taken up by the various state associations, or at least until it is presented to our own association we doubt if much enthusiasm will be awakened in West Virginia.

Personally we desire to join in this tribute to our departed colleague and will do so when it is put to our state society, but not until then, for this committee should not go over the heads of the organized profession.

On another page is published a communication giving the plan of the memorial.

The following are the standing committees appointed by President Jeffers for 1925:

Medical Defense Committee: H. P. Linsz, C. R. Ogden, C. G. Morgan.

Committee on Scientific Work: C. R. Ogden, O. D. Barker, Walter E. Vest, D. A. MacGregor.

Committee on Medical Education: W. T. Henshaw, J. N. Simpson, W. S. Fulton.

Workman's Compensation Committee: J. E. Cannaday.

Public Policy and Legislative Committee: C. A. Ray, M. V. Godbey, J. R. Schultz, R. A. Ashworth, D. A. MacGregor.

Committee on Hospitals: Roy Ben Miller, F. L. Hupp, A. P. Butt.

COUNTY SOCIETY REPORTS

The Harrison County Medical Society held its regular monthly meeting at the St. Marys Hospital, December 4, in the evening. In addition to one of the most interesting and profitable sessions we have had this year, the annual election of officers for the year 1925 was held.

The following were elected to the respective offices for the coming year: W. M. Davis, Bridgeport, president; Wm. Gaston, Clarksburg, vice-president; C. O. Post, Clarksburg, secretary; B. Steel Brake, Clarksburg, treasurer; F. V. Langfitt, Clarksburg, censor; H. E. Sloan, Robert C. Hood, Earl Flowers, Edward Payne, all of Clarksburg, delegates to the state meeting.

Dr. B. S. Brake read one of the most interesting papers we have had this year on Puerperal Eclampsia, with a resume of the records of St. Marys Hospital cases of this kind.

C. O. Post, *Secy.*

With the December meeting of the McDowell County Medical Society another successful year of work has

become history. The event was most delightfully celebrated by a gathering of the members at the Welch Hospital No. 1 on Wednesday evening, December 10, 1924.

President Camper called the meeting to order with the following members present: Drs. Vermillion, Peck, Brewster, Woolwine, Wetherbey, Daniels, Sameth, Davis, Wilkerson, Anderson, Matney, Shanklin, Kirkpatrick, Rutherford, Kriener, Lawton, Lovely and Livingston. Dr. W. O. Lilly, formerly connected with the McDowell Dental Clinic, was a guest at the meeting.

After the reading of the minutes of the last meeting, the clinical cases and paper for the evening was dispensed with and the annual election of officers then took place, resulting in the following election of officers: Dr. W. L. Peck, president; Dr. H. L. Kirkpatrick, vice-president; Dr. A. G. Rutherford, secretary; Dr. Sameth, treasurer; Dr. J. Howard Anderson, censor; Drs. S. A. Daniels, R. V. Shanklin, delegates to state meeting; Drs. Woolwine and Vermillion, alternates.

In a few well-chosen words the newly-elected officers pledged their support to the society.

On motion Dr. Anderson, the secretary, was instructed to write the Mercer County Medical Society, thanking them for their invitation to attend a meeting the third Thursday in January at the West Virginia Hotel. On motion of Dr. J. H. Anderson, the president, was instructed to appoint a committee of three to confer with the Mercer County Medical Society in regard to the State Medical Meeting to be held in Bluefield this year. President Camper appointed the following committee: Dr. Killey, Dr. Shanklin, Dr. Rutherford.

The annual report of the treasurer was made and approved. The report showed the society to be in a flourishing condition, closing the year of 1924 with a balance of $475.74.

At this juncture the meeting was closed and the members adjourned to the reception room of the Nurses, Home, where Mrs. Rutherford was assisted by Mrs. Dr. Hall of Welch, and Miss Rose Fuller, superintendent of the nurses at the Welch Hospital. The room was attractively decorated in the Yuletide hangings of red and green. A most delicious banquet of fruits, turkey salad, and nuts was served to the M. D.'s and their invited guests of honor, who were: Congressman James F. Strother, Judge James A. Strother of the criminal court of McDowell County; J. N. Harmon, J. A. Crockett, Gen. William Edward O'Toole of the United States Coal & Coke Co., at Gary; Mr. Guy C. Mace of Gary, and Dr. W. O. Lilly of Welch. Dr. A. G. Rutherford acted as toastmaster and with well-chosen and witty remarks, called upon the different guests of honor to respond. Each one of the guests responded in a very pleasing way.

The McDowell County Medical Society pledged their support to the McDowell County Country Club, which is now in progress.

As the hour drew late the society tendered their vote of thanks to Dr. Rutherford for his hospitality, to the ladies for their dainty repast, and beautifully artistic arrangement, and declared the society adjourn until January, of the new year.

On Friday night, October 24, the Ohio County Medical Society held its regular meeting, Dr. W. G. Maclach-

lan, of Pittsburgh, Pa., being the speaker of the evening, his subject being, "The Morphological Changes of the Aorta and the Aortic Orifice with their Relation to Prognosis and Treatment."

There are times when you leave a medical lecture more perplexed than when you went, or if you are not perplexed then you are depressed over the little held out to you as regards relief to be given. Now as you read this subject it is likely you would say, (before you heard the lecture, of course), "Well, this is going to be just such a one!" Wrong! Incorrect!! It certainly was not!

The doctor puts on no airs. Perhaps may repeat quite a little—but he certainly tells something worth while. Tells it so you understand his view point—and when he is through you feel you would be willing to let him have charge of your heart if you had something wrong. His manner is easy and conversational. His main theme, although he talked of others, was Syphilitic Aortitis and Aneurysm. In fact, like many others he has some doubts of there being much of any other kind. He emphasized the fact that it usually comes an inch to an inch and one-half away from the *cusps*. This is due first to the force of the blood stream perhaps in a minor way, but more than likely it is due to the lymphatics and their arrangement about the aorta. There are comparatively few in this small area above spoken of above the aortic cusps. Some individuals depart from this arrangement and have them all the way to the cusps. These patients can have the aortitis or aneursym doing the same, involving down to the cusps.

The doctor then cited an interesting physiological case performed in Pittsburgh over eleven years ago, where a transplant for other reasons was made on the aorta of a female dog. It developed an aneurysm. It went on 11 years, living out a dog expectancy. It had several litters of pups, and even now and then a fight in the kennels at the laboratory. In other words lived a normal dog's life —died of a nephroma, we understood him to say. Autopsy showed the fibrous scar tissue had gone on although supposedly not elastic, and functioned in the absence of the usual aortic structures which it replaced.

The doctor then gave three fine cases illustrating his point. Usually there is some tendency to go home when a series of cases are read. Not so here. One was a good sized comparatively new aneurysm—four plus —Moulder normal heart, put him to bed, six weeks active salvarsan (½ usual dose) active mercury inunctions sodium iodide three times a day. Left hospital, went to work against orders in a war ammunition plant, lifting 130 pounds one hundred and twenty times a day—carried on treatment faithfully three years. As good as ever today, eight years later.

Second: Italian, large size old aneurysm, four plus, normal heart. Objected to treatment. Given under protest. This tumor extended into right second space pushing aside ribs to admit half a lemon. Even under poor treatment reduced, still living and condition better than at start.

Third: Syphilis, storekeeper, aneurysm, fair size. This case had a diastolic murmur. Involved cusps. Followed treatment faithfully, but it being war times he worked. Died suddenly while waiting on a customer.

This is the doctor's argument. If you have the cusps not involved and a normal heart, you can go on and arrest, perhaps kill the spirochaetes. Arrest the granulomatous process, form a fibrous scar like that of the dog and your patients go on comfortably many years. If the cusps are involved the outlook is bad. Believes in mercury, gives a dram a day inunction for a year or so, then one month in four for two or three years —iodides as long as they tolerate them. Arsenic in two to four courses, using one-third to one-half usual dose. Of course he uses rest if possible three months. He uses his own cases, gives his own ideas, and to us was very helpful and interesting.

Ackerman and Gilmore gave good discussions, which space forbids giving in detail.

On November 28, Dr. A. E. Weiss, of Pittsburgh, Pa., was the speaker before the Ohio County Medical Society, his subject being "The Differential Diagnosis and Non-Operative Treatment of Some Common Gynecological Affections."

American slang frequently fits the bill better than American Medical Journal English, and so we will say Dr. Weiss is a "sure live wire," on which we fancy it is rather difficult to "put anything across," and in Gynecology this would almost do for an epitaph. We personally turn out every time the doctor is due for one of his talks, they are talks, for he never uses even a note. Boasting of no bigger physique than this reporter, the doctor nevertheless says as much in any one evening as any lecturer we know of. We suspicion he enjoys talking. He has a little of Will Rogers about him and does not mind a satirical remark now and then. He led off with an attack on specialists. Being as he said a specialist himself, this (as Dr. Ackerman remarked on his feet, afterward) was as good as any part of his talk and was like a good overture to an opera. He said the pendulum was swinging backward again and that we were getting back to general practitioners. They must teach this up in Pittsburgh. Last week we had Dr. Frederick B. Utley of Pittsburgh actually claiming to be a general practitioner. Weiss said no one had any business claiming to be a specialist until he was five years a general practitioner. As he was going to talk on palliative measures in gynecological work he assailed surgery, although we understand in one of the biggest hospitals of its kind in the country he does with one other man, most all of the surgery, but that does not alter his talking since comparatively he does not do as much surgery in proportion to what material he has. Surgery he claimed was the Brutus in the gynecological drama. It had brought his calling into disrepute. Rushing into the abdomen of a woman and doing something or other with no very clear idea beforehand what was going to be done, was, he intimated, one of the favorite pastimes of a large body of men in the past, and Weiss always assures you he was a sinner himself by way of example. He hazards the guess we are "surgery crazy," and thinks some of the old things are coming back. He had some good slides, which didn't fit in very well, but in any event nothing but a moving picture machine could keep up with him. Most all the benign growths on cervix he believes can be handled by actual cautery. He had with him an unusually

small compact cautery, simple in action which we would suggest to anyone contemplating buying one. He says all gynecological examinations should have three things in mind. The first two are to be assumed as present until proven otherwise *in every case whatever the age.* Pregnancy, carcinoma. The third condition is a pelvic cellulitis (no actual pus) which he strongly counsels should be left alone and the patient kept flat on her bed—the bed being to her a real splint to be adhered to as accurately as a splint to a fractured femur. He argued only half way confinement to bed was responsible for a good deal of the poor results. Varicosities of the vulva, to bed same as on leg. Pruritis vulva, he had little to offer. Douching was alright once in a while, but always—and he said he meant *always*—lying down. Sitting up was worse than none. Too much douching he thought was done. Emphasized the old rule, all suspected appendicitis in female make pelvic examination by way of rectum or vagina. In lecture did not mention pessaries. Silver asked him about them. Like Aladdin he produced several from his pocket and gave a good sized lecture on them. Believes in them. To be applied in a reasonable time after childbirth. Uterus up first, then pessary—not pessary shoving uterus up. Never to be applied in young women, pelvic inflammation or where there are poor supporting tissues.

Dr. Weiss does an immense amount of work. He has tried out all he talks about many, many times. He speaks as one having understanding and not as the scribes. He believes simple measures are coming back. Perhaps they are. It is well worth while to have a man of his experience to tell us so whatever we may or may not think.

STATE AND GENERAL NEWS

Broken in health and spirit, Dr. R. W. Timberlake, former Fayette physician and member of the county court, took his own life at his home in Hinton, December 14th. His lifeless body was found in the bath tub by the family about 8 o'clock. He had opened an artery in his arm near the elbow with a razor. He had gone into the bath room only twenty minutes before his dead body was discovered.

PROPOSED LEGISLATION.

The next state legislature is to be asked to appropriate $12,000 to establish a bureau in the State Health Department to provide for organizing and conducting clinics for the examination of suspected cases of tuberculosis in each county. An effort will also be made to obtain an appropriation from the legislature to establish a state sanatorium in one of the counties south of the central part of the state. A meeting to consider these problems was held on Sepember 29, in Charleston, by a special committee appointed by Dr. Walter E. Vest, president of the West Virginia Tuberculosis Association. Those present were: Dr. W. T. Henshaw, state health commissioner; Dr. C. A. Ray, chairman of the committee on public policy and legislation of the State Medical Association; Dr. M. L. Bonar, College of Medicine, West Virginia University; President Vest and Secretary Rowell of the State Tuberculosis Association. The other members of the committee are: Mr. James S. Lakin, president of the State Board of Control, and Dr. J. G.

Pettit, superintendent of the State Tuberculosis Sanatorium at Hopemont.

The tuberculosis surveys and health demonstrations made by the West Virginia Tuberculosis Association, during the past four years, have proved the need of more adequate official facilities for the careful medical diagnosis of persons who are entitled to know whether they are open cases of tuberculosis, as a matter of protection to themselves, to the members of their families, and to their communities. The records at the state sanatorium and the reports of surveys also show that there is a constantly increasing demand for sanatorium care and treatment for persons who are in the advanced stages of tuberculosis. Many applications are from persons who are too ill to travel long distances from their homes and are desperately in need of institutional care. To relieve the existing situation, it is believed that another state sanatorium is needed largely for the treatment of persons who have a fighting chance to get well. The logical place for such an institution is somewhere in the southern part of the state.

Dr. Frank LeMoyne Hupp, with Mrs. Hupp returned from the Southern Medical Congress. He reported a very good meeting, and while modest about his paper's reception, we feel he made a good show for West Virginia.

Dr. W. S. Fulton went over to the Army and Navy game at Baltimore, and says it was one of the thrills of his life. It seems he was in the Army division but had a little tenderness for the Navy. He had promptings from within his soul to show them outwardly. A friend, however, advised W. S. that if he ever wanted to come again to inhibit. Although W. S. F. has not got a good "inhibitor" in first class working order, yet it worked sufficiently well for him to keep out of the hospital.

The Chiropractors over in Ohio met together the other day and if we recall correctly had a banquet or something. Malin of Bellaire was one of those in charge. The meeting was to get together in order *to put through some of the legislation* they want in the coming Ohio legislature. Whatever their shortcomings or faults may be, this reporter sincerely admires their solidarity.

Dr. Ivan Fawcett foreswore work for a week or so, took off his coat so to speak, and was one of the leading spirits in raising $400,000 for the new Linsley School. Our especial hobby is that doctors can do anything if they only try, and Ivan Fawcett is one bit more of the testimony to that effect. Dr. Marschner also worked on this project.

Dr. C. D. Wilkins, superintendent of the Ohio Valley General Hospital, is still confined to the hospital. He is, however, considerably better.

The monthly meeting of the staff of the Ohio Valley Hospital met on Tuesday, December 9th. Dr. Caldwell read a paper on Regional and Bloc Anaesthesia. He has performed a number of operations under this form, and we personally saw him amputate a limb the other night. He carefully dwelt on its disadvantages as well as its good points, and received a hearty ovation at the close. Dr. Drinkhard discussed it. They are partners, but that did not deter Dr. Drinkhard from assailing certain features of it. To this writer that

kind of cross fire is distinctly one of the sure signs of what a clear, straightforward science medicine is getting to be. Dr. Hupp got up and said he had a great surprise. Mr. B. Walker Peterson, one of the leading Bankers of Wheeling, and who has always stood as sponser for the Laboratory of Pathology here, had generously offered to give an electrocardiagraph if it would be properly handled and made use of. Dr. Reed, chairman, appointed a committee: Hupp, Goodwin, Shepp, Fulton and Hall, to look into the various aspects of the matter. Dr. Shepp showed some elegantly mounted specimens—a gall bladder full of stones in situ, a foetal adenoma of the thyroid with metasteses into the glands of the neck, *benign*. A *fibroma* of the uterus that had practically replaced in its growth the cervical canal.

The staff of the Wheeling Hospital held their meeting Wednesday, December 10, with a good attendance. The paper of the evening was by that reliable and well equipped speaker, Dr. Gregory Ackerman. The subject was, "Tuberculous Meningitis—Its Diagnosis." Perhaps this is one of the most difficult subjects to handle and come to any fixed conclusions. But the Doctor covered all the phases, and best of all it was followed by a generous discussion in which everybody took part.

Dr. Jacob Schwinn, eminent Wheeling physician and surgeon, was honor guest at an informal occasion at the Elks club, where more than a score of his fellow practitioners of Wheeling helped him to observe the occasion of his birthday anniversary. During the evening Dr. Schwinn was presented an elaborate radio receiving set by Dr. Robert J. Reed, a lifelong friend, who acted on behalf of the local practitioners, who combined to give Dr. Schwinn a lasting reminder of the occasion.

Thirty-two Wheeling physicians heard Dr. Reed deliver a graceful presentation speech to Dr. Schwinn, in which he paid tribute to the service Dr. Schwinn had given during his years of activity in Wheeling, saying that the public appreciation of the doctor's work was evidenced on all sides and among all classes, was a reward which he knew repaid for all the long years of work in the service of humanity. Dr. Reed referred to the honor guest as the "father of medicine in Wheeling."

Dr. Schwinn, in response, said it had been his privilege to enter a profession, the first requirement of which he feels to be service to humanity. The span of man's life is but the millionth part of a second, compared to the ages which have gone before, he said, and if in that brief period he could fill it with honest endeavor for the good of mankind he could feel his destiny fulfilled. If each could contribute his little moment on earth to mankind's progress, he continued, God's plan would be visible in shorter time. He modestly declared service a privilege, and his efforts have been only to grasp such opportunities for service as presented themselves.

Dr. W. S. Fulton remarked that while most doctors grow mellow and ripened in their late years, Dr. Schwinn began that way. Dr. Arthur Hoge said that most doctors gathered to bestow flowers and honor on a colleague after the latter was dead, because they felt they safely could. With Dr. Schwinn, however,

it was perfectly becoming and easy while he was alive.

Dr. Charles Clovis, adding his brief talk declared he was always impressed by the fact that the profession, one by one, showed Dr. Schwinn their interesting cases. After years of experience he was convinced, he said, that it was not so much to show as to be shown.

Dr. Harry Hall paid tribute to Dr. Schwinn with especial reference to the doctor's work for the crippled child clinics of the Wheeling Rotary club. Dr. Schwinn's thorough work, said Dr. Hall, was an inspiration to his fellow professionals, and that there was not a medical man in Wheeling who had not, at one time or another, received aid from Dr. Schwinn. Wheeling Rotarians sent a suitable gift with their respects to the man who had so aided their efforts in the interest of crippled children.

Every other physician present added attestation of respect and affection for Dr. Schwinn, as one man present remarked: "It was a case of every practitioner of a serious profession getting down on his prayer rug to a man they reverence and love."

Caterer Paul Leach provided a tempting buffet supper and a general social time followed until a late hour. The occasion was hurriedly arranged when it was learned that it was Dr. Schwinn's birthday, and it was impossible to reach all doctors who are loyal friends of Dr. Schwinn in time to participate in the event. The following list of those present is by no means a complete representation but includes only those able to be directly interested:

Drs. Elizabeth Keay, Isabell Rogers, Jones, Ambrecht, Tomasseene, Fulton, Cracraft, Kaufman, Hall, Keesor, Clovis, Caldwell, Thornton, Williams, Morris, Hupp, Reed, Truschel, A. K. Hodge, Linsz, Nolte, Drinkhard, J. H. McClure, Goodwin, Hersey, Staats, Max Viewig, George Viewig, Marschner, Gilmore, Webb, Trethway, Henderson, Burdats, Copeland, Keller, Snyder, Campbell.

Dr. W. S. Fulton, of the Wheeling Clinic, was the chief speaker at the dedication exercises of the new DeCourcy Clinic, Cincinnati, Saturday, November 8. The address of Dr. Fulton was given at a dinner held at the University club at which a number of prominent physicians of Ohio, Indiana, West Virginia and Kentucky attended.

The DeCourcy Clinic was established three years ago at 210 West Ninth street. Because of the establishment of a number of departments it has become necessary to enlarge the original clinic from 15 rooms to 45 rooms. The following departments will be housed in the new building: Medical, surgical, x-ray, eye, ear, nose and throat, obstetrics, gynecology, dentistry, pediatrics and anaesthesia. There are three reception rooms, two on the main floor and one on the second.

Besides the private offices and consultation rooms there are four laboratories including a complete x-ray department, a large library and reference room which is always available not only to the staff of the clinic, but to the profession.

Dr. Joseph L. DeCourcy, widely known goiter specialist, is the director of the clinic.

Scholarships on the Oliver-Rea Foundation for graduate study in medicine are available at the New York Post-Graduate Medical School and Hospital. Inquiries should be addressed to the Dean, 301 East Twentieth street, New York City.

THE AMERICAN BOARD OF OTOLARYNGOLOGY.

The American Board of Otolaryngology in Chicago on November 10. The following constitute the board of directors: Drs. Harris P. Mosher, Boston, president; Frank R. Spencer, Boulder, Colo., vice-president; Hanau W. Loeb, St. Louis, secretary and treasurer; Thomas E. Carmody, Denver; Joseph C. Beck, Chicago; Thos. H. Halstead, Syracuse, N. Y.; Robert C. Lynch, New Orleans; Burt R. Shurly, Detroit; Ross H. Skillern, Philadelphia; Wm. P. Wherry, Omaha. The office of the board is at 1402 South Grand Boulevard, St. Louis, Mo. The board comprises representatives of the five national otolaryngologic associations; the American Otological Society, The American Laryngological Association, the American Laryngological, Rhinological and Otological Society, the American Academy of Ophthalmology and Otolaryngology and the Section of Laryngology, Otology and Rhinology of the American Medical Association. The object of the association is to elevate the standard of otolaryngology, to familiarize the public with its aims and ideals, to protect the public against unqualified practitioners, to receive applications for examination in otolaryngology, to conduct examinations of such applicants, to issue certificates of qualification in otolaryngology and to perform such duties as will advance the cause of otolaryngology. The first examination will be held at the time of the meeting of the American Medical Association.

After attending the Southern Medical Association meeting in New Orleans Dr. Tom A. Williams is spending the winter in Miami, Fla., and will not return to Washington until April 1. He has taken into association Dr. Kenneth W. Kinney of the Calverton Apartments, who will be in sole charge of the work until then.

The following West Virginia physicians attended the Eighth Annual meeting of the Chesapeake & Ohio Surgeons Association at While Sulphur Springs, November 7 and 8:

R. K. Buford, Charleston, L. O. Fox, Ansted, H. L. Goodman, McKendree, J. A. Jackson, Ronceverte, Geo. W. Johnson, McAlpin, MacRae Banks, Raleigh, J. A. Campbell, Beckley, L. B. Rupert, Chelyan, Bankhead Banks, White Sulphur Springs, John E. Cannaday, Charleston, James Putney, Charleston, Walter E. Vest, Huntington, Samuel Fairchild, Elk Ridge, W. C. Beard, Alderson, L. T. Vinson, Huntington, R. J. Wilkinson, Huntington, R. M. Bobbitt, Huntington, F. O. Marple, Huntington, J. E. Musgrave, Handley, R. D. Black, Charleston, Quintord Taylor, White Sulphur Springs, L. R. Harless, Gauley Bridge, W. F. Harless, Clothier, G. T. Wyatt, White Sulphur Springs, James R. Bloss, Huntington, Mark Sutphin, Logan, S. B. Lawson, Logan, B. B. Wheeler, Beckley, L. C. Morrison, Milton, J. E. Whitehall, Big Creek; H. Lon Carter, Danville, G. P. Fisher, Kayford.

November 8, 1924.

My Dear Dr. Bloss:—

Enclosed herewith you will find an outline of the Gorgas Memorial program which is now in process of development. The Gorgas Memorial consists of two phases:

1. An institute in Panama for research in tropical diseases, and,

2. A health educational campaign that has for its purpose the elimination of unscientific methods, by developing a co-operation between the public and scientific medicine.

The medical press of the United States can contribute in a very material way to the success of this program by publishing at intervals in its columns, the publicity material we have prepared for the information of the doctors. The first of a series of releases will be mailed you within the next few days with the request that you publish it in your December issue, if possible. If your December number is made up, will you make a special effort to have it appear in January?

With kind personal regards, and trusting that you will lend the influence of your journal to the development of this big health movement, I am,

Cordially yours,
FRANKLIN MARTIN,
Chairman of the Board.

THE GORGAS MEMORIAL

During the past year, throughout the United States, the work of organizing the Gorgas Memorial State Governing Committee has been progressing. In some states the response has been most enthusiastic, while in others considerable effort has been necessary to bring home to the doctors, the importance of this movement to them, individually and collectively. Inasmuch as the Gorgas Memorial is primarily a medical movement and as such must have the united support of the profession if it is to make the proper impression on the general public, we take this occasion to outline briefly the Gorgas plan and to request the co-operation of our colleagues in bringing to a successful issue this national health program.

We are planning to establish a memorial for our former chief, Maj. Gen. Wm. Crawford Gorgas, not of marble or bronze, but a permanent living organization in the form of a great health foundation typical of his work in research and curative medicine, that will unite laymen and doctors in an intelligent effort to obtain better personal health—a health guild that will be supported and directed by the representatives of curative medicine.

The Gorgas Memorial consists of two phases:

1. An institute in Panama for research in tropical diseases.

2. A health educational program in the United States and other countries that wish to co-operate and participate in the movement.

We are living in an age when people are knocking at all doors of knowledge and demanding that they be admitted. In the field of medicine who are so well fitted to meet this demand as those actually engaged in the practice of medicine? The doctors have a far more interesting and important message to deliver than any other group.

In the United States today there is scarcely a community that has not its quota of irregular "medical practi-

tioners," so-called. In many states there are strong organizations of the representatives of the various cults, whose theories are imposed upon an uninformed public. Public ignorance is encouraged by professional reticence and the result is that astounding growth of unscientific methods. If the profession is to maintain the high standing to which centuries of labor in behalf of suffering mankind entitles it, it is essential that a definite organized effort be made to familiarize the public with such facts as will impress upon it the importance of medicine's contributions to human welfare. A constant fund of proper health information through the newspapers, magazines, lectures, moving pictures and the radio, furnished by medical men and women of known reputation and standing, will direct the public to the proper source for medical advice and gradually eliminate the irregular practices constantly increasing.

One of the objects of the Gorgas Memorial is to furnish a channel through which this kind of information may be disseminated. It cannot be done by individual physicians. It must be conducted by a dignified, ethical organization, controlled by the medical profession. The name of Gorgas is synonymous with "better health." No more appropriate name could be adopted for a movement that has for its object, *the development of co-operation between the public and scientific medicine for the purpose of improving health conditions by implanting the idea in the mind of every individual that scientific medicine is the real authority in all health matters and as such should be recognized as the source of health instruction.*

Before we ask the public for financial and moral support, it is essential that the doctors of the country unite in support of this program. As a means to this end, governing committees are now in process of organization, on the basis of 100 members to every 1,000,000 population in each state. Seventy-five per cent of the personnel of each committee will consist of medical men and 25% of influential laymen and women. The permanent activities of the organization will be supervised by these committees in their respective states, in co-operation with the National Executive Committees.

An organization cannot operate without funds. We are endeavoring to raise an endowment of $5,000,000, the interest only of which will be utilized to carry on the work. The principal will be invested in trust securities and remain intact. None of the money thus obtained will be spent for buildings or equipment. The Republic of Panama has donated the site and guaranteed the initial buildings and equipment for the tropical research laboratories, in recognition of Gorgas' great work in Panama. Those invited to serve as founder members of the state governing committees are requested, as they accept membership on the committee to subscribe $100 to the endowment fund, payable within two years. Every individual on the state committee is a contributing member. When the medical nucleus of the organization is complete, a general appeal for funds will be made to the public.

The American Medical Association at its recent meeting in Chicago, passed the following resolution:

"*Resolved;* That the House of Delegates of the American Medical Association convinced of the great prom-

ise which the Gorgas Memorial contains of benefit to humanity through improved knowledge of preventive medicine and tropical disease, and of its peculiar adequacy, as a tribute to our great leader and sanitarian, recommend to the organized profession of the country, through its constituent state and county societies, the enthusiastic support of the project."

J. A. Witherspoon, Tennessee.
Joseph Rilus Eastman, Indiana.
Thomas Cullen, Maryland.
W. H. Mayer, Pennsylvania.
F. B. Lund, Massachusetts.

The memorial has also been endorsed by numerous other medical and civic organizations.

Every doctor is requested to take a personal interest in the Gorgas program and to see that his community is adequately represented on the state governing committee. Each county society should appoint officially at least one of its members to serve on the state committee. This is one foundation that is controlled by the practitioners of curative medicine and as such should be supported by every practicing physician. Let us pull together "the doctor for the doctor."

Medical members, board of directors, Gorgas Memorial Institute. Executive offices, Chicago, Ill.: Frank Billings, Gilbert Fitzpatrick, Seale Harris, W. H. G. Logan, Samuel J. Mixter, G. H. de Schweinitz, Rear Admiral E. R. Stitt, George Crile, Wm. D. Haggard, Franklin Martin, Wm. J. Mayo, Stuart McGuire, Ernest A. Sommer, Ray Lyman Wilbur, Surgeon-General Hugh S. Cumming, Major-General Merritte W. Ireland, C. Jeff Miller, Brigadier-General Robert E. Noble, George David Stewart, Hugh Young.

Officers and lay members, Board of Directors: Pres. Calvin Coolidge, honorary president; Franklin Martin, vice-president; George M. Reynolds, treasurer; W. J. Sennett, Asst. treasurer; Silas Strawn, attorney; Hon. R. J. Alfaro, Brigadier-General Charles G. Dawes, Bernard Baruch, Tyson Dines, Samuel Gompers, W. P. G. Harding, Judge John Bassett Moore, Adolph S. Ochs, Pres. Beliasario Porras, Panama; Leo S. Rowe, Fred W. Upham.

We presume it sort of comes over you as you grow older, it may not be the truth at all. You can well recall you scarcely believed it in your youth, but as we remarked, as you grow older you have an inward feeling that it is the way. What is the way? Things happen like words in a cross word puzzle, they bob up and seem to fit in their places, suddenly happen, suddenly work a result sufficient that years have not done. Wheeling had a fire, we all know what a fireman's life is. Almost as bad as a country doctor's life, except that in one the fireman gets a big dose once in a while, and the doctor steady 10 c.c. doses day in and day out. Being a big piano store the noxious vapors reminded anyone of what life is. "What Price Glory." Smarting, fevered, fitful eyes gave their share of the trouble. Doctors were there and did their duty. But, and here is the cross word idea, a councilman, Mr. Browning, on the second day called a doctor in a hurry. Just then and there no one happened to be placed. You know the medical profession has the public so spoiled on service that long before any calling or trade thought of such a thing, it was giving very capably this idea of deliv-

ering quickly the aid asked, and had people taking it for granted. For a doctor not to be handy made Mr. Browning nervous, and as he stated, excited. He called the three he knew best. No luck. Then the word was sent to Wheeling's full time health officer. That a health officer is a specialist was not known to Mr. Browning any more than it is to 95% of the citizens in your city. That good health officers do not have anything to do with curing diseases, or removing *appendices* was as yet also obscure and foggy to Mr. Browning and almost all of the other citizens. What happened when the word came to Dr. McLain is not clear any more than the invisible punch that lays out some prize fighters in the third round. Dr. McLain stated his position no doubt, but perhaps on the second day did not sense any especial emergency need. Mr. Browning thought he ought to have come anyway, or else done some telephoning. Mr. Browning does not realize what pitfalls a health officer could fall into calling some of his friends and leaving out others *in anything*. A hostess leaving off a few notables on her party list would be mild in comparison. Our own impression is that both of them perhaps erred trivially being in positions where melodrama had eclipsed rational arrangement of facts. From this little musical setting quite an opera was composed, that through newspaper articles and gossip came pretty nearly being a full fledged grand opera. Next council was going to make the health officer attend all fires, and this correspondent heard it whispered all city employees, which would necessitate the health officer leaving a conference on impure milk to administer aromatic spirits to some garbage collector overcome while removing the remains of the mash in the garbage collection of some of celebrated "speakeasies." You wonder why all this rambling? The climax with its lesson, a lesson of more importance to most doctors than the best near-cure for psoriasis, to you follows. The Ohio County Medical Society had a meeting, passed a resolution, deploring the diverting of the health officer from his highly trained duties, and stated they recommend a plan of calling Red Cross nurses, then each hospital, and they would immediately locate all doctors able to free themselves. A committee from council met the Ohio County Medical Society representatives, there must have been twenty doctors, members of women's clubs numbering fifteen or twenty more, and a lot of citizens. The total was over fifty or more.

Mr. Browning stated his case. It is pretty difficult to state a case like he had after Old Father Time has extracted the "melodrama of the day it happened" from it. It is like placing an order for a strong cup of coffee and someone slipping you Postum Cereal. Dr. Gaydosh led off in rebuttal with an inquiry if the firemen were in the workmen's compensation, let them pick their own. Browning said something we believe about not being in condition to do any picking.

Dr. Andrew Wilson, assistant health officer, stated he had often helped before. (He might have known "when we are there" is never recalled by others like "when we are not there.") This time he had not been called. Then Dr. Drinkhard arose. When Drinkhard is not engaged in some of his specialties in medicine, which is seldom, he can

preach (they tell us) a lot better sermon than half the preachers. Of course the audience recognizes that being a doctor he is perhaps the most hardened sinner present, but nevertheless Drinkhard puts it across in fine shape. Billy Sunday has nothing on him. He wound up by saying, "It was nothing more or less than a plan by some cheap politicians to oust a good health officer." For some reason Browning did not take kindly to this current information, but whatever he thought the crowd gave the speaker the great applause. After thinking it over Browning was disposed to take this as an insult. The air thickened. Dr. Noome stepped into the breach and smoothed it all over. We are strong for Noome in matters of this kind. Dr. Keesor recited his willingness to perform, but said as school medical advisor he had it *directed* to him that he was not to leave his regular work for other duties. Dr. Fulton gave a fine speech. His gestures in a tight fitting blue coat were as graceful as Jack Dempsey gently administering narcotic Swedish movements. He enlarged on what a health officer was and is, gave Mr. Browning credit for meaning well, got everybody in a good humor and closed. Drinkhard jumped up and explained to Browning. Browning said he was glad everything was alright. The resolution passed, was referred to council and passed it last night. Some thought Drinkhard "spilled the beans." We did, but do not now. His dramatic manner stirred things up, made everybody move and want to do something, and in the end after his apology, hurt nobody.

What medical fraternities need is someone to stir their emotions and their blood. What is the lesson? This: That when doctors are aroused, and move in concert, nothing, absolutely nothing stops them. They have orators, they have influence, they have power. They rarely ask for anything, never for very much, so if we have unfair burdens to bear, it is because we have not the vision. It is our own fault. For your own good we wish devotedly you had been there to hear our fellows.

Dr. Perry Bosworth of Huttonsville, has been quite ill, but is now much improved.

Dr. H. K. Owens of Elkins, has just received a new six-cylinder sedan, the gift of a grateful patient.

Dr. W. W. Babcock of Philadelphia, recently spent a few days hunting with Dr. A. P. Butt, and while here initiated the new operating room in the City Hospital new addition.

Dr. Few of Parsons, has returned from an extended vacation spent at his old home in Virginia. He is reported as much improved, and we hope for his entire recovery.

MEDICINE AND SURGERY

INTRA-ABDOMINAL RUPTURE OF THE INTESTINE FOLLOWING STRANGULATED FEMORAL HERNIA.

Abstract of paper read by Dr. Frank LeMoyne Hupp, before the Baltimore meeting of the American Surgical Association, and published in the October number of The Annals of Surgery.

After a literary digest in which the author refers to the rareness of this accident, a case report is made of a man who on admission to the hospital presented the picture of one suffering with a strangulated femoral

hernia, associated with peritonitis. Incision over the protrusion revealed a gangrenous, open loop of the intestine, and the proximal segment, from which the black loop was separated, was nowhere to be seen in the sac. free incision through right rectus exposed the open and retracted proximal end of the terminal ileum, showing pressure necrosis and separation at the point of constriction. The abdominal cavity contained fecal matter, free fluid and gas. A segment of the ilium, fourteen cm. long was resected and an end to end anastomosis effected with a Murphy button. The resected segment of the gut presented two deep-seated ulcerations, one above the constriction. The patient made an uneventful recovery, passing the button on the thirtieth day.

Reference is made to the opinion expressed by Moynihan, regarding the collapse of these patients, as being due to the overloading, distention, and the ulceration of the gut above the block, together with the absorption of the contents, whose bacterial virulence is greatly increased.

Eight cases from the literature are reported, in which this definite pathological entity of ulceration was demonstrated.

In concluding, the writer sounds the warning that a searching interrogation of the mucous membrane should be made immediately adjacent to the anastomosis, in order to forestall a potential leakage; that this condition, together with the possibility of an intra-abdominal rupture at the point of constriction must enter into the mortality factors of a strangulated hernia.

The text of the paper contains a study of eight cases, each with definite ulceration, perforation and general peritonitis, following strangulated hernia.

SKIN TEST FOR SUSCEPTIBILITY TO SCARLET FEVER.

Dick and Dick, *Jour. A. M. A.*, Jan. 26, 1924. In 1923 produced experimental scarlet fever with an apparently pure culture of streptococcus hemolyticus isolated from a case of scarlet fever. The Burkefield V filtrate did not produce scarlet fever in a person who later developed the disease on inoculation with the unfiltered culture.

Injections of the filtrate V gave inflammatory reactions more often in persons who gave no history of scarlet fever than in those who were convalescing from the disease. After preliminary tests a one to one thousand in normal salt solution was made, tested for sterility and kept in a refrigerator. Later this was passed through a Berkefield W filter without affecting its action. One-tenth of a c.c. of this was injected into the skin on the forearm. Some of the cases showed no reaction whatever, others gave varying degrees of reddening and swelling about the site of injection and were classed as positive or negative accordingly.

The test was made on a series of 153 cases with the following results. Of 65 convalescents from scarlet fever there were no positives . Of 16 with histories of scarlet fever there was one doubtful positive (this man, it developed later, probably had not had the disease). Of 72 persons with no histories of scarlet fever there were 37 positives. Further evidence of the specific relation of this test to scarlet fever is afforded by the following experiment: Fresh blood se-

rum from a convalescent scarlet fever patient was mixed with an equal volume of a one to one hundred dilution of the filtrate. Another portion of the one to one hundred dilution was mixed with an equal volume of salt solution. Both solutions were incubated for 30 minutes. A skin test was then made with 0.1 c.c. of each mixture in a patient who had previously had a positive test with the 1:1000 solution. At the end of 24 hours the test done with the salt solution mixture showed a strongly positive reaction, while the one done with the convalescent serum mixture was entirely negative. The experiment was repeated five times, using a different convalescent serum and a different subject with a positive skin test each time.

Two nurses who gave no histories of scarlet fever, one with a slightly positive test, the other with a positive test, were each given 10 c.c. of convalescent serum. On the second day following the administration of the serum, the skin tests were repeated with negative results. A third nurse who had no history of scarlet fever showed a strongly positive skin test. She was given 10 c.c. of convalescent serum on three occasions after which her skin test became gradually negative.

Conclusion: The skin test described bears a specific relation to immunity to scarlet fever.—Willis.

OBSERVATIONS ON THE TREATMENT OF SCARLET FEVER WITH SCARLATINAL ANTISTREPTOCOCCUS SERUM.

Blake, Trask, Lynch, New Haven, *Jour. A. M. A.* Serum from a horse, previously immunized with the specific type of streptococcus hemolyticus found by a number of observers in scarlet fever, was used. First, as rash extinction test in small amounts, and, second, as intramuscular injections of large amounts for therapeutic purposes. Before proceeding to the therapeutic test it seemed desirable to determine whether or not the serum possessed the ability to produce a local blanching of the rash following intracutaneous injections of small amounts of 0.2 to 0.5 c.c. This was done and an era of blanching was noted varying from 2 to 6 cm. in diameter, depending on the amount used. This persisted until the rash disappeared. If the test was made 24 hours after the appearance of the rash there was no pigmentation or desquamation at the sight of the blanched area. It is suggested that this is due to the antitoxic properties of the horse serum. Twenty-three tests were made on thirteen subjects with positive results. Fifteen control tests with equivalent amounts of normal horse serum were negative. Six control tests with polyvalent antistreptococcus horse serum were negative.

Thirteen cases of scarlet fever were treated therapeutically with exceedingly satisfactory results. In all but three severe cases a single injection of 40 to 60 c.c. was sufficient to cause a fall of the temperature to normal in 12 to 24 hours with a disappearance of the rash and a marked lessening of the toxic symptoms. Of the three more severe cases three to four injections were given with recovery in 36 to 40 hours.—Willis.

EPIDEMIC DIAPHRAGMATIC PLEURODYNIA, OR DEVIL'S GRIP.

Robert G. Torrey, M. D., Philadel-

phia (*Amer. Jour. Med. Sciences*, Oct., 1924). Dr. William C. Dabney published a report of an epidemic resembling Dengue in 1888, occurring in and around Charlottesville, Va. He differentiated this from dengue and malaria, and stated that on account of the agonizing pain on breathing it was called Devil's Grip.

Since that time accounts have been made by many doctors of the same train of symptoms in epidemics along the eastern coast, especially in Virginia, New Jersey and New York and Pennsylvania. These writers designated the condition "epidemic pleurodynia" and considered that the syndrome constituted a clinical entity, characterized by sudden onset, pain in the chest or epigastrium, fever of a brief duration and a tendency to recrudescence on the third day.

Typically the onset in this disease is sudden, often with a distinct chill the temperature is elevated, reaching from 102 to 104 and the pulse may be very rapid, it is slow in periods of comfort and is probably increased by efforts to breathe, and following the temperature curve in proportion. Pain is the main symptom occurring in the epigastrium or back or both, and in lower chest. It is aggravated by breathing or motion and increased during the febrile attacks and decreases as the temperature lowers. Sometimes it is so severe as to make breathing almost impossible. There is very marked tenderness about the lower chest which persists for a varying time after the fever has disappeared. There may be only one attack of pain and fever but usually there is recrudescence of pain and fever occurring between 24 and 48 hours. Headache usually comes on as a late symptom and is frontal. Sweating is profuse but occurs late and independent of a rise in temperature. Prostration is not so marked as in influenza, while the fever is high, the patient looks extremely ill, but as it subsides they look surprisingly well. There is an absence of signs of lung involvement and pleural friction rubs have not been heard.

The leukocyte and red cell count and urine analysis show nothing characteristic. Dr. Small, of Philadelphia, has found a protozoan organism in a few smears made from these patients. This was in the erythrocyte and he called it Plasmodium Pleurodynia. The evidence is not complete, but a striking resemblance to the developmental cycle of the malarial parasite is suggested by this study. These bodies are found in the red cells, small, round or oval usually located eccentrically. They stain a brilliant blue though sometimes with a single red chromatin granule. Wright's stain was used.

The prognosis is good. No deaths have been reported. Tenderness may persist for some time and weakness may be present after severe cases. As a rule recovery is complete apparently.

Quinine was used in the treatment on account of points of similarity to malaria.—WILLIS.

PRIMARY CHANCRE OF THE PALPEBRAL CONJUNCTIVA

The case reported by W. P. Ling, Peking, Chia (Jour. A. M. A., Aug. 16, 1924), is of especial interest for two reasons: It is a double infection in which the trsal conjunctiva and the skin of the forehead are simultaneously infected. The diagnosis of the case was not an easy one. This was so for the following

reasons: The patient gave a history of previous syphilitic infection in 1914; therefore, it was thought at first that it might be a gumma. However, the subsequent course of the lesion, namely, the rapid healing of the ulcer the influence of neo-arsphenamin and mercury, made possible a definite diagnosis of primary chancre. Furthermore, the fact that the wassermann reaction was reported by the patient's physician to be positive one month after the appearance of the sores, and that it became negative after two months of vigorous treatment, further confirmed the diagnosis.

EFFECTS OF TREATMENT ON BONE LESIONS IN CONGENITAL SYPHILIS

Material consists of roentgenograms of the long bones of eighteen congenital syphilitic infants studied by George Fred Sutherland and James Herbert Mitchell, Chicago (Jour. A. M. A., Nov. 24, 1923), nine had symptoms referable to bone disease, such as swelling of a joint of an arm or leg, tenderness of the shaft, pseudoparalysis of Parrot, or pain an handling. The usual course of treatment consisted of from six to eight weekly injections of neo-arsphenamin, intravenously or intramuscularly, in doses up to 0.15 gm., followed by eight to ten weekly intramuscular injections of mercuric salicylate in oil, in doses of from one-fifth t oone-third grain (0.013 to 0.02 gm.). This course was followed by a rest from treatment for from three to five weeks, and then the Wassermann test was made and the course was repeated. The symptoms of the bone lesions decreased after the first injection of neo-arsphenamin, and usually disappeared within a month. The pseudoparalysis, when of the true Parrot type, cleared up quickly; but when complicated by rickets, the recovery of normal use of the extremities was much slower. Under this treatment, the roentgen-ray changes show a return toward normal.

A DIGEST OF CHANGES BETWEEN THE 1921 AND 1924 TAX LAWS

By H. ARCHIBALD HARRIS
Certified Public Accountant

The following digest has been compiled by W. M. Swindell, Jr., Economist, and Bertha M. Holmes, Washington manager, both of the staff of Archibald Harris and Company, under the direct supervision of Mr. Harris. Archibald Harris and Company are counselors on Accounting and Taxation for the Illinois, Indiana and Tennessee Bankers Associations. They also advise a number of industrial and professional organizations on accounting and tax matters.

Through a special arrangement with Archibald Harris and Company, Certified Public Accountants of Chicago, readers of this publication may obtain free tax or accounting advice on the new or old revenue bill. Readers may submit their inquiries to the magazine or to Archibald Harris and Company, Certified Public Accounts, Marquette Building, Chicago, Illinois. Please mention the name of this publication in writing direct to the author.

Gain or Loss

If in a reorganization money or other property is received together with the stock of a corporation, a party to the reorganization so that gain or loss may result (Section 203 (d) (1)), any part of the gain covered by earnings or profits accumulated since 2/28/13 shall be taxed at surtax rates only; any gain not covered by such earnings or profits shall be subject to both normal and surtax.—Section 203 (d) (2).

Income—Gross

A person having tax-free securities must submit with his return a statement showing the number and amount of such obligations and the interest received.—Section 213 (b) (4).

Provision is made for refund to states or municipalities of tax paid by public utilities on income accruing to the state or municipality.—Section 213 (b) (7).

Payments under the World War Veterans Act, 1924, are exempt—also State Pensions. (This last provision does not appear to be necessarily a war pension.)—Section 213 (b) (9).

In order that an exemption of $300 income per year be allowable the domestic building and loan association shall be one "substantially all of the business of which is confined to making loans to members" instead of one which is operated exclusively for such purposes as under 1921 Act.—Section 213 (b) (10).

If a citizen of China, residing therein, receives dividends from a corporation organized under the China Trade Act, 1922, the stock of the corporation being in good faith vested in him, such dividends are exempt from surtax.—Section 213 (b) (13).

Net Losses

If a taxpayer other than a corporation has in the second year a capital net gain, the net loss of the prior year shall first be used as a deduction in computing income for such "second year." If such net loss exceeds the ordinary net income such excess shall be applied against the capital net gain for such year and any excess loss shall be carried over to the "third year."—Section 206 (c) (2).

A capital net gain in the "third year" is handled by a taxpayer other than a corporation in the same manner as in the "second yera."

If a taxpayer (other than a corporation) has , in the second year sustained a capital net loss, the deduction for a net loss sustained in the prior year shall be used in computing the ordinary net income of the second year. If the deduction is in excess of the ordinary net income such excess shall be allowed as a deduction for the third year.—Section 206 (c) (1).

If a capital net loss is sustained, the taxes shall be computed as follows:

The tax should be computed on the ordinary net income at regular rates. From this shall be subtracted 12½% of the capital net loss.—Section 208 (c).

Rates of Tax—Normal Tax

Rates for American citizens: 2% on first $4,000 above exemptions and credits—1921 Act, 4%; 4% on next $4,000—1921 Act, 8%; 6% on rest of income—1921 Act, 8%.

Rate for non-resident aliens: 6% on all taxable net income in excess of $1,000—1921 Act, 8%.

Rates for non-resident aliens residing in Canada or Mexico:

2% on (salaries, wages, etc.) first $4,000 in excess of $1,000 plus any credits for dependents.

4% on next $4,000 salaries, wages, etc. (not all kinds of income).

6% on all salaries and wages in excess of $8,000, above $1,000, plus credit for dependents.

6% on all other income in excess of personal exemptions ($1,000 plus credits for dependents).—Section 210.

Surtax

Surtax begins at $10,000 net income. 1921 began at $6,000.

From $10,000 to $14,000, rate is 1%.

1% is added for each $2,000 until $500,000 is reached.

All net income over $500,000 is subject to 40%.—Section 211 (a).

Returns

Married persons living with husband or wife must file a return if the net income is $2,500. (1921 law $2,000.)—Section 223 (a) (2).

Joint return provision same as 1921 Act except net income raised $2,000 to $2,500.—Section 223 (b).

Returns for period less than twelve months:

Commissioner is empowered to make regulations prescribing method of computing tax on such returns where during the fractional part of a year covered by a return the taxpayer has had a capital net gain, sustained a capital loss or has received earned income.

In cases of fractional returns not due to changes of accounting period the personal exemptions and credits for dependents are prorated. —Section 226 (e).

Tax Paid at Source (Withholding)

Rate of withholding on salaries, wages and other fixed and determinable annual gains of a non-resident alien—6% instead of 8% as under 1921 Act.

Withholding returns due March 15th.—Section 221.

CORPORATIONS

Capital Gains or Losses

Corporations allowed all capital losses.

China Trade Act

Entirely new. Special credits for corporations organized under the China Trade Act, 1922.—Sec. 263.

Consolidated Corporations

Affiliation established if one corporation owns at least 95% of the voting stock of the other or others or if at least 95% of the voting stock (instead of "substantially all") of two or more corporations is owned (instead of owned or controlled) by the same interest.—Section 240 (c).

The Commissioner shall if necessary in order to correctly establish income of two or more related trades or business owned or controlled by the same interest consolidate the accounts of such trades or business, such consolidation to be made at the request of the taxpayer as well as at the demand of the Commissioner, which was the only way in the 1921 Act.—Section 240 (d).

Deductions

Dividends not allowed as a deduction include those paid by a corporation organized under the China Trade Act of 1922. — Section 234 (a) (6).

Evasion of Surtaxes

When a corporation holds earnings to prevent payment of surtaxes by its shareholders an additional tax of 50% of the corporation's net income shall be added instead of 25% as in 1921.—Section 220.

Net income means taxable net income plus any dividends received and plus any interest on obligations of the United States which would be taxable in the hands of an individual instead of taxable net income as in 1921.

1924 Act does not allow the shareholders to elect to be taxed as

members of a partnership as under 1921 Act.

The fact that a corporation is a mere investment company is prima facie evidence of a purpose to escape taxation.

Exempt Corporations

A local association of employees, the membership of which is limited to the employees of a designated person in a particular municipality and the net earnings of which are devoted exclusively to charitable, educational or recreational purposes is exempt.—Section 231 (8).

Benevolent life insurance associations of a purely local character and mutual casualty insurance companies are exempt. Most corporations are not required to be of "purely local character" as was the case under the 1921 Act. To be exempt such corporations must derive 85% of their income from amounts collected from members for the sole purpose of meeting expenses, instead of deriving their sole income from such sources as under 1921 Acts.—Section 231 (10).

Gain or Loss—Basis for Determining

If property (other than stock or securities of a company a party to was acquired after 12/21/17 by a corporation in connection with a reorganization and immediately after the transfer an interest of 80% or more in such property remained in the same persons or any of them, the basis shall be the same as if the transferor had sold the property adjusted by any gain or loss recognized at the time of the transfer.—Sec. 204 (a) (7).

In case of sale of property (other than stock or securities of a corporation a party to a reorganization) acquired after 12/21/23 by a corporation by the issuance of its stock where after the transfer the control of the corporation was in the persons who transferred the property to it, the basis is same as if transferor had sold the property, adjustment being made for any gain or loss recognized when transfer was made.—Section 204 (a) (8).

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SOME CONSTITUTIONAL MANIFESTATIONS OF SINUS DISEASE IN CHILDREN.

By DR. T. W. MOORE, Huntington, W. Va.

Read before the Ninth District Medical Association, Portsmouth, Ohio, October 13, 1924.

The association of disease of the para-nasal sinuses and systemic disorders has long been appreciated. Usually it has been accepted as another manifestation of focal infection and one of the less important groups —the usually accepted ratio being teeth 55, tonsils 30, sinuses 10, and other seats of infection the remaining 5 per cent.

That sinus infection has played an important etiological part in arthritis deformans, Bordley[1] and many other observers have proven, I think conclusively. That involvement of the nasal sinuses is a frequent concomitant of asthma, bronchiectasis and other pulmonary conditions we know, but whether the relationship is one of cause and effect, or the simultaneous existence of the sinus infection and pulmonary conditions are due to the same cause, which is at present an unknown one, is I think, still debatable.

During the past ten years, especially the last half of this period, through the tremendous amount of work done by Dean[2] and his co-workers at the University of Iowa and a few other observers in different sections of our country, it has been proven beyond the shadow of a doubt that para-nasal sinus disease is not only a very important etiological factor in numerous diseases of infancy and childhood, but that it is not possible to cure many diseases of this period of life until the sinus infection is controlled. This has been particularly noted in arthritis; especially the chronic forms, in asthmatic conditions at this age, and Byfield[3] tells us in acrodynia, cyclic vomiting and some forms of nephritis.

Until quite recently our association of the germs found in the sin-

uses, and the disease produced, has been limited to the knowledge that in the arthritic cases, especially those of the deformans type, the streptococus hemolyticus has been found in the sinuses, and a culture made from the bacilli taken from a sinus (nearly always the maxillary) and injected into a rabbit (where the animal did not immediately succumb to the infection) in a few weeks developed an arthritis with enlargement of the joints involved.

Within the present year Marriott[4] of Washington University, has studied in his clinic the children brought to him with oedema, scanty urine loaded with albumen, etc., the cases of parenchymatous nephritis which he designates as "the large white child with the large white kidney." In the last twenty cases of this kind, which he describes as nephrosis in contra-distinction to the cases of hemorrhage nephritis, he has found a staphylococcus in one or more of the sinuses of all these children and the treatment has been directed wholly to the nasal condition, no attention being paid to diet and no other treatment instigated except the regularity and hygiene incident to life in a hospital. The cure has been rapid in all but two cases, which were so far exhausted that there was no improvement and death supervened. One child's weight decreased from 40 to 26 pounds within four days as the oedema disappeared, with general improvement in appetite and increase in amount of urine from 150 to 1200 c.c., remember with treatment of the nasal sinuses alone.

Clausen[5] working with Marriott, has been able to isolate a substance which seems to act directly upon the cells, from the blood of these oedematous children—a surface tension changing substance and has found that when a rabbit's ear is placed in Ringer's solution it undergoes very little or no oedematous change, but when a small amount of this tension producing substance is added the ear becomes oedematous. This substance is not found in the sinuses but probably is a product of the altered metabolism.

So it seems that today we may consider that frequently sinuses infected with the streptococcus hemolyticus are an etiological factor in arthritis deformans, that a staphylococcus infection of these sinuses produces a nephrosis with oedema, scanty urine—little or no retention of urea or non-protein nitrogen. "These kidney changes are not permanent and complete repair is possible." But as Marriott further says when we have a hemorrhagic form of nephritis we are dealing with a wide spread systemic disease involving other parts of the body as well as the kidneys, and this is very frequently due to a streptococcus infection of the tonsils and adenoids.

The treatment of nasal sinus disease in children is not difficult as a rule—over 80% of the cases recover simply from the removal of tonsils and adenoids—due in a measure to the improvement in drainage thus brought about. However, Dean has shown that in cleft palate cases where it was desirable to cure the sinus condition before operating upon the cleft and where he wished to retain the support given by the tonsils, that it was not possible to render the sinuses free from micro-organisms until after the tonsils were removed. So after removing the tonsils and adenoids—if the sinus condition per-

sists, nasal douching with normal saline solution has proven very effective. The technique is to have the child lying upon its chest, face downward, and the head hanging over the table, lower than the body, thus protecting the ears by preventing the solution entering the Eustachian tubes. The douche bag should not be over eighteen inches above the child's head. After the douche the child should be rolled over on its back and a few drops of 25% argyrol solution, or 2% mercurochrome, or ½% acriviolet solution instilled within each nostril. If this does not suffice to cure, climatic changes seem to produce wonders, especially warm dry climates like Arizona. It is only in the extreme and very exceptional cases that radical operative measures are indicated in young children.

1. James Bordley, M. D., Personal Communications.
2. University of Iowa Studies, Vol. ii, No. 1.
3. University of Iowa Studies, Vol. ii, No. 1.
4. Clinic Records Dr. McKim Marriott, St. Louis Children's Hospital, Page 1414.
5. Marriott & Clausen: Intoxications Associated with Alterations in the Physico-Chemical Equilibria of the Body Cells and Fluids. Clinic Records.

THE TREATMENT OF KIDNEY INFECTIONS.

By J. C. MATTHEWS, M. D., and
R. M. BOBBITT, M. D.,
Huntington, W. Va.

Read at Annual Meeting of West Virginia Medical Association, Wheeling, May, 1924.

1. With the remarkable development of Urology during the past several years has come a better understanding of kidney infections. Much work has been done on the etiological factors; the diagnosis has been more definite, and thereby our ideas concerning their management and treatment somewhat changed.

In this short article we wish to deal particularly with the non-tubercular types. We believe it has been definitely established that tubercular kidneys, no matter how early the infection, are best treated by nephrectomy, provided the patient's general condition and an uninfected properly compensated kidney on the other side make it permissible.

In considering kidney infections we must, of course, obtain much necessary information. The patient should have a complete general examination with careful search for foci of infection. From the urological side, the condition of the bladder, ureteral obstruction from kinks, strictures and stones, the size and position of the kidney pelvis and the function are all important. We sometimes think all these cases should be classified from the standpoint of function for usually upon this point depends our treatment of the case. It is not uncommon to find in cases with acute symptoms of short duration suggesting pyelitis, definite kidney deterioration and sometimes complete destruction; also a destructive infective process may go on indefinitely without any symptoms referable to the urinary tract. It becomes apparent therefore that the treatment of these infections depends first on the careful examination of the case; however, there are a few general considerations which hold true in all kidney infections. Rest with increased fluids are very important and when the function is low or retention is present the diet should be limited so as to produce the least effort on the part of the kidneys. Foci of infection should be carefully sought for and eradicated for it has been our experience that this procedure alone will

often clear up the simpler forms of these infections. The sinuses, teeth, tonsils, gall bladder and appendix should be checked routinely.

The value of internal medication in these cases is the cause of considerable dissension. Hexamethylenamin in the presence of an acid urine certainly helps in some cases, while the changing of the reaction of the urine from time to time seems to be of definite value. The use of neosalvarsan in small doses was introduced by Gross, of Vienna, in 1918. Chetwood reports excellent results in an article in the *Journal of Urology*, 1923. Although our experience has been somewhat limited, in some cases the results were remarkable. Where there is marked kidney destruction the results are poor, and in all cases proper ureteral drainage should be established before its use. The drug is particularly efficacious in colon bacillus and staphlococcus infections. The dosage used by us is .2 gm. and repeated every three to four days for five or six doses.

Probably the most important measure to be employed in non-surgical cases, is drainage per ureter. A large percentage of these cases have some form of obstruction which should be dealt with according to its nature. Stones should either be removed by ureteral dilatation or by open operation, while the ureteral stricture can be satisfactorily handled by gradual dilatation with boughies or wax bulbs. As a great many kidney infections become chronic because of poor drainage, we can readily understand why such good results can be obtained by these methods. Hunner's work on ureteral stricture has thrown much light on this condition and has certainly aided in saving many kidneys. It has occurred to us that these so-called strictures are often inflammatory changes in the ureteral wall, but any condition which will interfere with the proper ureteral contraction will interfere with drainage, and dilatation is the best form of treatment.

Pelvic lavage is also useful in these infections when the pathology is limited to the kidney pelvis and there is no loss of kidney function. The pelvis should first be lavaged with distilled water followed by instillation of silver nitrate, from one to two per cent. Mercurochrome one to two per cent solution has also been used in the kidney pelvis and good results reported.

We now must deal with the surgical treatment of these conditions, but first we must decide which types need surgery. This is largely a problem of kidney function and in cases even with marked kidney deterioration, and particularly those with obstruction, treatment as before mentioned should be tried, because in many instances a remarkable improvement in function can be had. It is of course plain that in infected kidneys destroyed or practically destroyed, nephrectomy is the only procedure if the other kidney is compensating.

There are a group of cases however, where surgery is indicated in which the patient's general condition makes us doubtful as to the outcome. These cases have a destroyed pus kidney on one side with a poorly compensated non-infected kidney on the other side, with albumin present on the good side and a definiate retention of nitrogenous products. These patients are usually septic, running low grade fever and other signs of pus absorption. We believe they are best handled by preliminary nephro-

tomy to allow the toxic nephritis on the opposite side to subside and later nephrectomy.

The points we wish particularly to emphasize in this article are:

1. All kidney infections have a definite cause, such as focal infection, poor drainage, etc.

2. They should be classified according to the impairment or non-impairment of renal function.

3. Surgery should not be attempted in borderline cases until other methods are tried as in many instances apparently hopeless kidneys can be saved.

POST OPERATIVE PAROTITIS

By L. D. HOWARD, M. D.,
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Read before the Monongala County Medical Society.

In the great field of surgery, it is necessary that we have a fair knowledge, at least, of all surgical problems. However, because of the relative infrequency of many maladies, it is not possible for us to have as comprehensive a knowledge of them as of those with which we are more or less constantly confronted.

Post Operative Parotitis is a comparatively infrequent complication of surgical procedure for which we should be most thankful. Because of its infrequent occurrence, experience by the average surgeon in treating it, is necessarily limited. Like a flash of lightning, it sweeps down upon a patient already burdened with a serious affliction and because of its rapid development almost overwhelms both patient and attendants. Before entering into a consideration of the various aspects of this disease, I believe it would be well to refresh our memories with a few of the more important anatomical features of the parotid gland.

The parotid gland lies on the cheek behind the jaw and below the ear, below the posterior two-thirds of the zygoma. Its limits are important because suppuration may occur in any portion. Its extent is as follows:

Posteriorly is the external auditory canal, mastoid, digastric and sterno-mastoid muscles. It extends below to a line joining the angle of jaw and the mastoid. In front it extends about one-half way over the masseter muscle.

The parotid or Stensons duct leaves the upper anterior portion of the gland about 1 cm. below the zygoma, runs on a line joining the lower edge of the cartilaginous portion of ear with middle of upper lip and opens on a papilla inside of the cheek opposite the upper molar tooth. The papilla is easily seen and a fine probe can be readily introduced into it from the mouth.

The parotid fascia: The gland is covered by parotid fascia which is moderately dense and continuous with the fascia, separating the lobes of the gland. Above it is attached to the zygoma and anteriorly it continues with the masseteric fascia over the masseter muscle. Below and posteriorly it is continuous with the fascia of the neck. A band running from the styloid process to the lower jaw is known as the stylo-mandibular ligament.

Lobes: The parotid gland has three lobes known as the glenoid, pterygoid and carotid. The glenoid lies behind the articulation and anterior to the external auditory canal; the pterygoid lobe winds around the

posterior edge of the lower jaw on the lower surface of the external pterygoid muscle; the carotid lobe is a prolongation of the gland inward, passing along the external carotid artery with the internal carotid and styloid process on the inside. A separate portion of the gland which is sometimes quite detached lies at its upper anterior portion between the gyzoma and Stensons duct. This is called socia parotitis.

Vessels: The external carotid artery enters the gland and divides opposite the neck of the lower jaw into the temporal and external maxillary arteries.

Nerve: The facial nerve emerges from behind the jaw just below the lobe of the ear and divides into its various branches while still in the gland, while a branch passes along and below the duct of Stenson.

Disraeli, the great English premier once said, that the chief concern of any statesman should be to see that those laws were enacted which would best serve the health of his people. As true followers of Hippocrates, we as physicians and surgeons should be mostly concerned about those ways and means which will tend not only to alleviate the suffering occurring as a result of our patient's affliction, but also assure, if possible, a complete return to the former normal condition.

Post operative parotitis is a secondary disease. We are chiefly concerned in considering the etiological factor with prophylaxis. Although this condition is rare and has not received very much consideration from many surgeons, thereby limiting the literature on it, the investigations and deductions resulting therefrom have been interesting. Time allotted to our papers this evening will not permit a very full consideration of these investigations, so I will just touch the high spots.

Parotitis is a complication of many diseases, such as typhoid and typhus fever, cholera, facial paralysis, diabetes, neuritis, lead, mercury and iodide poisoning, and perhaps others, but we are concerned at this time only with post operative parotitis.

It has been observed that this condition occurs more frequently in women than in men, possibly because more women undergo operations. Nearly all the cases recorded have followed abdominal operations and some investigators, notably, Crandon, favor pelvic operations. Deaver believes that traumatism is an existing factor brought about by too forcible manipulation of lower jaw or pressure upon the parotid gland by anaesthetist. It has been observed however, in cases where a very simple anaesthesia has been given and has not occurred in many cases where forcible manipulation of the jaw was necessary.

Collins, believes it is more apt to occur after abdominal operations, its development being favored by dry mouth; the infection ascending through Stensons duct. This idea is also held by Picque and Fenwick. Other observers have noted that it frequently occurs in gastric and duodenal ulcers which have been treated by the starvation methods, i.e., rectal feeding. No fluids being allowed by mouth. In other cases of ulcers so treated in which water was given by mouth parotitis was decidedly less frequent. It has been observed in clean mouths and filthy mouths although in many patients whose mouths were foul, it did not occur.

Symptoms and Signs: The symptoms usually appear within three to ten days and in one case of Fowler's did not occur for eighteen days. There is no great array of symptoms, in fact the conditions ofttimes develops without any pronounced change in patient's general condition, but in more cases there is a rapid rise of temperature to 104 or 105; increase in pulse rate and severe pain, and at this time we might offer a word of explanation of the extreme pain experienced by the patient.

The pain is unusually severe, due to the fact that the gland is of the racemose type and the fibrous septa between lobules are very abundant and quite strong, thereby preventing pus from extending readily from one lobule to another. There is yet another reason for the severe pain these patients suffer, and that is the peculiar location of the various parts of the gland. Swelling of the glenoid lobe produces pain in the ear and also in the temporo-maxillary articulation; swelling of the carotid and pytergoid lobes causes pain and fullness in throat. When lower jaw is opened the space between the same anteriorly and externally auditory canal and mastoid process posteriorly is necessarily limited causing a pinching of that part of the gland located in this region. The patient becomes very nervous as a result of this pain and may become delirious. While only a part of the gland may be affected, it usually extends until the whole gland is involved unless early treatment is instituted. There may be great difficulty in swallowing, particularly if the lower lobes of gland are affected, again there may be difficulty in breathing due to the same cause. The gland in the severe cases swells rapidly, the swelling ofttimes extending down the neck behind the ear. At first there is no change in color of the gland, then redness followed by purplish discoloration occurs, the skin becomes shiny, especially as pus nears the surface. If swelling is extensive, the eyelids are involved and patient cannot see because of this.

There is no secretion passing from Stensons duct. The disease may last a long time due to retention of pus by dense septa separating lobules. Pus extending from one to another only when septa break down. Again the gland may slough rapidly when an early fatal result occurs. The leucocytes are usually markedly increased. The bacteria found are staphyloccocci pneumococci, pneumobacilli, streptococci; their frequency occurring in the order named.

Prognosis: This depends upon the degree of infection and whether the patient has had a short or previous long illness.

Treatment: As we are realing with a secondary disease, the main point in our consideration of treatment is prophylaxis. From careful investigation it has been conceded that postoperative parotitis is nearly always secondary to abdominal operations, therefore, it is extremely important that our manipulations in our intra-abdominal surgical procedures should be as gentle as possible, especially in our handling of the female organs. Again, while some of the evidence would tend to discredit the infection idea, still we as students of prophylaxis should insist upon clean mouth, if at all possible, before abdominal or in fact, any operation. Bacteriologists tell us there are more germs in the mouth than rectum, therefore it would always be a safe and sane

preliminary step to observe a careful preparation of mouth.

Many of our patients complain of dry mouth and these should be encouraged to chew gum, a piece of rubber or better still, suck a piece of hard lemon candy which is perhaps one of our best stimulants to activity of parotid gland. When the gland is not functioning, its circulation is not active, therefore it is more susceptible at this time to infection.

Lastly, we should insist upon as careful manipulation of the lower jaw as is possible during the anaesthetic.

Active Treatment: Once the disease develops, early application of ice offers the best chance for bringing about resolution. Should suppuration occur, complete evacuation at once is indicated. Should there be a rapid onset of symptoms with no indication of pus, early incision is not only indicated, but absolutely necessary in order to save life.

Lines of Incision: The incision depends on the location and size of abscess. If it is necessary to open the gland one-half inch in front of the ear, structures to be avoided are the duct and facial nerve. The incision should be parallel to the zygoma and the duct is avoided by not cutting on a line joining the lower edge of cartilage of ear with middle of upper lip. The branches of the facial nerve are deeply placed and a careful skin incision followed by the introduction of a blunt forcep which entering the gland, is carefully opened, assures no danger. Behind the ear we must avoid the blood vessels, the incision here must be longitudinal and not transverse, introduce the forceps as before stated. The three cases to which I will briefly refer are, first, M.B., female, age 34, admitted to the hospital with general peritonitis. Immediate operation was not considered permissible and peritonitis was treated; thirty-six hours following admission laparotomy was performed and a large pelvic abscess was evacuated. The wound was closed with drainage and the treatment of peritonitis continued. Twenty-four hours following operation, the patient developed a biliteral parotitis. The onset was rapid, ice was immediately applied, but death occurred in twenty-four hours. It was hard to say in this case whether death occurred from parotitis or from peritonitis, but it is safe to presume that either would have produced a fatal result. The leucocytes were 24,000.

Second Case: V.E., female, age 6. Admitted to hospital, with acute appendicitis; *appendectomy* was immediately performed and patient had a normal convalescence for five days, when following a nervous attack she began vomiting. This continued for forty-eight hours, at the end of which time, she showed marked evidence of intestinal obstruction. The abdomen was again opened in the face of a hopeless proposition, and an enterostomy performed. Three days after second operation, parotitis of the right side developed. Ice was first applied, followed in three days by incision, with the evacuation of pus; on second day arter incision, heat was applied to gland to encourage a more active flow of pus. Patient had a tedious convalescence, but a complete recovery. Leucocyte count in this case was 18,000.

Third Case: M.P., female, age 32. Laparotomy was performed for internal suspension and double salpingectomy and partial oophorectomy.

Thirty-six hours following operation, patient developed bilateral parotitis with a rapid onset of symptoms; the swelling was extensive, causing marked difficulty in breathing and swallowing. Temperature was 105. Early incision of both glands was done, but with no evacuation of pus and with little amelioration of symptoms. The glands and neck were then packed in ice and in a few hours the patient was on the road to recovery, coming out of what seemed for a few hours an absolutely fatal termination. Leucocyte count in this instance was 20,000. There was no bacteriological study in any of the cases reported.

Briefly the summary of our observations and investigations is that of prophylaxis, and in the event that this fails, early incision with the application of ice offers the best hope of saving the patient's life.

ELECTRICAL TREATMENT OF TONSILITIS

By WALTER C. SWANN, M. D.,
Huntington, West Virginia

Read before Cabell County Medical Society

The object of this paper is to give a report on the technique and results of electrical treatment of tonsils, used on something over two hundred cases in the last two years.

The literature on the subject is becoming quite extensive and I shall give largely my own technique and results as demonstrated on the cases treated.

Tonsils treated were mostly the enlarged and diseased type. Only a few cases of small pus tonsils were treated. The only contra-indications for electro-desiccation treatment are, buried tonsils and in children under five years of age.

Advantages of the electrical treatment are: No dangers from local or general anesthetic. Very little or no pain during or after treatment. No confinement to home or bed, the patient going on about his daily affairs. No recurrence of trouble in the majority of cases. Last, but not least, no hemorrhage.

The only argument that can be raised against electrical and x-ray treatment is that it takes several weeks to complete. Requiring from ten to twelve weekly treatments in the majority of cases, to produce a healthy condition of the remaining tissue.

Dr. Thomas M. Stewart of Cincinnati, in a paper entitled "Tonsil Facts," reports a case of diseased tonsils which he treated until the tonsils were reduced one half. The remaining tonsil tissue was removed surgically and sent to a laboratory for examination. The report showed the tissue to be normal and not infected by any organisms. High frequency current is germicidal and the heat produced in the tissues has a sterilizing effect. Not all tonsils are cured by electrical treatment, which fact does not render the method any the less useful.

The function of our tonsils has never been fully determined. There are several theories such as the internal secertion theory, the hemopoietic theory, the immunity theory, the protection theory and the eliminating theory. To say the tonsil has no useful function would be without reason or proof. It is a gland showing great cellular activity throughout the period of fastest growth. It is normal for a child between five and ten years

old to have big tonsils. And yet public health nurses demand removal of such tonsils. The histologic structure of the tonsil is identical with that of other lymphoid nodules throughout the respiratory and alimentary tracts. Therefore the theory relating to the production of lymphocytes in the germinal centers of the lymphoid follicles is the one best substantiated. Many of these lymphocytes pass through the epithelium into the crypts, then into the faucial cavity, or being retained in the crypts constitute part of the cheesy matter so often found in tonsils. Some of these lymphocytes pass to the general circulation by way of the efferent lymphatics.

I think it not best then to remove tonsils surgically until treatment has been tried and a negative result obtained. A large part of the tonsils that have been removed in the past could have been made healthy by the proper treatment. Some have been removed surgically that did not even need treatment of any kind. Electrical treatment of tonsils is absolutely safe and does most certainly conserve the better health and life of the patient. Hypertrophy is reduced in practically all cases to that of normal, or even less than normal size. Crypts are shortened in depth and the whole mass goes through a sterilizing process that cannot be accomplished in any other way.

The small amount of scar tissue following desiccation forms a protective covering to the tonsil. McFee reports, in a series of cases extending over a period of fifteen years, there has been no appreciable amount of recurrence of tonsil tissue. And the tonsils did not again become the seat of diseased processes.

Many methods of treating tonsils are now being used, fulguration, dessiccation, x-ray, radium and ultraviolet rays, all of which have their good qualities. The ones with which I have had experience are, dessication and x-ray. The current used in dessiccation is the D'Arsonval, 300 to 500 milliamperes. There is quite a difference in the machines used to produce the current. The ones giving best results will be found to be equipped with oil immersed transformers and condensers. Not all the apparatus on the market is as capable as their makers claim. Electrodes of sufficient length to reach the tonsil easily should be used, and insulated well down to the tip. I use from one to three local applications of a four per cent Butyn solution as local anesthetic. The patient is seated in the proper position for the use of a head mirror. A wooden or glass tongue depressor is used. The electrode with the current turned on is held in contact with the tonsil until blanching and steam appear. The whole exposed surface of the tonsil is gone over in this manner and sometimes down into the crypts. About one-half to one second is required for each spot treated. Five to fifteen spots can be made on each tonsil. Treatments are given every five to seven days. It is not advisable to give heavy treatments during an acute attack of tonsilitis. But a mild sparking, using the Oudin current will certainly cut the attack short.

Tonsils observed just following or within forty-eight hours after treatment, will have somewhat the appearance of a diphtheritic membrane covering the tonsil tissue but not extending onto the pillars or palate. There is some slight discomfort to

the patient lasting one or two days, but usually it is too slight to mention.

The sloughing produced can be much or absolutely none, just as the operator wishes. If deemed advisable, in large hypertrophic tonsils, the treatment can be given so mildly that no apparent sloughing results. Still each week shows a diminishing tonsil. This type of treatment leaves no scar tissue and is especially suited for very young patients, with large soft tonsils. In the cases of badly infected tonsils I have been giving deep, hard treatments, which produce quite a bit of sloughing. The high temperature produced in the tonsil and the surrounding tissue has a sterilizing effect that can be produced in no other way. The germicidal effect can be proven by the disappearance of the band of red on the anterior pillar, which is characteristic of all chronically infected tonsils. The resulting scar tissue I do not believe to be harmful.

The x-ray is admirably suited for treating diseased conditions of the pharynx, because lymphoid tissue is four times as susceptible to x-ray as the skin and other tissues. This fact is taken advantage of in raying the tonsils. Twenty-five per cent of the skin dose is all that is required every two weeks, leaving a seventy-five per cent margin of safety. A large piece of lead foil covers the head and neck, shielding from the ray all the glands and parts except a small space directly over the tonsil, where a small hole about three inches long and two inches wide is made. The body is protected by leaded rubber sheeting. After a tonsil has been treated with high frequency current, x-ray treatments are given for two or more times. The x-ray is not germicidal but by destroying the lymphoid tissue, better drainage is provided for the infected tonsil. Good drainage will most certainly help any infected tissue, if not produce a cure. Usually the affects of x-ray are slow and hardly perceptible, but one case of acute cervical adenitis was relieved of pain in twelve hours and the swelling was noticeably reduced in twenty-four hours.

With advancing years the tonsils will be found to be shrinking, becoming more firm and a diminished blood supply makes the color pale. A less per cent of tonsils are found to be infected in advanced life. The atrophy of blood and lymph vessels and the gradual thinning out of lymphoid tissue, is a similar condition to that produced by fulguration and x-ray treatments.

The results so far in the cases treated have been better than I had expected they would be. Not all the tonsils treated have become entirely healthy. Three that I know of have had surgical removal since. Middle ear trouble sometimes clears up after treating the tonsils. Two cases of beginning deafness were cleared up. The large tonsils and the ones that extend well out into the pharynx are the best suited for treatment by electrical means. But a few cases that were not what I called suitable cases, insisted on treatments and the results were often surprising in the good accomplished. I believe it is not unwise to try electrical treatments in most all cases before resorting to surgery.

In an article by Dr. Thomas M. Stewart of Cincinnati, published in the *New York Medical Journal* of July 4, 1919, on high frequency electrical currents in the treatment of

enlarged and diseased tonsils in comparison with the results of cutting operations, data were compiled and published on 13,329 tonsil operations. The data referred to were in agreement in the main with the report of the Johns Hopkins Hospital in Baltimore. The resume of the author's conclusions is as follows:

1. That the tonsil operation does not insure against after attacks of sore throat, nor of other diseases and infections for which the operation is performed.

2. That tonsil tissue is present in nearly one-half the cases after operation, not always to the detriment of the patient, nor a reflection on the operator.

3. That the treatment by means of the high frequency current secures reduction in the size of the tonsil in over 75% of cases by causing a shrinking in the tonsil, with healthy instead of diseased tissue as a result, no risk to the voice, and of course, no danger from shock or hemorrhage.

The Johns Hopkins report states that: "The many diseases for which tonsil and adenoid operation are performed may, and do return after the nose and throat have been put in normal condition. In any event, the tonsils are not the only gateway for disease germs to gain entrance into the system. Tonsil operations or treatment alone will not cure tubercular glands, rheumatic joints, or kidney inflammation." To which, states Dr. Stewart, we might add that 40% of the cases, after removal by the tonsil operation, are just as liable to sore throat as before operation, because of diseased follicles in the pharyngeal wall, and these cases constitute a fairly large percentage of cases best treated by electrical methods. The fact that many deaths have occurred from tonsil operations means that tonsil operations are always dangerous.

CONCLUSIONS

Tonsil treatment does not eliminate future attacks of sore throat.

Enlarged tonsils can be reduced in size in all cases.

Electrical treatment of tonsils is not harmful or dangerous in any way and may be tried before resorting to surgery.

Operation following electrical treatment should have less chance of producing hemorrhage because the tonsil has been put through a drying process.

IDENTIFICATION AND CLASSIFICATION OF THYROID ABNORMALITIES

By H. L. ROBERTSON, M. D.
Charleston, W. Va.

Read Before the Cabell County Medical Society, October 9, 1924.

In attempting to put into writing a brief summary of the modern conception of factors necessary to the identification and classification of the various thyroid abnormalities, and consequent dyscrasias, I have purposely evaded the more technical classifications and extensive symptomatic findings, and have confined myself to a simple practical method, which though less accurate in detail, appeals to me as more applicable for a general working basis.

The etiology of the abnormal thyroid is virtually hopeless as so many disturbing factors may be singly or in conjunction contributing to the disorder.

1. The much-studied and perplexing factor of iodine assimilation.

2. Changes in the gland substance due to various toxins; syphilis, tuberculosis, neoplasms, trauma, etc.

3. Conditions arising from fatigue, shock, or nervous conditions of many forms, and the complementary disturbances of other disordered ductless glands.

With almost unlimited etiological possibilities we must determine the individual case and avoid generalities till we have a more complete knowledge than we have at the present time of this most complex gland.

Before considering thyroid dysfunction, let us fix in our mind what function has been disturbed. This is the normal distribution of thyroxin to the tissues of the body. It is a substance powerfully toxic, a few thousandths of one milligram being lethal to a guinea pig. Unlike most chemicals, it is catalytic, i.e., by its mere presence producing chemical changes, being unaltered itself, and is used over and over again. This hormone is necessary to cell metabolism, being the exciting or accelerating agent; increased amounts of it producing excessive combustion and over-cell activity; an under supply, delayed or incomplete metabolic changes.

No matter then what form of thyroid pathology we may be dealing with from the atrophied gland of the cretin, to the horse-collar type of the colloid, or the hard nodular adenoma, aside from conditions arising from mechanical pressure from enlargement, the degree of secretory disturbance is the main clinical factor to be determined. Hypertrophy with increase of size and function or hyperplasia with increase of size only.

In approaching this problem a simple working classification is necessary. I know of no other disease in which the classification means more, for till the abnormal gland is classified, all further study is directed at random, treatment guess work, often disastrous rather than helpful.

For my own work I have adopted the general nomenclature and classification as laid out by Plummer with modifications that make it adaptable for general work.

First, disregard from your working classification, those rare conditions which taken together, total less than 5% of all thyroid disease. These are:

Cancer infrequency 1-3 of 1%.

Tuberculosis infrequency 1-6 of 1%.

Syphilis infrequency 1%.

Myxedema and Cretinisim, 3%.

These are conditions to be remembered but not probabilities.

Thyroid pathology now resolves itself into three large groups:

1. Goiter of the colloid type variously named adolescent goiter, simple goiter, etc. These are the large symmetrical growths of the non-toxic type, that we are all so familiar with in this part of the country, so common in the adolescent life of females.

2. The goiter of the adenomatous type, nodular in appearance, symmetrical and hardly possible to mistake.

3. The hyperplastic toxic goiter associated with Graves' Syndrome, commonly known as exopthalmic goiter, Basedow's disease, etc.

I am of the opinion that before long another group will be added to this classification, which will include those cases of dysfunction resulting

from an irregularity of the synthesis of the thyroxin molecule. Quoting from Lampe: "The disturbance in exopthalmic goiter is one affecting more the character of the secretion than the amount, and further, in cases of hyperthroidism, there is a true dysthyroidism in the production of a secretion differing from the normal." Kendall believes that the oxyindol nucleus is largely responsible for the physiologic activity in stimulating metabolism, rather than the iodine. This suggestion of molecular deformity has been advanced by Janney and others, but it is still hypothetical. The solution of this chemical problem may, however, explain the inconsistencies met with in Graves' disease when compared with other hyperthyroidal conditions. For example exophthalmos, which can not be produced experimentally by excessive thyroxin administration. It may also explain the beneficial results of the now empirical administration of Lugol's Sol. in what might seem unsuitable cases.

This simple classification makes it possible by little more than a cursory examination and a few questions, to definitely decide the type of pathology to be studied.

The physical symptoms of the colloid and exophthalmic types, we are too familiar with for me to make comment upon, but there are points with reference to the ademonatous type that will bear referring to.

This type is primarily toxic or non-toxic. The non-toxic type may exist at birth and remain non-toxic throughout life, producing no trouble apart from local pressure symptoms and deformity. They are however, potentially toxic.

The patient presents none of the symptoms of the exophthalmic type but the gland is prominent, distinctly irregular in outline and nodular.

The processes behind these nodular growths are:

1. Simple non-toxic adenoma.
2. Progressive toxic adenoma.
3. Cyst.
4. Syphilis.
5. Localized or chronic foci of infection.

With such inherent pathology, it is obvious why such glands develop startling changes. The parenchyma may be displaced by the adenomatous tissue and a condition of hyperthyroidism evolve, or what is more common, stimulated into over-activity with its sequelae of toxic symptoms.

Progressive toxic adenomas develop most frequently in later life and will average four times the weight of the exophthalmic type. The enlargements are usually noticed 10 to 12 years prior to the development of toxic symptoms, whereas the exophthalmic will show toxic symptoms within a year. Its toxic syndrome is progressive, rarely marked by crisis as is seen in the exophthalmic. There are no eye symptoms, as we see in Graves' disease, nor are digestive disturbances or skin phenomena so prevalent. Neither are the nervous and psychic symptoms the predominating feature of the case as in Graves. The B. M. R. averages 25% lower than in Graves. Their points of similarity are: tachycardia, tremors, loss of weight, nervous disturbances and enlargement of the thyroid gland, though the organ is dissimilar in outline.

This leads to the consideration of the greatest aid we have in the study

of the pathology of the thyroid; viz., the study of the B. M. R. For, as in diabetes hyperglycemia is the basic symptom, so in hyperthroidism, increased metabolism is the basic symptom from which we estimate the degree of disturbance. It affords something more definite than the ordinary clinical signs can possibly do. It has long been known that disturbances of the thyroid were attended by relative changes in metabolism. This knowledge however, could not be put to practical use till normal standards had been established and simple methods perfected to compute metabolism and its variation from normal standards. This has been accomplished notably through the studies of DuBois, Benedict, Dryer and others so that we can now estimate the activity of the thyroid with remarkable accuracy by determining the metabolic rate and comparing it with the normal standard.

By basal metabolism is meant the actual minimum heat production of an individual under what may be termed basal conditions. The basal metabolic rate is the per centage variation of the individual from that expected of a normal subject under similar conditions. By minimum heat production is meant the heat produced by the body after all sources of food absorption has been eliminated and further, the protection from heat dissipation resulting from muscular or psychic activity. In other words, the test is made while the body and mind are at rest.

The technique of basal metabolism estimation is not simple and unless carried out with scrupulous care and patience, is subject to many sources of error. To what extent basal metabolism estimations is going to be of help to us in our thyroid cases depends largely on our conception of disturbed metabolism. To assume that all variations in metabolism or heat production of the body are due to thyroid irregularities, and that the B. M. R. *per se* is a definite index to the thyroid activity is of course, absurd. Infections of various natures, whether by direct stimulation of the thyroid parenchyma, or other cellular activity under toxic influence, increase the metabolic rate. Again, lymphatic leukemia, diabetes, cancer, hyper-pituitarism and wasting disease decrease. Such conditions must be eliminated before the B. M. R. can be applied to thyroid activities. Furthermore, one test does not constitute a study of B. M. R.

The conditions which in my work I have found B. M. study essential to are:

1. Those cases of enlarged thyroid in which there is doubt as to whether we are dealing with hyperplasia or hypertrophy; the border line cases.
2. Toxic goiter for pre- and post-operative study.
3. Hypothyroidism.
4. Differential diagnosis of hyperthyroid conditions from psychoneusis, myocarditis and other heart conditions presenting tachycardia.

Two or three briefly stated cases will illustrate:

1. Female, age 16; highly nervous. Complaint, general neurosis; rapid heart, loss of weight. Physical examination shows a small symmetrical goiter; pulse rate 120. Heart moderate dilation and mitral murmur transmitted to the axilla. Emotional imbalance. Information required: to what extent is the thyroid involved? The B. M. R. gave a plus 8.2, which is well within the

normal rate. The thyroid was excluded; diagnosis of valvular heart with psycho-neurosis established. Operation absolutely contra-indicated. Diagnosis of toxic goiter had been made and thyroidectomy advised.

2. Female, age 20: Typical exopthalmic, B. M. R. plus 45. Second reading one week later plus 62.9. Operation deferred on the account of case being in the ascending wave. Referred to Crile clinic where rate rose to plus 75. Ligation was done and later thyroidectomy.

3. Female, age 65: Complaint, rapid heart action and substernal pain. No definite physical findings on first examination. B. M. R. plus 54. Later large substernal goiter was demonstrated. Patient not in operable condition and died a short time later with unmistakable syndrome of toxic goiter.

I have dwelt unduly long on basal metabolism as a diagnostic aid in the classification of goiters, so must pass other diagnostic aids with but cursory mention.

1. Sugar tolerance: This test loses its significance when we consider that other endocrines exhibit similar reactions. There is nothing conclusive about it, and there is no parallel to the degree of thyrotoxicosis.

2. Colloidal test: Is not suitable for the man in general practice to make use of. It is not commonly used.

3. The Goetch test: In the hands of competent workers is useful. It runs over 80% parallel with the B. M. R., but after all it gives us little but an index to the degree of disturbance of the sympathetic nervous system, and not of disturbed metabolism. Personally I have disregarded it.

4. The therapeutic test: Has its place and should be used in cases where more accurate tests are not available.

CONCLUSIONS

1. Goiter suspects must first be classified by physical findings, clinical data and history. On this and this only can the diagnosis be made.

2. The B. M. R. will verify the diagnosis, and decide the functional activity of the gland.

3. The B. M. R. is the most reliable diagnostic aid we have in the study of hyperthroidism.

TUBERCULOSIS

THE GREAT WHITE PLAGUE

By DR. G. D. LIND

Continued from January

Dr. Thomas of Chicago, estimates that the State of Illinois loses every year, no less than $36,000,000 from this disease. His estimates are based upon the economic value of the human lives which are cut short each year, the average earning capacity being taken into consideration. He thinks it a fair estimate to consider that if proper steps were taken at least fifty per cent of this sum might be saved every year, or $18,000,000 by curing half of the subjects of the disease.

Although not formerly clearly distinguished from all other diseases, yet there is history to show that it has ever persisted as the captain of the hosts of death in all ordinary times. There were periods, however, in which the plague, cholera, smallpox and some other diseases carried off honors. These were the pestilences, more dreaded than war or fa-

mine, which periodically swept the world before we had learned their true nature. They made rapid progress when once started in a community, because so readily contagious. They died down like fire when the supply of fuel became less. But tuberculosis has, until recent years, made steady progress in its march of death. It is not making rapid progress now. We have been waging a brave fight with this enemy, and how have him on the run. There is not so much tuberculosis today in Europe and America as there was even twenty-five years ago. Another twenty-five years at this rate and it will have diminished to an encouraging degree, and in less than a century it will have vanished.

The first great stride toward arresting this demon's destructive march was made when we discovered the true nature of the disease. A spy was sent into the camp. He found the enemy's weak point, and now we are "fighting it along that line," and expect to keep it up until we have the enemy in the last ditch.

People used to think they were born with tuberculosis, that the fates had marked men for destruction in that way. But here and there was a man who believe it was contagious. In Italy in the eighteenth century the animal death rate was so great that the King of Naples decided to try vigorous measures based on the theory of the contagiousness of the disease. In 1782 all physicians were required to report the disease under a penalty of 300 ducats for refusal, and banishment from the country for the second offense. Laymen attempting to evade the law were imprisoned. The furniture and clothes of all dying with the disease were burned and the houses renovated, even to replastering the walls. The effect of such drastic measures was to diminish materially the death rate for this disease. This is scientific history, read in the light of the fact that the germ was not yet discovered, or even suspected. Exactly 100 years later, and not very far from the same spot the germ of tuberculosis was discovered.

A few years ago I lived in St. Louis. I bought my sugar and coffee from a broad-faced German grocer who spelled his name Koch. One day I accidentally learned that he was the brother of Dr. Robert Koch of Germany. But who is Dr. Koch of Germany? There is not a physician in the civilized world who does not know of Dr. Robert Koch. He is the man who, with his stains and cultures and his microscope, patiently working as only a German can, discovered a little plant about one ten-thousandth of an inch in length, or such matter, which he had the night to name, if he did not name it *Bacillus Tuberculosis.*

Klebs and Villman and Cohnheim were searching for it, but Koch succeeded first, and gave us a method of staining it so that any physician today who has a microscope with high powers, a few chemicals and a work on bacteriology can easily demonstrate the germ in the spittle of a consumptive patient.

Dr. Oliver Wendell Holmes once said that if approached by a being from another planet, and asked to be shown the most wonderful instrument produced in this world he would show him a stereoscope. Now I have always been a great admirer of Dr. Holmes, but I must say I think he made a mistake in this instance. He should have said the most wonderful

instrument made by man is the microscope. I know if I were asked to point out to the being from another world the most wonderful discovery ever made by mortal man, like the traditional Washington, I would say, I cannot tell a lie, it is Koch's discovery of Bacillus Tuberculosis, and he made it with his little microscope.

Perhaps you have a curiosity by this time to know what Bacillus Tuberculosis looks like. Well, it is so small, and so transparent, and so devoid of limbs and features that when it was pointed out to you, you would not see anything that looked like anything you expected to see. When we look into a microscope with its reflecting mirror adjusted, we see a circular space of light. When the object is prepared properly, and the lens properly adjusted you see the object and objects in this circle of light. When a bit of consumptive spittle is spread out on glass, dried, passed through two different colored stains, each in succession washed out again by the proper fluid, then you may see everything in that spittle colored blue except the germs, which will be colored red, and will appear as little red sticks, the whole looking something like what I have tried to draw on this sheet of paper.

We know these things are plants, we know that their multiplication and growth in the body of an animal causes the disease tuberculosis. It has been proven over and over again by inoculating animals and by cultivating the germs in properly prepared substances which act as a soil, and which we call culture media.

Dr. Johnson is said to have defined a flea as an animal infinitely small, but endowed with infernal activity. The activity of Bacillus Tuberculosis is not in its power of motion, for it has not been demonstrated that it can move at all, but in its power of reproducion and the secretion of a toxin, or poison of great power, it makes up in numbers what it lacks in size, like the chintz bug, and the grasshopper. It is a very devil for ubiquity and a codfish for prolificacy.

The germs enter the system mainly through the nose and mouth in breathing. There is more than a possibility, a strong probability that frequently they are taken into the stomach by using milk from tubercular cows. Dr. Newton thinks a law should be passed making a semi-annual test of every dairy animal in the United States compulsory, and providing for the slaughter of every one showing evidence of tuberculosis. We may be obliged to come to this before we succeed in exterminating the disease. We can kill the diminutive monster which is fast killing the human race. We cannot follow the germ into its fastnesses in the blood and tissues of the body without killing the patient, but we can kill it before it enters the body. Australia has had too many rabbits and has offered big prizes to the man who would rid the country of the plague. Any child can kill a rabbit. A certain multi-millionaire has offered seven million dollars for a remedy for the cure of tuberculosis. He may as well offer seventy times seven millions. He never will have an opportunity to part with his money in that way. If he had possessed the merest rudiments of a medical education he never would have made such an offer. Yet, strange to say, every cross roads store in the United States has on its

shelves, and has had for years, a sure cure for the disease, if we are to believe the labels.

I am here tonight to tell you that tuberculosis is what you have been in the habit of calling consumption, and long ago called phthisic, and that it is not only entirely preventable but generally curable, though not with drugs. First, I want to tell you what has been done by medical men and governments to prevent the spread of the disease, and to cure those already infected.

There is not a civilized nation on earth that is not doing something to prevent the spread of this disease, but there is so much yet to be done —the world of filth and poverty is such a large one—that one is appalled at the prospect of what is before us. Our large cities, and smaller cities and towns, are in many cases veritable breeding places for the germs of tuberculosis.

The germs are evidently being thrown out of the body by way of the expectorated matter from the lungs. Now, if this matter could be immediately destroyed by burning or disinfecting chemicals, and if all coughing were done in a cloth, or paper, which would be burned or disinfected before the spittle could dry, it would be only a matter of time when the germs would be exterminated. But when the consumptive coughs without holding a cloth over his face, he projects millions of germs into the air, along with particles of mucus which may fly into another person's mouth and be swallowed, or strike particles of furniture and clothing and walls to be dried into an inpalpable dust, which every movement of the atmosphere distributes where the germs can be inhaled by others. When he spits, if on the ground, on the floor or on his clothing, the same drying process sends millions of germs into the air again to be inhaled by the next victim.

Even talking and laughing is dangerous if precautions are not taken. It has been demonstrated by a German professor that in speaking, a man may distribute germs to the distance of two or three feet into the air. Hubener placed a man one foot, eight inches from plates smeared with an adhesive substance and made him count aloud for ten minutes. The plates represented a surface of 31 square inches. On these 1,000 to 1,500 germs were found. The public telephones are a source of danger. Particles of matter from persons talking, dry on the transmitter and may be inhaled by another person using the instrument. In Vienna the telephones are furnished with napkins bearing the inscription *"wipe."* Flies and other insects can carry the germs and sometimes are doubtless important means of disseminating the disease.

If the germs had no natural enemies, such as sunshine, fire, and disinfecting chemicals, and if water did not hold them down for a time, the world would long ago have been depopulated of human beings. Cold is not an enemy. The germ will live in ice, and are not destroyed by the greatest cold known. It is in the dark holes and corners of our cities mainly where the germs may live until dried and ready for transportation by the air. Sunshine is the greatest natural destroyer, and moisture keeps them out of the air. It was found that consumption was alarmingly on the increase among the street sweepers of New York City. The sweat

shops and close factories where many men and women are crowded with no ventilation is where the danger is great. The slums of our cities, the large tenement houses, where light and air is at a premium, and filth abounds, are good breeding places. The air in such places is heavily laden with germs. Those occupations which confine people in close rooms suffer the most.

The human body naturally resists the growth of the germs. They are found in ninety per cent of persons who frequent public places, but only in about ten per cent do they find lodgment in the tissues and blood, and get in their destructive work. The Germans have a saying, "Jederman hat am Ende ein bischen tuberculosi." The disease is not hereditary in the strictest sense as formerly supposed, but there may be a hereditary weakness which enables the germs to get hold. An unhygienic life, excess in drink and diet, dissipation and overwork with insufficient food, will predispose to the disease because the vital resistance is lowered. This is true of every other germ disease.

Tuberculosis is an appropriate name for the reason that it is characterized by the presence in the lungs and elsewhere of little lumps of cheesy matter called tubercles. Why has it been called consumption? Because it causes a wasting or consuming of the tissues of the body. One of the surest signs of the disease is continuous and progressive loss of body weight where there can be no other assignable cause. It is a disease of the lungs. In perhaps ninety per cent of cases it is, but it is sometimes a disease of the bowels, of the brain, of the tonsils, of the bones. What is commonly called white swelling, a disease of the joints, is tuberculosis of the bones. People die of tuberculous diseases of the bowels and bone, and consumption is never even suspected by anyone but the intelligent physician, and if he pronounces it consumption the people are ready to dub him an ignoramus, because they have always associated consumption with a cough and spitting of blood from the lungs. The disease is therefore more prevalent than anyone dreams of. You may have consumption and no cough or lung symptoms whatever.

Dr. Osler, the greatest physician America has ever known, the plumed knight of medicine (who is now leaving us, and our only consolation is that what is our loss is Europe's gain), says the problem of tuberculosis is essentially a home problem. "In an immense proportion of cases, the scene of the drama is the home—on its stage the acts are played, whether to the happy issue of a recovery, or to the dark ending of a tragedy, so common place as to have dulled our appreciation of its magnitude. In more than 400 homes of this country there are lamentations and woe tonight, husbands for their wives, wives for their husbands, parents for their children, children for their parents. A mere repetition of yesterday's calamities, and if the ears of your hearts are open, you can hear as I speak the beating of the wings of the angels of death hastening to the 400 appointed for tomorrow. That the appalling sacrifice of life is in large measure unnecessary, that it can be diminished, that there is hope for even the poor consumptive, this represents a revolution of feeling from an attitude of oriental fatalism, which is a triumph of modern medicine."

The public crusade against this disease is arranged in three lines. First, instruction of the profession and the people, a campaign of education. Second, preventative measures to check its spread among the people. Third, the application of methods for the relief of those already infected.

The profession is already alive to the importance of the subject. The Illinois State Board of Health has recently issued a circular on the Early Diagnosis of Tuberculosis, for distribution to the physicians of that state. It sets forth in concise form all the information to be obtained by an exhaustive research in the fields of recent foreign and American literature of medicine. Special attention is directed in this circular to the fact that whenever tuberculosis exists to an unusual degree, inspectors will be sent to assist in investigating and taking proper steps to arrest the spread of the disease. Innumerable articles have appeared in Medical Journals, discussing from a physician's standpoint, the dangers of infection, the means of prevention and the curability of the disease. The *Index Medicus* gives a list of 500 articles in medical journals, all of which have appeared during the past year.

The public is being instructed as rapidly as possible. This lecture is part of the general program of the campaign of education. Two magazine articles I have seen addressed to the public, and millions have read them. One is by Eugene Wood, running through two numbers of *Everybody's Magazine;* the other by Samuel Hopkins in *McClure's* for January. These writers not being physicians have made some pardonable blunders but on the whole, their teaching is true, and should be heeded.

Up to recent date forty-eight American and five Canadian associations for the study of tuberculosis have been founded. There is one National association, with a board of directors composed of twenty men from all over the country, men whose names stand at the head among practicing physicians. New York State has the greatest number of associations, no less than six. These associations are for educative, preventative and curative purposes. There are one hundred and twenty-seven hospitals and camps for the special treatment of tuberculosis in the United States, Canada and Hawaii. New York State takes the lead again with thirty-six hospitals. Eight million members of fraternal societies of the world are now making a move toward establishing a great sanatorium for consumptives among their members. A committee was sent to Mexico to select a site for an immense farm, where outdoor exercise and profitable labor in stock raising can be carried on. Although not intended as a money-making scheme, it is believed that expenses can be met by an organized system of production.

In Indiana the state board of health has instituted a system of instruction to the public school teachers in matters pertaining to the prevention of tuberculosis. Experts are giving talks to the pupils in the public schools, and the most influential newspapers are printing editorials on the subject, at intervals. When a death from consumption is reported the board sends pamphlets to the family in regard to disinfection and offers gratuitous assistance. In Ohio a similar method is followed. The Chicago Tuberculosis Committee sends lecturers to speak at teachers' institutes.

The Chicago Board of Health has issued a pamphlet of instructions to consumptives in several different languages, and the Boston board is doing the same.

Thomas Carlyle said there were 1,500 million people in the world, mostly fools. I don't think there are quite so many fools as that, but there are far too many. There are two classes working to oppose all that is being done to educate the people. The one class consists of the fools who have an insane dread of catching the disease, or fear that contact with the afflicted will injure their business. Men and women are losing their jobs because their employers in many instances are afraid they will infect their establishments. Some have been driven from place to place, failing to get employment, and have died of persecution rather than of consumption. Then we have the quack doctor and manufacturers of patent medicines who are not fools, but are smarter than the real doctors in the financial sense. The fools are those who believe what they say, and their name is legion.

You must remember one fact, my friends, it is, that when a physician makes a discovery in medicine it is not his property, but the property of all who may want to use it. Edward Jenner gave his immortal discovery of vaccination freely to the world. Honors from all nations, but not wealth from the million poor was his reward. Morton did not patent his discovery of anaesthesia, and tens of thousands of the victims of injuries and surgical diseases can sing his praise today. Sir Joseph Lister gave his valuable method of antiseptic wound treatment freely to the profession and to the world, and today few soldiers die unless the bullet strikes a vital spot. Formerly more died from after effects of wounds and from preventable diseases than were killed in battle. Roentgen didn't even give his discovery a name, but called it the X-ray, much less get a patent on it. These men gave freely to the world, what cost them the better part of their lives to learn.

Should a physician in good standing among his fellows make the announcement that he can cure any disease by some special treatment of his own, and propose to keep that treatment secret, that minute he is cut to the death by all of his fellow physicians. He at once loses caste, and is henceforth a "Pariah" among men of his kind. Yet people will believe what they read in an almanac or newspaper about somebody's wonderful cure of some incurable disease. There is a man now advertising in the papers, and claiming that he can raise the dead. The quacks and advertisers keep the real doctor away as the poet will express it in these lines:

> No class escapes them—from the poor man's pay
> The nostrum takes no trifling part away;
> Time too, with cash is wasted; 'tis the fate
> Of real helpers to be called too late;
> These find the sick, when (time and patience gone)
> Death with a tenfold terror hurries on.

The economical but misguided father believes that a twenty-five cent bottle of medicine he gets at the grocery will save his child from death by diphtheria, and the doctor is called too late to use anti-toxin, and save the child's life. The law has helped a little in preventing the spread of this disease, but nothing compared to

what it might do. Public opinion must precede the law. Our legislators are wise people, but they are too easily influenced by the yellow metal and its representatives. It is a curious fact that gold can draw like a magnet almost all things to itself. If the newspapers didn't make money advertising patent medicines, and the legislators could not be bought, there would not be the least trouble in the world to suppress the manufacture and sale of that which not only does harm, in itself, but keeps the doctor away in many cases where he might save life. The number of consumptives who today are relying on some body's consumptive remedy, perhaps cod liver oil that never saw a codfish, or some golden medical discovery that was never discovered but stolen from a physician, now out of date and well named golden because its sale brings in the gold, is quite incomputable.

There are twenty-eight states which have laws prohibiting spitting in public places. The Health Department of New York City is now after the spitters in earnest. Recently twenty-five sanitary squad police have been detailed to watch offenders during the evenings on the streets. They are no longer warned, but arrested at once if seen spitting. Even the little city of Hinton, W. Va., near where I live, has forbidden us to spit in the streets.

It is not generally known that the University of Chicago owns a large number of tenement houses in Chicago, which are veritable breeding places for tuberculosis. The seven million dollar offer referred to awhile ago is to be given this institution if they discover a cure. Perhaps they are breeding the disease for experimental purposes. I once heard of a lady naturalist so enthusiastic in the study of bed bugs that she gave them bed and board in her own house. There is not a city or town of considerable size in the country that does not have some objectionable rat holes that need burning, but which could be renovated and disinfected and the inmates compelled to obey the simplest principles of health care. The danger is not altogether in tenement houses. Many a man lives in the best of hygienic conditions and is making a brave fight against the disease at home, but is obliged to work in a factory where the air is bad, along with a consumptive whose expectorations he is obliged to inhale, simply because a mercenary employer does not want to incur the extra expense of providing better workshops, and the law is slow in compelling him.

So great is the resistance of the human body to the germs that one must be exposed many times to become infected, but constant daily exposure, together with bad habits which diminish the resistance, will bring anyone under in time.

Among the attempts at prevention of the spread of the disease, New York City has done the most. Dr. Herman N. Biggs, head of the health department, has attracted the attention of the civilized world by the vigorous work he has done. He has reduced the death rate by more than forty per cent in the past fifteen years.

Continued in March

THE WEST VIRGINIA MEDICAL JOURNAL

JAS. R. BLOSS - - - - - - - - - - - - - *Editor*

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Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

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A WORD OF GREETING

By STERRETT O. NEAL
Newly Appointed Executive Secretary

Offices of the West Virginia State Medical association have been opened in Charleston.

The location is the Smallridge building, 1013 Quarrier street, just two blocks east of the post office, adjacent to all of the hotels and near all of the doctors' offices in the downtown district. The telephone number is Capitol 102.

Offices have been equipped with a view of establishing permanent headquarters; real, state headquarters of which every member of the state association may feel proud because, after all, whether the present appointee is in office or not the offices still will be conducted. The prescription, taking this progressive step, has been written, and it has been filled.

The writer is rather at loss to find words for this initial message. Frankly, he would much rather greet each and every member personally, because, in that manner, a concensus of opinion could be obtained that undoubtedly would work to the best interests of the organization. However, he fully expects to visit every component society at the very earliest possible date.

The possibilities of a permanent headquarters for the West Virginia physicians appealed to the writer from the outset. And here, a little history might be written in.

Returning from New Orleans, where I served as night city editor of the South's greatest newspaper, *The Times-Picayune,* for more than eighteen months, I contemplated reentering the West Virginia newspaper field again. There were several propositions before me, and then I heard of the state association's program to establish permanent headquarters.

Inquiry brought out the fact that Dr. Jas. R. Bloss was one of the guiding lights in the movement and that Dr. C. A. Ray of Charleston; Dr. J. E. Rader of Huntington; and Dr. J. Howard Anderson of Marytown, were on the committee in charge.

Maybe it was because my imagination has been keyed up through more than twelve years of newspaper service. Anyhow, immediately the possibilities of making a success of such a plan began to appear. After Dr. Bloss had outlined the aims and policies in a tentative way, I immediately decided to make application for the position. It was duly taken up through the proper channels and a selection was made from a group of applicants.

Now, in this first message, I am not going to say that I expect to make a howling success as your secretary. It has been my experience that the fellows who started with glowing statements of what they expect to do usually lose their pep and ambition and get into a rut. I have seen too many newspaper men start on a new job and look like world-beaters for a month and then turn in work absolutely inferior to the cub reporter's.

But I will say that my enthusiasm has not waned one iota, that the possibilities of performing service increase in number with each passing day. Already several tentative plans have presented themselves which should save the members of the state association more than their annual dues. In fact, every time I discuss this new work with a physician or surgeon I get a new idea.

Here are a few of them, for example:

Through co-operative purchases, books may be obtained at a saving.

Through co-operative orders, personal prescription blanks may be obtained at a saving, as well as other printed supplies.

Through the same co-operative plan, accident and workmen's compensation reports may be ob-

tained—since the compensation commission has ceased supplying them.

Matters of insurance will be presented to the next state convention in Bluefield.

The *Medical Journal* can be made bigger and better. And here it might be said that Dr. Bloss is to be complimented for the efficient manner in which he has conducted the *Journal's* business management. He was a layman in the publishing business even as I now am a layman connected with the medical profession. I only hope I prove to be as much of a success in my position as he has been in his.

Comprehensive publicity can issued, intended to build up good will for the association.

Leg work can be done for every member. Every city newspaper has its "leg men." They are the fellows who run down details for their city editors. Often they are not writers, but they get the facts. I am not a physician or a surgeon, but if I know what is wanted, I certainly will bend every effort to get the information.

And there are numerous other ways in which this office can be of service. The only thing asked is that members give us an opportunity to serve.

The personnel of state headquarters promises to keep "doctor's hours" if necessary to perform any duties that may arise. Each day's work will be completed that day if we have to stay up all night to do it. We hope to rise to all emergencies even as doctors arise to their emergency cases.

And so in conclusion:

There have been those who forecast a falling off in membership because the annual dues were increased to $10.

However, it has been our experience with members of the medical profession that they will pay for services given as they expect pay for their services.

If the time ever arises when this office fails to give adequate service, it is likely that this office will realize it even before President Jeffers and members of the Council ascertain the facts. And once we do reach that realization, we will have things in shape for our successors at once.

We are going to strive for accuracy and service—and make membership in the state association an investment, not a liability.

Thank you!

WHAT WE NEED

Every member of the West Virginia Medical Association to promptly pay his 1925 dues and constitute himself a committee of one to influence some one doctor who is not affiliated with the association to join now and reap some of the benefits which are sure to come out of the new era which we have entered with the year of 1925.

The new, full-time secretary is now installed in his offices in Charleston and at work. Mr. Neale impresses us as a "hustler" and willing to do more than his part, but we, as members, who are to be directly benefitted, must help him. Being an experienced newspaper man, he has suggested ideas to us which are by no means visionary but entirely practical, and when promulgated, as they will be from time to time, will attract your

attention and justify our faith in the success of this venture.

The writer has been in active practice for nearly forty years and would naturally not expect to be benefitted personally beyond the realization of a lifelong ambition to see the West Virginia Medical Association classed as second to none in comparison with others.

Our state laws are good, but we are going to get better laws.

Our hospitals are No. 1, and our doctors and surgeons are Class A, but our association has been allowed to drift because everybody has looked upon it as the other fellow's job. The fact is, it's a job for all, so let us prevail on everybody to get in harness and help us old wheel horses *pull this hill.* —C. A. R.

ATTENTION SURGEONS

To those who expect to have papers for the surgical section at Bluefield meeting, please let me have the names and subjects, if possible, at once. I am especially anxious to have a few very short papers by the younger surgeons.

A. P. Butt, *Sec. Surg. Sec.*
Elkins, W. Va.

SHOULD A FORMER EPILEPTIC MARRY

Should a person who has had epilepsy marry and have children? Will the children of a person who has had epilepsy and has recovered be afflicted with the disease.

A leading medical authority answers these questions in the January issue of *Hygeia*, popular health magazine, published by the American Medical Association. He says:

"Heredity unquestionably is an important factor in causing epilepsy. It must be remembered, however, that there are many different forms of epilepsy and in some the influence of heredity is much less than others. Before giving advice concerning a particular case, it is quite important to know the facts and nature of the epilepsy in question.

"The commonest form of epilepsy is that spoken of as essential or idiopathic epilepsy, and it is in this variety that heredity plays a large part. Many studies have been made of the families of epileptics and the figures vary within wide limits. It is, however, probably fair to say that epilepsy will be found in about 20% of the families of persons suffering with essential epilepsy.

"From another point of view, it has also been said that the children of persons with essential epilepsy frequently are born dead or die in infancy, many of those who survive show some form of nervous disease and possibly 25% develop epilepsy.

"The danger of giving birth to badly tainted children is probably greater when epilepsy has been present in other members of the family or when there have been many examples of nervous disease. That the risk of transmitting epilepsy to the offspring is considered serious is evidenced by the fact that some states prohibit by law the marriage of epileptics without a certificate that they have fully recovered.

"Even when the convulsions have ceased for a considerable time, careful investigation of the family history and as exact a diagnosis as possible of the kind of epilepsy is necessary before advice can be given as to the propriety of marriage and reproduction. These investigations should be

made by a competent physician, preferably by a specialist in nervous diseases."

PEDICULOSIS, CHIROPRACTICALLY SPEAKING

The ranks of chiropractic are torn with dissension. There are two camps the Big-endians and the Little-endians, or, more descriptively, the strict constructionists and the liberal constructionists, the literals and the latitudinarians. The strict constructionists are the 100 per cent boys. To them pathology and therapeutics begin and end in chiropractic. All human ailments, from soft corns to hardening of the liver, are due to subluxated vertebrae impinging on nerves, and the cure of all these ailments lies in the "adjustment" of these subluxations. Those in the latitudinarian camp, on the other hand, take a more rational, if less orthodox view of both pathology and treatment. They admit that there are certain pathologic states that are not explainable on the chiropractic theory, and that there are certain conditions that may be more efficiently treated by methods other than the "chiropractic thrust." The amount of feeling exhibited by the opposing camps is characterized by more heat than light. The chief and most valiant exponent of the orthodox school of chiropractic is B. J. Palmer of Davenport, who is familiarly dubbed by his disciples "B.J." This individual is the son of D. D. Palmer, who founded the "Palmer School of Magnetic Healing," which, as the "magnetic healing" game became passe, evolved into the "Palmer School of Chiropractic. A year or so ago, the Palmer School of Chicopractic at Davenport brought suit against the City of Edmonton, an Edmonton physician and the College of Physicians and Surgeons of the Province of Alberta asking $20,000 damages for matter that had been published that the Palmer concern considered libelous. It may be said, in passing, that the Davenport institution did not get a verdict but had to pay its own costs. The star witness for the chiropractors was B. J. Palmer, the redoubtable "B.J." Palmer's testimony under oath in this case makes very funny reading, or it would be funny if one could forget that chiropractic is a menace to the public health. One of the questions asked Palmer was relative to the chiropractic treatment for lice. Palmer oracularly answered:

> "The chiropractic philosophy constantly imbues the same fundamental thought that all external or internal germs, or other scavengers, are scavengers strictly in the sense that they live upon the body waste and dead matters; the purpose of the chiropractic adjustment being to make normal tissue that there would be no waste matter upon which any kind of scavenger could live either inside or outside of the body."

Then followed these questions put by the attorney for the City of Edmonton, and the answers made by B. J. Palmer:

> "Question: And what particular vertebra did you teach them to adjust for lice on the head, if any?
>
> Answer: The adjustment for any scavenger would depend entirely upon where that scavenger was.

Q: Well take scavengers such as lice on the head; what vertebra would you adjust for those?

A: In the cervical region.

Q: And suppose you had body lice in the groin, what vertebra would you adjust for those?

A: In the lumbar region.

Q: Any particular vertebra?

A: It would depend entirely upon the particular one sublaxated. It might fluctuate in different individuals.

Q: What fluctuations would there be there?

A: From the second to the fifth, inclusive; it could be any one."

Comment on this would be painting a lilly and gilding refined gold. —*Jour. A. M. A.*, May 26, 1923.

We have carefully preserved the above editorial from the Journal of the A. M. A. for almost two years. It has been kept for use in our Journal in the February, 1925, issue. It is very illuminating in its information and I trust it will prove of interest to our readers. Some of you may remember it, if so, please pardon its repetition.

THE EDUCATION OF LAYMEN

Physicians have never been able to arrive at a definite conclusion and form a definite plan for proceeding upon this line. All admit the importance of undertaking it and yet no comprehensive campaign has ever been outlined. It is possible that it has appeared too much like advertising; too much like quackery. Thus no two men in our profession seem to be able to agree as to just what should be done.

For quite a time this thought has been in our mind and at last the plan comes, to begin, like charity, at home, to begin with an effort to educate those laymen who have sufficient confiidence in us to have us for their family physician. It seems that it is the best way in which to begin this work.

As a beginning the articles on "Fake Doctors" were reprinted in a size convenient for mailing to our patients along with their statements (and to those who did not receive statements that particular month) a supply is kept on the reception room table and they are handed to office patients as well. We might add that a supply of these papers has been purchased by the Committee on Policy and Legislation of the A. M. A. for use in those state legislatures about to meet. We have had inquiries concerning them from the examining boards and health Boards of several states. Several of West Virginia's county medical societies have purchased them for use by their members.

Now for the next piece of educational work. The American Society for the Control of Cancer recently sent us a little reprint on "Facts About Cancer." It was sent to "The Editor, *West Virginia Medical Journal.*" We read it over carefully. It is good educational matter to put in the hands of our patients. They will read it if it comes from "my doctor." So it seemed good to secure a supply of these for use in a similar way to the others. The cancer society will supply them to us if we but ask for them.

Of course this is but a "little one-man campaign of education" and will reach but a small number of the thousands who should be informed. It seems to be the best plan we can

evolve so far. It is not in any sense of the word advertising and will do good because our private patients trust us and know that we would advise only for their good.

Will not the members write us what they think of this method? If some better idea or plan can be advanced we wish to adopt it.—J.R.B.

A CHANGE IN COMMITTEE APPOINTMENTS

We are advised that Dr. R. H. Walker of Charleston, has been appointed on the Committee on Public Policy and Legislation instead of Dr. M. V. Godby.

COUNTY SOCIETY REPORTS

MARION COUNTY SOCIETY

Jas. R. Bloss, M. D.,
Huntington, W. Va.

Dear Doctor: Our society met last night at 7 p. m. following a very good chicken dinner, at the Fairmont Y. M. C. A.

The usual faithful few, consisting of Pres. Holland, W. F. Boyers, C. W. Waddell, W. J. Leahy, H. S. Keister, S. D. Howard, E. W. Strickler, L. N. Yost, H. R. Johnson, C. O. Henry, J. A. Reidy, E. P. Smith, J. B. Clinton, C. L. Parks, G. H. Traugh, and Dr. Carl Carter, as guest, were present.

Dr. L. D. Howard presented two rather unusual cases; (1) a man with stone in the bladder who had been previously operated within 6 months for prostatic removal, and (2) a woman with polycystic kidney.

Dr. E. P. Smith presented a case of persistent haematuria due to a kidney ruptured through traumatism.

Dr. J. A. Reidy of Monongah, presented a case of hemiplegia which involved successively the left side, then right and terminated within three days due to pneumonia.

Following these reports of clinical cases, Dr. Carl Carter of Fairmont, was elected unanimously to membership in the society.

The application of Dr. Etlor Pitony was referred to the board of censors.

The secretary then read his report for the year, as follows:

Attendance at meetings and papers by the following:

Jan. 29, 18, Dr. J. N. Simpson.

Feb. 26, 17, J. H. Wagner, Pittsburgh.

March 25, 13.

April 29, 17, Dr. Robert Hood.

May 27, 14, A. H. Colwell, Pittsburgh.

June 24, 14, F. B. Utley, Pittsburgh.

July 29, 18.

Aug. 26, 10.

Sept. 26, 26, Drs. McBee, Morris and King.

Oct. 28, 22, Dr. F. L. Hupp.

Nov. 25, 10, Dr. Chas. Koenig.

Dec. 30, 16.

As you can readily see out of a membership of 58, our attendance is very poor. Programs were furnished by the speakers mentioned above and members who did not avail themselves of the opportunity to hear the papers presented cheated no one but themselves.

The following new members were received during the year: Dr. G. V. Morgan, E. W. Strickler, Jan. 29; H. L. Horton, Aug. 26; E. F. Sheppard, Oct. 28; Carl Carter, Dec. 30;

The following members were dropped for non-payment of dues: B. F. Conway, H. S. Falconer, G. L. Howell, W. H. Kunst, Phebia Moore, H. R. Yost, H. S. Yost.

The following members died: F. W. Hill and W. C. Ogden.

The treasurer delivered his report and showed the society to have a balance of a fair amount on hand. Following the above reports, election of officers was held and resulted in the following:

E. W. Howard, president.

C. L. Parks, vice-president.

G. H. Traugh, secretary.

C. W. Waddell, treasurer.

Board of censors: J. A. Reidy, W. T. Leahy, J. B. Clinton.

Delegates to State Association: E. P. Smith, J. A. Reidy, C. W. Waddell, W. J. Leahy, L. D. Howard, H. S. Keister.

The following heads of departments of Cook Hospital were elected:

J. B. Clinton, general surgery.

L. D. Howard, gynecology and obstetrics.

J. A. Reidy, internal medicine.

H. R. Johnson, ear, eye, nose and throat.

L. D. Morris, anesthesia.

H. H. Carr, x-ray.

C. L. Holland, pediatrics.

C. W. Waddell, clinical pathology.

C. L. Parks, gastro-enterology.

It was moved by Dr. Henry, seconded by Dr. Leahy, that the secretary be instructed to recommend to the county court of Marion county that the Marion County Medical Society favored the appointment of a physician to be coroner. This motion carried. Adjournment followed.

Some of our members are not altogether clear about the reason for the increase in state dues from $5.00 to $10.00 per year. Please explain this in detail in the *Journal.*

Respectfully,

G. H. Traugh, *Secy.*

MERCER AND McDOWELL

The annual banquet of the Mercer County Medical Association was held Thursday evening, December 8, in the club room of the Hotel West Virginia, and added interest in the event was given by the presence of a large number of McDowell County Medical Society members who had availed themselves of the opportunity of a joint meeting for perfecting an organization to entertain the State Medical Association in Bluefield, June 9, 10, 11 and 12.

Members of the two societies, their wives and especially invited friends attending the banquet numbered about one hundred, and the meeting was pronounced the finest ever held by the local society.

Immediately following a delightful dinner of several courses, the retiring president, Dr. J. B. Kirk, with pleasing remarks introduced the incoming president, Dr. R. O. Rogers. The purpose of the meeting was set forth and the organization for the entertainment of the State Medical Association was perfected by appointment of the following committees:

General Arrangements: Dr. H. G. Steele, chairman;; Dr. J. Howard Anderson, Dr. A. G. Rutherford, Dr. John H. Bird, W. H. Wallingford.

Sub-committees:

Finance: Dr. H. G. Steele, Dr. J. C. Killey, Dr. Carl Smith, Dr. Uriah Vermillion, Dr. B. S. Clements.

Meeting Halls, Committee Rooms, etc.: Dr. David Littlejohn, chairman; Dr. J. B. Kirk, Dr. Thomas E. Peery.

Commercial Exhibits: Dr. David Littlejohn, chairman; Dr. Wade H. St. Clair, Dr. C. M. Scott.

Hotels: Dr. F. T. Ridley, chairman; Dr. E. M. Tanner, Dr. John McGuire.

Entertainment: Dr. O. S. Hare, chairman; Dr. J. Howard Anderson, Dr. S. R. Holroyd, Dr. G. G. Rhudy.

Publicity: Dr. W. L. Peck, chairman; Dr. A. G. Rutherford, Dr. David Littlejohn, Dr. H. G. Steele.

Automobiles: Dr. T. E. Vass, chairman; Dr. Chas. T. St. Clair, Dr. A. H. Hoge, Dr. W. B. Stevens, Dr. J. E. Blaydes.

Scientific Exhibits: Dr. H. G. Camper, chairman; Dr. G. L. Todd, Dr. C. J. Reynolds.

Clinics: Dr. A. H. Hoge, chairman; Dr. Wade H. St. Clair, Dr. A. G. Rutherford, Dr. Chas. F. Hicks, Dr. G. L. Todd, Dr. W. H. Wallingford.

Badges: Dr. W. C. Slusher, chairman; Dr. H. H. Haggart, Dr. E. W. Horton.

Reception: Dr. J. Howard Anderson, chairman; Dr. S. R. Hoyroyd, vice chairman; Dr. A. H. Hoge, secretary. All members both societies.

Golf Tournament and Use Country Clubs: Dr. W. W. Rixey, chairman; Dr. W. B. Stevens, Dr. R. V. Shanklin, Dr. John Bird, Dr. Chas. T. St. Clair.

Ladies Reception and Entertainment: Mrs. Wade St. Clair, chairman; Mrs. W. B. Stevens, vice chairman; Mrs. A. H. Hoge, secretary. All doctors' wives.

Registration: Miss Verna Echols, Miss Amelia Burton.

In course of the meeting several members of the McDowell County Society were called upon for addresses. Those responding were: Dr. W. L. Peck of Coalwood, president of the McDowell County Medical Society; Dr. J. Howard Anderson of Marytown, former president of the State Medical Association, and A. G. Rutherford, chief surgeon of the Welch Hospital. All of these speakers made very pleasing addresses and assured the local society in Bluefield the state meeting here in June would have the full support and co-operation of every physician in McDowell county.

It was of special interest to have present Dr. J. Howard Anderson, who for so many years has been closely identified with the State Medical Association here for the first time about ten years ago. Now at that time those living in the northern section of the state knew little of the southern section and the good feeling and impression gained by the meeting. The development of southern West Virginia in the last ten years will startle most of them who come to Bluefield next June, Dr. Anderson said, and concluded with the statement that the meeting in Bluefield this year will do much towards bringing about a better understanding and knowledge of the two sections of the state.

An attractive feature of the evening was splendid musical program rendered by talent drawn from Mercer and McDowell counties. The program was opened by Mrs. W. B. Stevens of Eckman, who sang three solos. She was accompanied at the piano by James Elmer Brown, of Bluefield. Mrs. Stevens was followed on the program by several instrumental selections rendered by a trio composed of Vincent Paoliello, violinist; Dr. H. H. Haggart cellist, and James Elmer Brown pianist. Mrs. David Littlejohn sang two solos accompanied at the piano by Miss Ella Holroyd of this city. Mrs. C. J. Reynolds of Bluefield invoked an immense amount of applause by readings well rendered and very appropriate. The program was closed with two piano solos by Miss Ella Holroyd.

The real spirit was evidenced at the meeting to make the undertaking the McDowell and Mercer County Medical societies have on hand the meeting of the State Medical Association, a grand success.

OHIO COUNTY

Dr. M. A. Blankenhorn of Cleveland, O., was the speaker before the Ohio County Medical Society on Friday evening, December 5, his subject being "The Clinical Significance of Jaundice."

To those men in West Virginia who had Dr. Blankenhorn give them discourses during the past year at Fairmont and other points, it will not be necessary to speak of the high quality of this lecture.

Men of his stamp should be encouraged because they belong to that sincere group in America who aim to put America on a par with the undeniable excellence of German, French and Austrian investigators. They attempt to adopt clinical medicine and the laboratory findings, and are in the estimation of this writer, a step beyond the purely research man, necessary as he is to the progress of medicine.

The doctor has an easy delivery and is pretty sure of himself, and what he has to say. He went into the reticuloendothelial system, and you that have not looked up this rather new feature in medicine had better do so as it appears to be intimately connected with a great deal of the diseases you have been puzzling about as pernicious anaemia, biliary pigments, icterus, and so on. He touched on the experiments of Minkowski and Maunym McGee, Mann, McGrath, Whipple and Hoover. Then gave the various tests; found many unsatisfactory; believes a good one on urine is to shake it and observe color of foam. Does not believe there is a real good one for stools. Believes blood should be used rather than urine for bile tests similar to blood sugar rather than urinary sugar. States there is a kidney threshold for bile pigment, and that it will splash through so to speak, in relation to its combination with albumin or protein. He covered all the various kinds of jaundice and drew the differentiation between icterus by obstruction and by disease, the one having more pigment than the other in the blood. He offers this as of clinical importance. Familial jaundice he believes to be due to a poor quality of red corpuscles which is quickly made and quickly breaks down, and that furthermore that their reticuloendothelial systems may all be rather below par.

As a whether the bile pigments are formed in liver or in the cells of Kupfer we gathered he inclines to the view the liver really elaborates the pigment. He distinguishes between bile pigment attached to protein and that which is free. Treatment with alcohol practically demonstrating the difference.

Dr. Drinkhard, we understood, was all "lit up" for this discourse, but an emergency called him away, and he was not able to use his acquisitions. H. M. Hall also discussed the paper. He was candid enough to admit part of it had rolled over his head, but that he had nevertheless received a lot of inspiration. He assayed to use some recently acquired information, the source of which the speaker guessed the very first time. He also admitted he was a general practitioner that was swimming a little beyond his

depth. He sat down before the life preserver was cast to him.

Dr. Phillips inquired as to icterus in arsenophenamine administration.

Dr. Blankenhorn replied that the real cause was not as yet made out. He stated some very good men kept on giving it, holding it due to the syphilis. He did not, however, give it, holding it due to the arsenic.

Dr. Hupp asked for a rationale to prevent disaster where operation was necessary. Dr. Blankenhorn referred him to the work of an old Lakeside man, Dr. Bell of Rochester, Minn., and the use of big doses of calcium lactate 4 to 5 days before operation. Or, secondly, as the doctor said, transfusion of blood from donor furnishing the clotting substance direct.

A committee composed of Dr. Wingerter, Phillips (E.M.), and Fulton was appointed to make report on one health officer for entire county.

Mr. Cody Marsh addressed the society in the interests of the Red Cross.

H. M. Hall.

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Friday night, December 12, the Ohio Medical Society had for their speaker Dr. Walter E. Dandy, of Baltimore, Md., his subject being "The Diagnosis and Treatment of Brain Tumors."

In this department we are allowed the so-called "reportorial license," which to those who do not know, is similar to poetic license. We don't have to be so dignified or so scientific as the others do in the body of the *Journal*. It is pretty fortunate here because we are going to say Dr. Dandy's was a dandy lecture, and from boyhood up the word dandy has always meant the best there is. It corresponds to Roosevelt's "bully." Believe us he would have said so too if here tonight, and before we go on we should like to say "Boy, page Bluefield, please," for although we perhaps think they feel they can make their own program out, yet if they will listen to us, which in this case means everybody there, we will tell them that here is their chance for their main event next May. Don't worry about Wheeling, because Wheeling can stand the whole lecture over again.

The minute you saw Dr. Dandy walk up to speak, speak is right, he never uses a note, you knew here was a master. His appearance, manner, voice, bearing and carriage represent what to the writer is the last word in lecturers. If he had talked on materia medica we believe we would have enjoyed it, but he didn't have it, he had one of the most difficult subjects and one you have heard read about frequently at medical meetings, but not like this. He began with a short talk. In this he said brain surgery looks no more formidable now than appendectomies did once upon a time, that progressive nervous symptoms, choked discs, headaches not easily accounted for, progressively affected co-ordination and gaits, with convulsions, especially if the latter came after the age of twenty-five, are largely suggestive of brain tumor. He spoke rather with a tinge of sarcasm how these were nearly always called syphilis, whereas in his opinion syphilis was the farthest removed of any of the maladies in its symptoms from tumor. Encephalitis and abscess were far more likely to conflict in the making of a diagnosis. He states if you know your anatomy, have the courage and are careful and make proper diagnosis, brain surgery

involving the fourth ventricle, stem, pons or cerebellum is not nearly so difficult or complex as popularly thought.

Now the wonderful and satisfying part of the lecture was that he actually has a clear-cut way of making as precise a diagnosis, in fact more precise than anywhere else in the body, as you could possibly wish for in any case. He has had one hundred and five cases in the last year, pictures of many he showed tonight.

Now we have no doubt like the proctologists who inject piles, he has a finesse about this whole matter that makes what would be difficult for anyone else, easy for him, and like as not Potter with his podalic version he had better do most of the operating for a while, yet we believe he is sincere when he says it is not as difficult as it looks. He showed the finest, clearest, most instructive plates and beautiful drawings we have ever seen, and he stands up and in the most beautiful English and with one of the most satisfying voices explains them until they look clear as daylight. It is a positive delight to hear him.

The main points are these, he does not believe in decompression, believes it aggravates and hastens the localization of the symptoms. He departs from the usual by saying positively and unequivocally that you should *not* do spinal punctures in cases of brain tumors or increased intra-cranial pressure. If you do you will cause alterations in position of the medulla and exodus. He referred always to death, especially sudden death, as exodus. As the reporter has had this done time and again he feels what is commonly known as chagrin. He advocates removal of the tumor, wherever it is. A good many were around and near the fourth ventricle, it makes no difference to him, and as to an opening, his drawings showed he certainly made a big hole; says they heal just as well as small ones and with no more evil results; insists you have to see things, or else don't try to do the work.

But to get back to diagnosis. He draws a line around from the ears, crossing over the normal site of the ventricles and make two holes, one over each lateral, the size of a small coin, local, then he puts in a syringe, draws off the fluid and injects as much air as he drew fluid out (no more). By taking two stereoscopic plates laterally and an ordinary one anterio frontal, and at the same time having the patient hold their head at various angles, he can fill all the ventricles with air. The plates are as plain as chest plates. When there are tumors present it is positively awe-inspiring to see how they press out of shape and obstruct the various ventricles, as well as dislocate the cerebrum on one side. There were men in the audience who learned to do diagnosis is from his plates before he told what the final result was. Following the plate diagnosis, he showed very artistic drawings giving the tumor in situ or else after removal.

If your technique has been good, bloody fluid bespeaks tumor or aneurysm. If your lateral are symmetrical then you must have a cerebellar pontine tumor. His talk and plates on pachymeningitis hemorrhagica were very instructive. He operates in coma and often cures, early diagnosis imperative, he makes a clean cut radical removal.

Drinkhard talked on the value of the lecture. Noome said it was one of the best, if not the best, the society

had ever had. Hoge asked about brain abscesses (symptoms same). How many plates? (Three). How many sides injected (one side only). Hernia? (No). Inject with syringe only? (No, makes small opening). Hupp asked if he believed in putting syringe needle into brain? (No, as little damage to brain as possible.) Ackerman, Did he drain abscess? (No, altered *intra* cranial pressure if possible with syringe as stated. Drain only allowed other infections to travel up and did no good. Allowed them to wall off. Brain handled infections with a little help well with little scarring. Hall asked if there were not violent fluctuations in the activities of the pulse, heart and respiration when working about fourth ventricle. (No, he avoided injuring the stem and therefore had no trouble, although he admitted a tyro might experience some trouble.)

We don't know who brought him here, but our thanks are theirs.

H. M. Hall.

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On Friday, December 19, 1924, The Ohio County Medical Society held their regular meeting, and had as a speaker of the evening Dr. Andre Crotti, of Columbus, Ohio, his subject being, "The Etiology of Endemic Goitre—Results of Research Work," with lantern slide demonstration.

Anyone writing may be said to have their words laid away in a series of drawers. Some are never wrapped up; they are used so often; others but seldom are. The word "brilliant" we have securely laid away. It does not fit in very often, but it surely did tonight. Dr. Crotti has the air distinguished, as he stands up so preeminently sure of himself, swinging gracefully his nose glasses, it cannot be said that he has not the grand manner quite continental in its gestures, with all the conviction that such an ensemble carries; and it seems a striking thing that this man of foreign birth uses the English language with far more effectiveness than most of us to the country born.

It is in itself a satisfying thing to hear our mother tongue used so well, with such telling gestures, as to be almost like listening to a new language. But of course Dr. Andre Crotti has more than his manner of talking to carry him on the crest of the wave. Known everywhere goitre is discussed it is superfluous to describe him or his work, yet there was much about the evenings talk that was not only new; never has been published; but startling as well.

Endemic Goitre is described as having three possible causes; one, geologic, two, iodine insufficiency; three, due to micro-organisms; as it is found all over the world where this mineral and that substance are and are not found, he thinks that disposes of that. He thinks we are a little hasty in ascribing it to iodine insufficiency. He says we do not say syphilis is due to mercury and arsenic insufficiency. He believes it happens to be a good antiseptic probably. Furthermore, you have it at the seashore. Seattle, Washington, he named in particular. Even workers in iodine have it. Because it is found here and there; now in one part of a mass of people living together with one water supply, and not in another part with a different supply, he believes it comes in the water. He spoke of the crew of Capt. Cook, away back in the sixties, who being short of water met an iceberg, melted the ice into water and had an epidemic of goitre shortly after. Then

he proceeded by a series of slides to show a micro-organism he isolated from the secretion of cases of goitre. It grew through a life cycle not unlike pictures of the malarial *protozoa.* This would eventually seem to be a host for a *spirochete* differing from the *palladae.* They are examined under dark field illumination and one or two of the pictures greatly magnified looked like our old friend scabies without the legs. This was intensely interesting as well as startling and the large crowd perhaps even now don't know whether they witnessed evidence of a dawning epoch in goitre or not. Next he showed pictures and slides made from the examination of the waters of Springfield, Ohio, which place has a great deal of goitre. They showed the identical micro-organism. The same spirochete. There was a respectful silence as this was shown. Everybody looked at everybody else and said, "Who knows? Maybe we are in on the so-called great discovery."

Dr. Hupp congratulated him because everybody felt there was little chance for discussion. Dr. Schwinn the same. Dr. Goodwin did not want iodine insufficiency altogether thrown out.

Dr. Crotti finally said that iodine should not be put in drinking water in reservoir because some would get it to whom it would practically be poison.

It was a great evening by a most distinguished man who simply offered you a probability. He may be wrong; he says so himself, but the men here were inclined to this view; they hoped he was right and would be among the first to do him honor.

H. M. Hall, M. D.

On Friday, January 9, the Ohio County Medical Society held their regular meeting, having as the principal speaker Dr. Elmore B. Tauber of Cincinnati, Ohio, his subject being "Burns."

When we saw the subject "burns," it occurred to us that a man who could come over 300 miles and just label his subject a mere plural word of five letters was going to be incredibly good, or just as incredibly bad. For, after all, these everyday subjects are like well known songs in a singer's program; they must be unusually different and well done, since if they are not the crowd being familiar with them is going to know it at once. You can sing some folk songs from the Scandinavian and do it indifferently, furthermore you may do so and get away with it as the crowd don't exactly know how the Scandinavians really think it ought to be handled, but if you sing the "Last Rose of Summer," it is well for you to know how to do it and do it remarkably well. Burns are the "Last Rose of Summer" in a medical meeting. We don't know that they did, but it would surprise us not if maybe a few men stayed away tonight because it was just "burns" that was going to be discussed. We are going to chance it by saying they missed "a little gem of a paper," because Dr. Tauber finished in a little over half an hour. The poor and burns we have with us always, and as the Doctor says, we are adding more sources of burns every day we become more civilized and more scientific. Fire and chemicals used to be the simple sources, but radium, electricity, x-ray, new chemicals, are increasing the cause all the time. He divides burns into three stages only. First, inflammatory on-

ly; second, vesicular; third, deeper structures. Causes: 1, fire; 2, rays, (radium, x-ray, sunlight, etc.); 3, chemicals; 4, liquids (water, molten metal, etc.)

His great point, that he was very emphatic about, was to *not* treat the burns as a mere burn, but to go at once into preventive measures for the aggravating complications later. Every severe burn is a case of shock, so he at once injects an intravenous solution (500 to 1000 cc.) of salt or soda or glucose 5% at once on admission. Insomuch as there is great accumulation of blood in the *splanchnic* area, he considers you have a cardio-renal situation to be met and he uses adrenalin chloride 10 minims repeated. Digitalis and caffein as well. Uses fluids in rectum if absorption is not good, recumbent position, and if necessary at times head lower than body. He is strictly against morphine sulph. as well as hypnotics. He avers that the damaged burned tissue is highly toxic containing a toxin somewhat resembling snake venom. He cited that burned dead tissue injected into a rabbit will not give it any serious symptoms. Burned *living* tissue injected into a rabbit is lethal in forty minutes. This was interesting to us as solving some of the problems of burns we have had in the past. One-half surface of body burned is fatal in adult; one-third in child, but he further states 20% of good area near to that burned is not performing its function and must be included in the reckoning. If the white count goes over 50,000 and the red over 8,000,000 or the coagulation time less than two minutes, then look out for a bad ending. Pain in abdomen or blood in stools, is, as always so reckoned, a sign of duodenal ulcer. As the patient is usually healthy when burned they receive only a liquid diet. He insists on *no visitors,* a private room, nurse day and night and plenty of fresh air in room. He feels these are very essential and unusually important. He usually keeps very close tab on fluid intake and output; *urinalysis* every day. He favors the open wet dressing, using watever you like, boric, salt, Dakin, or weak bichloride, with just as little changing of dressing as you can get along with; not over once a day. He thinks paraffine is alright for small burns, and if you insist, the large ones, but on account of drainage and admission of air he favors open wet methods. To constrict vessels and prevent absorption he adds, (we so understood) 10 c.c. adrenalin to every pint of fluid.

Good discussion followed. Silver asked about the method of anesthetic and scraping out all dead tissue. Answer: Patient in shock, do no more than you must. Did not favor it.

Howard Phillips asked when to remove damaged tissue. Answer: Not until 24 hours if possible; then as much each day as you can. What about Keloids? Answer: Only occur in colored race. If in white race he suspects the "bar sinister."

Massive doses of radium, straining out certain rays; anti-senetic treatment. Dr. Scheppe spoke of venesection when red count reached high point. Answer: Knew of it as well as the method of transfusion after it. He preferred diluting blood with solutions named in lecture. Hall asked when to open vesicles? Answer: At once.

Noome stated burn shock was to him same as any other "shock," a thing we recognized but did not know

the real cause of. As burns ought to be drained he felt the paraffine method should be discarded. He felt that the idea of morphine locking the secretions was pretty much of a myth. He disagreed with the speaker and stated he used it. Answer: Some of the speaker's colleagues also disagreed with him too, but he found if you carried out the above treatment you would not need it, and he personally felt that where he received patients that had been given morphine they did not do so well. It was a personal view.

The speaker also warned against allowing the patients to form hard scars in fixed flexed or extended positions, and if you changed these at times you would avoid much of the lost function.

He read his paper a little rapidly, has a slightly nervous delivery, but had a large audience of about 40 to 50 doctors completely absorbed in his talk. We call that a very flattering testimonial to a man talking on "burns."

He closed by saying that he was working on a serum taken from convalescent burn cases, and giving it to the fresh ones. The outcome was still in the future. He believed it was going to be all right. You and I must admit we often overlook the constitutional side of burns. This man tells you it is all important. We heard the criticisms afterward. We believe he did as much direct good as any talker we have had in a long time.

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Friday night, January 16, the evening's program consisted of an address by Dr. Julius Friedenwald, of Baltimore, Md., whose subject was "Some Remarks on Cancer of the Stomach with Special Reference to Its Early Diagnosis."

Perhaps at the very time this is being written, somewhere in West Virginia, either in one of its cities or high up where the winter winds are whistling through the trees in a mining village, some physician is doing his utmost to separate a lot of confusing symptoms so he can tell his patient the answer to what he has just asked him, "Doctor, have I a cancer of the stomach?" And the Doctor realizing just how little he has made out conclusively, is asking himself inwardly, "Am I slipping?" I can't really answer this man in a clear fashion, his question. Perhaps I don't know. Perhaps this is a case for some big man to answer. We know this is going on among us all the time. We do not get the credit for this mental castigation of ourselves. Maybe it is just as well we don't. Perhaps we would not be the world's nearest calling to "idealism" if we were made flabby and soft with too much real recognition and praise. But sometimes this reporter thinks we overdo it. Compared to some we might just as well add all other callings, we do perhaps too much interior flagellation of ourselves. Well, anyway, a big gathering of Wheeling and "surrounding town" medical men made up one of the best and most representative audiences to hear Dr. Friedenwald, we have seen for a long time. They braved an unusually nasty, bad night in the bargain, but perhaps everyone of them had applied to his own bare shoulders bastinado of concern because in the last year he could not, when he so very much wanted to do, diagnose an early cancer of the stomach. He therefore would brave anything to hear how it could be done

from an acknowledged master. Perhaps all of you know the sort of man they faced. A kindly looking grave man; his evening clothes and his manner making you hearken back to when someone like him gave you a diploma. Conservative, dignified, reading his paper with quickness and despatch, he finished by half past nine; and after all was said and done he told you quietly that so far you are justified in your quandery and in your dilemma, for the early diagnosis of cancer is still the complex and unsatisfactory problem it yesterday was. He ran over the usual signs; sudden onset, especially in a man over forty; next paid comment, without much reference to time, anorexia, loss of weight, aneamia and cachexia, blood in the stools, gastric analysis, palpable mass, vomiting, distress over cardiac end, the general exhausted appearance; and yet he said they were for the most part late; perhaps too late in appearing. He gave x-ray but was not prone to put it at the top of the list.

Quick onset was suspicious and he said it was usually not in an old dyspeptic who usually had something else. The pain was likely to be continuous, and although aggravated by eating, was found at all times. Still it was not necessary. Anorexia, one of the best and early symptoms, especially if it is a "new cancer" without old ulcer. Loss of weight was found in a high percentage running from five to seventy-five pounds. But it must be carefully considered. The cachexia was of some value, but not so much in early diagnosis. Blood in stools; more likely late; but it was to be found any time, even after several weeks treatment which was not so likely with ulcer. Gastric analyses helped.

First, although not infallible by any means, the absence of free hydrochloric when grafted on ulcer may not be a good sign. Presence of lactic-acid which came after hydrochloric had become absent Oppler Boas Bacilli. The increasing albumose (Wolff Junghens), a reliable test he thought and very helpful. Alberhalden he thought of little help. He did not hold out, however, the glowing dependence on the laboratory we have often times heard in our day. Palpable mass—not much of a helpful sign of course in early diagnosis. Vomiting, especially coffee ground material the same—not much aid in early relief.

Then he came to x-ray. As most cases started in pyloric end retention was to be expected. He thought a pre-pyloric bulging on the greater curvature was highly suggestive as the force of the wave was directed in obstruction down in this direction. Thought it of great service. But he said you could get it in other affections and especially in the nervous retentions, some of which could run forty-eight hours, it was well to put the patient under atrophine for a day or so to make sure of this point. He said you could have any or all of these symptoms present or absent in early cancer, so his conclusions were, we had yet to wait for some new sign or laboratory method. Therefore, (his final admonition was) if we have no signs or symptoms pathognomonic of cancer of the stomach he would urge an *exploratory incision* in all suspected cases, as the only real satisfactory method of obtaining an early diagnosis. It could be done under local, was free from danger, and al-

though in a measure extreme, it offered the only conclusive way. He dwelt on patients willingness to have it done. Coming from him we suppose *it is the course to take.*

Dr. Hupp paid his usual compliments to the speaker. If you ever want one of your pet speakers to get a "grand send-off" have Dr. Hupp do it.

Dr. Hupp spoke of a case he had where they did a gastro-enterostomy, found a big mass, closed up, later to find it had all disappeared. Although no Wassermann was made he could not believe it syphilitic. He also pointed out the high percentage of early diagnoses the Mayo clinic had reported with the use of x-ray.

Dr. Fulton was a little pessimistic and had the statistics to back him up. He reminded you a little of the popular song at present being sung, and sung last night by Madam Alda over the radio, entitled, "What Will I Do?" He said if you do make an early diagnosis it is not very cheerful at that. The Crile clinic had reported two per cent of cures.

A year or so ago a noted Boston surgeon said in all the cases he had done that year but one was alive. His experience was the same. Dr. Noome said he regretted there had been no new feature for hopefulness. He had not very much confidence in gastric analyses, if any. Had seen all the other signs go wrong too. Recalled a particularly bad case who, instead of anorexia ate ravenously three or four days before he died. Said he understood Dr. Rehfuss had perfected a new method of x-ray which was very successful in making out incipient cancer.

These three men gave ideal discussions. We were very proud of all three of them. We have an affection for our society and when we see our own men get up and without any effort talk in a dignified, scholarly manner address a leader like Dr. Friedenwald, it gives us genuine satisfaction and adds luster to the society.

Dr. Friedenwald closed by saying syphilis could simulate anything, and Wassermanns ought always to be done. Thought if early exploratory was made we could improve Dr. Fulton's statistics. Said he had a pioneer x-ray man with him, and while he had great respect for it he still held it far from infallible.

He closed in a very pretty little speech, thanking the speakers for their frank and helpful discussion. The meeting, perhaps for its character, helped many a discouraged doctor.

HARRY M. HALL.

STATE AND GENERAL NEWS

Ye editor has been complaining that he has had no news from the Kanawha Medical Society. At a recent meeting of the medical society, Dr. J. R. Shultz was appointed as reporter. We will now try to give you all the news you want. In case we give you too much, just drop us a line.

The first meeting of the Kanawha Medical Society was held at the Kanawha Hotel, January 6, 1925, at 8:30 p.m., at which meeting the new president, Dr. C. A. Ray, and the new secretary, Dr. Hugh Thompson, were inducted into office and presided over the proceedings. The scientific program consisted of a very interesting paper by Dr. W. R. Laird, of Montgomery, W. Va., on "Liver Function." Dr. Laird demonstrated by his paper

that he is doing some very high class original, scientific work in his institution and deserves a great deal of praise for it. His paper was well received, considered a classic, was widely discussed and appreciated by all present.

Dr. McQueen demonstrated a colored man with a large aneurysm of the superficial femoral artery. This case drew quite a discussion as to what was the best surgical procedure to pursue.

Dr. C. A. Ray reported a case of a very interesting mediastinal tumor. Death followed this case two or three days later but no pathological reports have been yet available.

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On January 20, a meeting was held at which Dr. M. L. Dillon gave an extremely interesting paper on cataract. He demonstrated a case of an old man, 70 years old, who had been operated on two years ago, which now has 20-20 vision and prior to operation had only 5-200.

Dr. Shultz discussed a technical question.

Dr. John N. Simpson, Dean of the Medical Department of the West Virginia University, was present and gave a very interesting talk. He gave a report of the constant growth of the West Virginia medical department, explained in detail how efficiently he takes care of our boys when they enter other medical schools. The writer feels that if the rest of us were as interested in a four-year medical school as Simpson is we would have long since had one.

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Some of the interesting things about Kanawha Valley doctors:

Dr. M. V. Godbey, who has served his state in several legislative capacities and was always very much interested in the welfare of the state association and doctors in general, has gone to Texas to take up the practice of his profession. Dr. Godbey made the change in location because of ill health. It is rumored that one of the large oil companies is drilling a very promising well on the lease next to the doctor's and that the probabilities are that ere long the doctor will reap a great financial reward. Here's hoping that he makes a million!

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Dr. H. D. Hively has completed his reciprocity arrangements with the State of Texas and he, too, is going to Texas to practice medicine and we have a hunch, to play with the fickle Dame Fortune in oil. We hope that every well he is interested in is a gusher.

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Dr. Geo. W. Shriver, who was previously located in Clendenin, has finished a two-years course in the University of Pennsylvania, post-graduate, and is now serving an internship in the Charleston General Hospital. We do not know where Dr. Shriver will take up his new location. It is rumored, temporarily at Clendenin. Wherever it may be, the community is to be congratulated upon getting a man of his type.

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Dr. Maxfield Barber, who finished medicine at the Medical College of Virginia, 1917, then enlisted in the World War (and by the way, while serving in that capacity was decorated for bravery) served twenty-two months in the Massachusetts General Hospital as an intern in medicine, then ten months in the Boston City Hospital on pediatrical service, has

sent out his cards announcing his location in the Kanawha Banking and Trust Building for the practice of his profession. We welcome him to our midst, as we believe that a man of his type is an asset to the whole profession.

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Dr. Shunk (female of the species) who has been chief resident physician for the Mountain State Hospital for about the last two years, has opened her office in the Kanawha Banking and Trust Building, for general practice. We also welcome her to our midst as we feel that a little of the feminine touch will make some of our meetings possibly less wild but more instructive.

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Dr. John E. Cannaday, whom every doctor in the state knows, is now reaping a reward by sojourning in the land of sunshine and flowers. We hope he is having a very good time. We also understand that Dr. Clarence Schoolfield and Dr. Geo. McQueen can resist the call no longer and are expected to join Dr. Cannaday in the near future.

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Dr. T. A. MacDonald, who is a graduate of the University of Toronto, Canada, is serving his internship in the surgical service of the Charleston General Hospital.

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Mr. Sterrett Neale, who has been in the newspaper game for years, has recently assumed his duties as full-time secretary of the West Virginia Medical Association, and has opened his office in room 211, Smallridge Building, Quarrier street. His telephone number is Capitol 102. We like the ear marks of this young man and believe that he is going to be a great benefit to all the doctors in the state. Look him up when you visit the Capitol City, as we believe he is all wool and three yards long.

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Dr. T. A. Lamb, who has been practicing his profession at Dunbar, has given up his lucrative practice and has become full-time medical officer for the Veterans' Bureau.

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Dr. L. A. Jarrett, who has been located in Charleston, has taken up the practice that Dr. Lamb gave up in Dunbar.

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Dr. Thomas V. Cocke, who finished his first two years in the West Virginia University, then at Jefferson, and then took his internship at Grant Hospital, Columbus, Ohio, is now located at Van, West Virginia, was forced to jump from a burning motor car some few weeks ago and as a result, received a badly broken foot. He is now back on his work.

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Dr. Hymes, who is an intern in the Mercy Hospital, finished medicine at Jefferson, was a visitor in our city recently.

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Dr. Mymes, of White Sulphur Springs, was a visitor with us recently.

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Dr. J. H. McCulloch, formerly of Charleston, now of Beckley, was here looking over the New St. Francis Hospital last week.

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The St. Francis Hospital announces that their new building will be open probably about March 1. We have looked over their new plant and

feel that our city will have something to be justly proud of in their new building.

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The Charleston General Hospital has been open now for several months in its new location, corner of Elmwood Avenue and Brooks Street. They extend to you the invitation to visit them at any time. This gives us five large hospitals in the city, well equipped, with several smaller hospitals conducted for private practice.

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Dr. Dan Barber, who finished at Harvard in 1923, and who is serving his internship in the Hartford General Hospital, Hartford, Conn., was in our city not long ago taking his State Board examination. We hope that when he has finished his internship, May 1, 1925, he is going to make West Virginia his home.

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Dr. Shirkey, Sr., Dr. Campbell, Dr. Cannaday, Dr. Ray and Dr. Raver, were in attendance of the Southern Medical Association in New Orleans.

Dr. Raymond Dunn of South Charleston, is once more a proud papa. This makes, oh, well, just count the fingers on one hand and don't forget the thumb.

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We welcome to our midst Drs. Rucker, Gillespie, Meier and Ross Dodson, full time Veteran Bureau physicians. We are sure we are going to like them and we hope they will enjoy their stay with us.

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Dr. and Mrs. J. M. Ray of Point Pleasant, who were married recently, were guests of the former's daughter, Mrs. C. H. Freeman of Park Hills, Huntington. Dr. and Mrs. Ray were married at Lisbon, Ohio. Mrs. Ray was formerly Mrs. Sophionia Staats, of Jackson county, West Virginia.

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Mrs. F. E. Brammer, of Huntington, entertained in honor of her husband, Dr. F. E. Brammer, recently on his birthday anniversary. A three course turkey dinner was served to the following guests: Dr. W. Byrd Hunter, Dr. B. L. Hulme, Dr. James L. Lilly, Dr. W. N. Rowley, Dr. W. E. Neal and Dr. William F. Beckner.

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At a meeting of the Raleigh County Medical Society, held Friday evening, November 28, at the Imperial Cafenette, the members of that organization elected Dr. Robert Wriston as the new president of the association to serve throughout the ensuing year. Other officers chosen were, Dr. O. B. Lynch, secretary and treasurer; Dr. T. F. Garrett, first vice-president; Dr. F. J. Moore, second vice-president. At the conclusion of the business meeting a banquet was served on an elaborate style and the medical men listened to several addresses by members of the organization. Dr. U. G. Cook has been the efficient president for the past year and has now at the conclusion of his term been relieved by the election of Dr. Wriston.

The meeting at the cafenette was an enjoyable one and the banquet was reported delicious.

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Tuesday night, January 12, the December Clinical Conference of the Ohio Valley Hospital was held.

A testimonial and memorial of respect and affection was adopted after it had been formed by a committee of the staff represented by Drs. Hupp, Fulton and Schwinn. The death of

the president of the hospital, Mr. Walker B. Peterson, was the occasion for its inception, and the members present remained standing for a period in silent communion.

While we have not received any sanction to do so, we are going to recite the talk given by Dr. Reed simply because Mr. Peterson did it that men might pause and heed, and we presume to do it because recalling Mr. Peterson's life we feel the more who profit by his example the greater the good that will be done. "Who would lead must first himself be led" quotes the poet. Mr. Peterson believed in laboratories. He believed in pathological teaching. He had traveled wide and far. He believed that doctors learned more by autopsies than in any way. His studies in Europe made him believe that was the weak point in American teaching, *and it is.* He always wondered why his own hospital had so few, and because it was near his heart and soul he ordered one done on himself as example. *Although it was not really needed it was done* under the direction of Dr. Robert Reed, his lifelong friend and physician. It was a noble act. To us this act was far more splendid than the above memorial or the grand and imposing funeral that was his.

We know what this means. It is an answer to the argument that only the poor and friendless are sought for autopsies. We know the inconvenience for every body in autopsy work. We know the jar to finer feelings, especially to the family, *but it is all swallowed up in the help you give to a profession that is trying its best to make the living live longer.*

The conference then settled down to work, and Dr. Drinkhard gave a talk on Idiopathic Pneumococcic Peritonitis. We hope he writes it for the *Journal.* You may have had a case and did not know it. He picked it up in a conference held in New York. Then Dr. Drinkhard pitched in after his own fashion and talked for a frank discussion of deaths, infections and failures at conferences. The one he attended had a critic and a historian, and nobody's feelings were spared. By resolution a modified form not quite so drastic, but pretty severe at that, was adopted. Clovis showed x-rays of calcified glands that in location and appearance could scarcely be told from gall stones. As for this reporter, he would have had no hesitancy in calling them gall stones.

The conference closed with the usual satisfying lunch of sandwiches and cocoa.

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Wednesday night, January 13th, Wheeling Hospital Conference was held.

The program was the discussion of the removal of flat warts by the use of biniodid of mercury, 1/8 to 1/4 grain.

Election of officers was held. Dr. John Gilmore was elected president; Dr. Webb, vice-president; Dr. O. D. McCoy, re-elected secretary and treasurer.

Dr. Gilmore is one of the most stable and best all round men we have, and his services are ever in evidence.

Dr. Webb is the highest type of general practitioner.

Dr. McCoy is elected time and again, which speaks for itself.

The Alumnae of University and P. and S. School of Medicine, Baltimore, Md., entertained Dr. Friedenwald Friday night at the Fort Henry Club.

The Doctor made a speech explaining the consolidation. Dr. Messerly of Martins Ferry, Ohio, and Dr. Geo. Viewig, also addressed the crowd present. It was a joyous assemblage and a supper was served at midnight.

Dr. Geo. Viewig, about whom we sought help in a number of the Journals, has been re-born (whatever that means). He has attended two meetings of the society to our knowledge, and he claims we missed him at one. He also was the originator of the Schwinn Birthday Party and was one of the leaders in the Alumnae dinner to Dr. Friedenwald.

We hate to go back to the return of the Prodigal Son, but that's the way we feel about happy, joyous Geo. L. Viewig. If we had a fatted calf, or any other fatted animal, we would proceed at once to kill it.

Back of this fooling there is pleasure in the return of a man who is one of the best in his profession in the city, but who, just because he thinks (which is not so) he can't talk on his feet, stays away from his society. We hope there will be no back sliding. There is hope now for three or four more men including George's brother Max.

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Mr. B. Walker Peterson, one of the leading bankers of Wheeling, as well as director in many companies, died January 3, 1925. He was president of the board of the Ohio Valley General Hospital, and the Peterson Laboratory, is named after him. He always took a keen interest in its progress. The only bequest we believe made to any institution outside of his immediate family was left to it. The sum of $25,000 was willed to its endowment fund.

Our honorable members of the legislature are leaving for the front at Charleston. We trust they will bear in mind the attitude they assumed here to the medical profession, while there. The profession here did not undertake to tell them, in an arrogant manner, what to do. They are intelligent men; but they certainly do have the facts to guide them.

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Dr. L. T. Vinson of Huntington, has gone to Hot Springs, Ark., for several weeks.

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Dr. and Mrs. I. C. Hicks and daughter Xilphia of Huntington, are spending the winter months in Florida.

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Dr. R. E. Vickers of Huntington, and Miss Blanche Bush of Ceredo, were married January 10, 1925. Dr. and Mrs. Vickers have gone to South America on an extended trip.

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Dr. and Mrs. W. E. Neal of Huntington, were at home New Years Day from 4 to 10 o'clock p. m. A large number of their friends called.

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R. M. Wylie, M. D., announces the opening of offices in the First Huntington National Bank building, Huntington, W. Va. Practice limited to diseases of internal medicine.

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Raymond M. Sloan, M. D., announces the opening of offices in suite 410, Robson-Prichard building, Huntington, W. Va. Practice limited to diseases of children.

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Dr. and Mrs. J. Edward Hubbard of Huntington, have returned from a visit in Florida.

Dr. T. N. Goff of Kenova, was a recent visitor in Cleveland, O.

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Dr. R. B. Nutter, who sustained a broken left arm and other minor injuries while making professional calls in East Shinnston several days ago, is now improving nicely. While the doctor was incapacitated his work was looked after by Dr. J. H. Underwood of Shinnston.

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Dr. and Mrs. H. S. Keister entertained with a bridge party in their home in Fairmont to honor their guests, Dr. and Mrs. George A. Windsor of Livingston, Mont. Roses were used about the living rooms, and a buffet supper was served.

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Charged with sending first class mail as third class, Joseph Guarascio, Fairmont man who advertises himself as a "suggestive, magnetic healer," is being held by Commissioner G. H. Gordon, Clarksburg, under $500 bond for the next term of federal grand jury, which will meet January 13, in Parkersburg.

"Professor" Guarascio drew a fine of $300 and costs in the Marion county criminal court last spring when convicted of practicing medicine without a license.

He advertises his method of healing as "suggestive magnetism," and uses no drugs or instruments. By the mere placing on of hands he states he is able to cure ills of body or mind, including epilepsy, insanity, sciatica, drug habits and nervousness.

Guarascio's method of treating epilepsy is to stretch the patient on a couch, press and rub the forehead, stroke the body from breast to feet, the while admonishing the patient to "believe he will get well." The patient then pays $2.50 and returns two or three days later for another treatment.

Guarascio makes no diagnosis or examination, but merely questions his patient, accepting his statements at face value, according to one man, who received treatment for epilepsy from the "professor," although he had never had a more serious illness than a bad cold or the measles.

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Dr. and Mrs. Carter S. Fleming of Fairmont, have returned from Hillsview, Pa., where the former was recuperating from a severe illness. Mrs. Fleming spent a part of the time with him.

MEDICINE AND SURGERY

SURGICAL PATHOLOGY OF THE URINARY TRACT IN INFANTS

The surgical pathology of the urinary tract in infants was studied by Henry G. Bugbee and Martha Wollstein, in New York (*Journal A. M. A.* Dec. 13, 1924), the material being furnished by 4,903 necropsies. In this series were found 117 cases of kidney lesions. Among these cases, twenty-four other malformations and eleven other abnormal conditions occurred. Only one case of single kidney and one case of double ureter were found. Polycystic kidney was noted fifteen times; renal calculus thirteen times; horseshoe kidney ten times; pyonephrosis nine times, and hydronephrosis forty-four times (single, nineteen; double, twenty-five). Six cases of renal displacement and five cases of rudimentary kidney were found. The most common other deformity or malformation was of the heart—five cases. Spina bifida,

esophageal stenosis and pyloric stenosis each occurred twice; imperforate anus and inguinal hernia occurred three times each. Congenital syphilis was present in five cases of the whole series. Two cases presented status thymolymphaticus. As calculi were found in the kidneys of thirteen infants, all with one exception under a year old and one in a child of 11 days, the supposition is that calculi may form in the fetus and that faulty metabolism and the presence of infection in the mother may be the underlying cause. All of these infants harbored an infection, and all but three showed a severe grade of gastro-entertis. The fact that so many calculi were found in infants a few months old shows that calculi may be present from birth, and it is fair to assume that they are more common in infants than has been generally supposed, many definite colics possibly being due to this cause. The authors urge that a thorough investigation be made of all infants, regardless of age, that present an indefinite abdominal tumor, obscure abdominal colics, a disturbance of urinary function, hematuria or persistent pyuria.

EXCISED DUODENAL ULCERS

The experience of Wm. Carpenter MacCarty, Rochester, Minn. (*Jour. A. M. A.*, Dec. 13, 1924), witht 1,269 carcinomatous gastric ulcers, 832 simple chronic gastric ulcers, 425 excised duodenal ulcers and ninety-seven excised chronically inflamed (duodenitis) portions of the duodenum reveals the following facts: 1. Chronic gastric ulcers and duodenal ulcers are not infrequently multiple. 2. Chronic gastric ulcers are usually larger than chronic duodenal ulcers when seen at operative exploration; they have deeper craters with greater diameters. 3. Chronic gastric ulcers vary from 1 to 40 mm. in diameter, and duodenal ulcers vary from 1 to 25 mm. in diameter. 4. Chronic gastric ulcers vary from 1 to 20 mm. in depth, and excised duodenal ulcers vary from 1 to 5 mm. in depth. 5. All coats of the organic wall may be excavated in both gastric and duodenal ulcers. 6. Both types of ulcers may have their bases adherent to some neighboring organ. 7. In general, the relation of the diameter to the depth of the craters is such as to allow the generalization that duodenal ulcers are shallower than gastric ulcers. 8. There is less scar tissue in duodenal ulcers than in gastric ulcers. 9. Duodenal ulcers at necropsy, are usually shallow, having wide craters with sharp, thin edges; those which are excised during life resembling more closely gastric ulcers in shape, being, however usually much smaller. 10. The mucosa of the borders of gastric ulcers is usually hypertrophic and hanging over the crater; that of the duodenal ulcers is usually approximately the same thickness as the normal duodenal mucosa, and does not project over the crater. 11. Postmortem changes are absent in excised ulcers. 12. Duodenal ulcers are usually in the anterior wall of the duodenum; gastric ulcers are usually in the lesser curvature or posterior wall. 13. The majority of the duodenal ulcers are in the first 5 cm. of the organ; they are sometimes found, however, in other portions, and have been found at the papilla of Vater with the opening of the common duct in the crater. This condition is usually associated with cirrhosis of the liver as a result of the partial occlusion of the duct. 14. There are no cytologic

changes in duodenal tubules which suggest that carcinoma develops in them. In this series of 425 ulcers, no carcinoma ulcers were found. During the same period of observations, three carcinomas of the duodenum were observed, but in no instance was there any apparent relation to an ulcer, such as is the case with gastric carcinoma and ulcer.

EARLY DIAGNOSIS OF TRUE HERNIA OF THE DIAPHRAGM

It is the opinion of Donald P. Abbott, Chicago (*Jour. A. M. A.*, Dec. 13, 1924), that true hernias of the diaphragm, especially periesophageal, are much more common than is generally supposed. They are not found in the early stage because, owing to the fact that the sac is very small, the subjective symptoms are often slight. For the same reason, objectively, there are no findings on employing inspection, palpation, percussion and auscultation. The most important means of examining is fluoroscopic. Routine examination of the patient with the fluoroscope will reveal small periesophageal diaphragmatic hernias, which will otherwise be missed.

PHYSIOLOGY OF THE MAMMALIAN OVARIES

A. J. Carlson, Chicago (*Jour. A. M. A.*, Dec. 13, 1924), asserts that at present there is no reliable evidence that ovarian extract effects are specific for the ovary. Until it has been conclusively shown in spayed females that these extracts prevent the atrophy of the uterus and initiate and maintain estrual periods typical for the species, it seems clear that experimental ovarian organotherapy has not been placed on a scientific basis. The reasons for the past failures may be inherent in the complexity of the ovarian hormones and their practical failure to be active when given by mouth; but the ovarian field can point to no such persistent and systematic work of hormone isolation as we have in the case of the thyroid and the pancreas. The sex life of the mammalian female is developed and maintained by the ovaries through continuous and temporary hormone mechanisms. Hormones acting more or less continuously develop and maintain the secondary sex organs and act to increase basal metabolism; temporary hormones from ripe follicles and corpus luteum initiate the estrual cycle, the early interaction between the fertilized ovum and the uterine mucosa, mammary gland hyperplasia and suppression of follicular growth. Menstruation appears to be only indirectly dependent on the follicular and luteal hormones, in that it follows failure of fertilization and atrophy of corpus luteum spurium. But the hormones initiating estrus are necessary precursors, to menstruation. The initial cause in all menstrual disorders may be outside the ovaries and hence not to be affected by ovarian therapy. None of the ovarian hormones have so far been isolated, as determined by reliable biologic or chemical tests. And it is still an open question whether in the experimental animals any of the ovarian functions can be maintained by substitution therapy; that is, by feeding or injection of ovarian extracts.

AN INSTRUMENT TO FACILITATE THE OPERATION FOR BUNIONS

C. F. Eikenbary, Spokane, Wash. (*Jour. A. M. A.*, Dec. 13, 1924), removes the head of the metatarsal by means of the Gigli saw. This has been found entirely satisfactory. It leaves a smooth surface, very little reshaping of the end of the bone is necessary, and it saves a great deal of time in the operation.

THE SURGICAL TREATMENT OF MENINGITIS

Wells P. Eagleton, Newark, N. J., (*Jour. A. M. A.*, Dec. 13, 1924), divides surgical cases of meningitis into (1) fulminating or acute; (2) exudative or subacute, and (3) protective. He is of the opinion that treatment of meningitis has been based too much on the principle of drainage and former classifications have been used too much on etiology. Surgically, pathology and symptomatology should be the basis for treatment, for the only cases that offer prospect of recovery are those in which the infection is not virulent, and those in which it is more or less limited to one part of the cerebrospinal fluid system. It is cases in the early stage, while the process is limited, with frequently but a small number or no micro-organisms and a small or a large number of cells in the fluid from the lumbar region that offer hope of successful treatment. To diagnose meningitis early, all symptoms should be divided into (1) toxic symptoms, under which headache and fever occur, and (2) localizing symptoms. A localizing diagnosis may be made from a careful study of all slight symptoms. Headache, vomiting, pain behind the eye, slight intra-ocular congestion, high cell count, increased fluid from occipito-atloid puncture, excessive fluid on puncturing the dura over the under surface of the temporosphenoidal lobe and a feeling of "ill being" are symptoms not only of cerebral involvement but of localizing value if interpreted in the light of a positive blood culture, a nonreacting labyrinth and previous operative findings. Ocular paralysis may be a symptom of deep cell involvement, but with it is generally associated a localized basal cisternia meningitis, as the third and sixth nerves both pass through the basal cisternia interpeduncularis. The indications for treatment are: 1. Evacuation of the infected fluid while it is still limited to an area adjacent to the primary focus of infection in the ear or nasal sinuses, by surgically attacking the basal cisterna which directly communicates with this area. This must be instituted before the basal cisternae are plugged by exudate and the patient is dying from cerebral sepsis. 2. The placing of the inflamed veins and infected subarachnoid spaces at rest, by ligation of the common carotid of the affected side. 3. Increasing, if possible, the immunity of the cerebrospinal fluid. By transfusing immunized blood into a patient suffering from a beginning meningitis, or blood immunized to the particular strain of streptococcus in the meningitis. This may enable the cerebrospinal fluid to combat the infection even after it has become general enough to show a few micro-organisms in the lumbar puncture. Evacuation of the infected fluid and its replacement by a warm and modified Ringer's solution, subarachnoid lavage, is the third indication.

TREATMENT OF SHOCK WITH GLUCOSE INFUSIONS AND INSULIN

In three cases cited by David Fischer and Myron Snell, Milwaukee (*Jour. A. M. A.*, Dec. 13, 1924) insulin subcutaneously and glucose intravenously caused a rapid cessation of the typical clinical symptoms of surgical shock, much more rapid and certain than by any previous methods heretofore tried. A sterile, chemically pure solution of glucose is used, preferably of 10 per cent strength; 500 or 1,000 cc. may be given, depending on the severity of the condition to be treated. The usual sterile precautions are taken as in other intravenous medications. The solution is allowed to flow into the veins at a very slow rate, so that at least one hour is consumed from the beginning to the end of administration; the longer the time, the better. The amount of insulin to be used depends entirely on the amount of injected glucose. For every 3 gm. of injected glucose, one unit of U-20 insulin should be used; and if H-20 insulin is used, one unit for every 2 gm. The total amount of insulin to be given should be divided into two equal doses, one part given five minutes after the beginning of the glucose administration, and the remainder at the end of the administration. So long as glucose appears in the urine, one need not fear an insulin reaction, for this acts as a safety guide and shows that there is more glucose present in the blood stream than can be taken care of by the introduced insulin. This glucose can be driven off by the injection of a small additional amount of insulin. Since glucose has a diuretic action, and tends to deplete the body tissues of fluids, it is the author's custom to give at the same time fluids by rectum or hypodermoclysis.

THE CONSERVATIVE TREATMENT OF BONE INJURY IN COMPOUND FRACTURES

Instead of advising debridement as the treatment of the soft part wounds, Walter G. Stern, Cleveland (*Jour. A. M. A.*, Dec. 13, 1924), says any advice to be broadcast to the profession at large should read: "Remove as little as possible and always remember that the worst looking and most thoroughly crushed tissues may still be viable." The best results from compound fractures he has seen have been from cases in which, after the field has been thoroughly prepared with ether and iodin, the soft part wounds have been sutured loosely and the skin closed over; in which the fractured bones have not been unduly manipulated or subject to surgical operations of any kind whatsoever, and in which the fracture was securely immobilized and the patient kept quiet and at complete rest until all the danger from infection was over. The worst results he has seen —infection, osteomyelitis, nonunion and death—have been in cases in which, as a part of the immediate treatment, the bones have been plated, wired, screwed, resected or otherwise operated on or unduly manipulated. After a fracture has once been cleansed and put up in fixation, complete rest and quiet is the best means of preventing and combating latent infection. Compound fractures thus treated are "potentially clean," and should not be drained.

INDUCED HYPOGLYCEMIA AS A MEANS OF RESTING AND IMPROVING PANCREATIC FUNCTION

Helmuth Ulrich, Boston (*Jour. A. M. A.*, Dec. 13, 1924), relates the case of a man, aged 23, with diabetes mellitus who was subjected to a prolonged period of hypoglycemia, for the purpose of determining the effect of induced hypoglycemia on carbohydrate tolerance. It seemed reasonable to expect a certain amount of recuperation of the limited, and therefore overburdened, pancreatic function as a result of such a period of rest induced by exogenous insulin administration. The case reported here tends to strengthen this belief because of the following facts: On a diet containing but 40 gm. of carbohydrate, the use of 30 units of insulin a day was insufficient to render the patient's urine sugar free in six days, merely bringing about a reduction of urine sugar from 120 to 84 gm. in twenty-four hours, and of blood sugar from 560 to 308 mg. It was only after insulin had been increased to 45 units that glycosuria disappeared and the blood sugar was markedly reduced. After a period of probably constant hypoglycemia, lasting about four months, on the contrary, insulin was no longer required even with a diet containing 120 gm. of carbohydrate, or about three times the initial amount to hold glycemia at or near the normal level.

A METHOD OF DEMONSTRATING TUBERCLE BACILLI IN THE URINE

In the method described by Stephen G. Jones ,Boston (*Jour. A. M. A.*, Dec. 13, 1924), a catheterized specimen of urine is centrifugated at lowest speed for two or three minutes, thereby removing the bulk of the pus and detritus. The supernatant cloudy fluid, containing a few pus cells and the bacilli, is poured off, one half is discarded and the remaining half is poured into a second centrifugal tube. To this half filled tube, one quarter volume of 95% alcohol is added, the remaining quarter being distilled water. This mixture is centrifugated at highest speed for forty-five minutes until clear, the supernatant fluid discarded, and a smear made from the sediment obtained with a flamed wire loop. The smear is allowed to dry and is then fixed by being passed rapidly two or three times through a Bunsen flame. The centrifuge must be an electrically driven high speed machine. When carrying a load of four tubes, it should make from 2,000 to 2,100 revolutions per minute, which produces a force 1,077 times that of gravity. The Ziehl-Neelson stain is employed. A more delicate stain is obtained if a steam bath is used rather than heating the smear with the direct flame. This is easily accomplished by placing the glass slide over the open top of a can containing steaming water. In this way the stain is heated sufficiently without danger of precipitating the dye. Twenty minutes suffices. The preparation is decolorized by exposure to 30% nitric acid, followed by alcohol (Czaplewski's solution) or to 20% sulphuric acid. The pitfalls are that occasionally nitric acid and alcohol may not decolorize all acid-fast bacilli other than tubercle bacilli. Twenty per cent sulphuric acid will decolorize all other acid-fast bacilli, but may also decolorize tubercle bacilli. The decolorized smear is washed with wa-

ter, and counterstained with methylene blue. Several hours' search will often disclose the solitary group of bacilli which otherwise will be missed.

A DIGEST OF CHANGES BETWEEN THE 1921 AND 1924 TAX LAWS

By H. ARCHIBALD HARRIS
Certified Public Accountant

The following digest has been compiled by W. M. Swindell, Jr., Economist, and Bertha M. Holmes, Washington manager, both of the staff of Archibald Harris and Company, under the direct supervision of Mr. Harris. Archibald Harris and Company are counselors on Accounting and Taxation for the Illinois, Indiana and Tennessee Bankers Associations. They also advise a number of industrial and professional organizations on accounting and tax matters.

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GAIN OR LOSS—RECOGNITION OF

No gain, no loss when corporation in a reorganization exchanges property *solely* for stock or securities in another corporation which is party to the reorganization.—Section 203 (b) (3).

If the corporation referred to above receives, in addition, other property or money the transaction is not entirely tax-exempt unless the recipient corporation distributes such money or other property in *pursuance of the plan of reorganization.* If this is done, no gain and no loss.

If, however, the recipient corporation does not distribute it *in pursuance of the plan of reorganization* the gain, if any, shall be recognized and shall be accounted for by the recipient corporation but not in excess of the sum of money and the value of such other property which is not distributed.—Section 203 (e).

Reorganization same as 1921 except that the 1924 act makes the term include a transfer by a corporation if immediately after the transfer, the transferor or its stockholders or both are in control of the corporation to which the assets are transferred.—Section 203 (h).

"Party to a reorganization" is defined as including a corporation resulting from a reorganization and as including both corporations in case of an acquisition by one corporation of at least a majority of the voting stock and at least a majority of the total number of shares of all other classes of stock in another corporation.—Section 203 (b) (2).

LOSSES—NET

In case of corporations, computation of net losses shall not include dividends allowed as deduction for the tax year.—Section 66 (a) (4).

PERSONAL SERVICE CORPORATIONS

Personal service corporations are not now recognized. (Was section 200 (5) of 1921 Act.)

REFUNDS, ADMINISTRATION

Any income taxes paid by farmers' mutual or other mutual, hail, cyclone or fire insurance companies (if otherwise exempt even though they are not of a purely local character) not outlawed shall be refunded.—Section 1013 (b).

RATES

Corporation income tax rate 12½ %—same as 1921.

ESTATES AND TRUSTS

NET INCOME

In computing net income of an estate or trust there shall be allowed in addition to other charitable deductions, amounts which under the will or deed of trust are to be used for religious purposes or for prevention of cruelty to children or animals or to a public cemetery not operated for profit, (not necessarily contributions to an organization).—Section 219 (b) (1).

In computing the income of any *estate or trust* a deduction shall be allowed for the amount of income which during its taxable year *is to be distributed currently* and the income collected by the guardian of an infant which is to be held or distributed as the court may direct any such amount to be reported by the beneficiary whether received by him or not.—Section 219 (b) (2).

Discretionary trusts are allowed a deduction for amounts properly paid or set aside for any beneficiary.—Section 219 (b) (3).

If no part of the income of the estate or trust is included in computing the net income of a beneficiary the credits for dividends and interest on United States obligations are allowed in computing the normal tax of the trust.—Section 219 (c).

RETURNS OF ESTATES

An estate or trust which has a *gross* income of $5,000 must file a return regardless of its net income. Also must file a return if net income is $1,000.—Section 225 (a) (5).

TAX PAID

Tax shall be computed upon the net income of the trust or estate and shall be *paid by the fiduciary* with two exceptions which are (1) where the grantor of a trust has the power to revest in himself the title to any part of the corpus of the trust and (2) where the grantor may claim the income of the trust, or where the income of the trust may be used to pay premiums on insurance policies on his life (except those irrevocably made to charities or such organizations.) (In these two cases the grantor must include the income of the trust in his return.)

GIFT TAX

Beginning January 1, 1924, gifts in excess of specific exemptions are taxable. Rates are 1% of the gift not in excess of $50,000, to 40% of the gift in excess of $10,000,000.—Section 319.

Gift tax is payable on or before March 15.—Section 324.

Residents of the United States shall pay on sum of all gifts made in the calendar year in excess of exemptions. Non-residents on all such gifts of property located in the United States.

Gifts made in property are to be taken at fair market value at date of gift.

Where property is sold or exchanged for less than its money's worth the excess of fair market value of the property over the amount received shall be deemed a gift.—Section 320.

EXEMPTIONS ALLOWED

American citizens or residents.

1. $50,000.
2. Charitable (etc.) gifts.
3. Gifts of $500 or less to any person.
4. Any gift of property which the taxpayer in the next five years before making the gift received by gift, be-

quest, devise or inheritance or which he acquired in exchange for such gift, if the property when received as a gift was subjected to estate or gift tax.

EXEMPTIONS ALLOWED

Non-resident aliens.

Same as for citizens except the $50,000 exemption is not allowed.

CREDITS

Credit against estate tax of a donor is provided for amount paid upon any gift which is to be included in his estate.—Section 322.

RETURNS

To be filed on or before March 15. —Section 323.

ESTATE TAX

If no executor or administrator appointed and acting within the United States, then "executor" means any person in actual constructive possession of any property of the decedent.

Rates of tax from 1% on net estate not over $50,000 to 40% on estate in excess of $10,000,000.

No exemption for estates of persons dying from injuries incurred or diseases contracted during or in military or naval pursuits as in 1921.—Section 300 (a).

Credit against estate tax shall be allowed for estate or inheritance, etc., taxes paid to any state, territory or the District of Columbia, on any property included in the gross estate, such credit not to exceed 25% of the tax imposed by this section.—Section 300 (b).

Gross estate includes all property to the extent therein of which the decedent has at any time made a transfer or with respect to which he has at any time created a trust where he could have at his death altered, amended or revoked the transfer or trust or where he relinquished such power in contemplation of death except in case of a bona fide sale.—Section 302 (d).

The commissioner may extend time for payment of estate taxes five years instead of three—made retroactive to 1921.—Section 305 (b).

Appeals to Board of Tax Appeals must be made within sixty days.—Section 308 (a).

Where tax shown by executor not paid when due, interest runs at 1% a month.—Section 309 (a) (1).

MISCELLANEOUS

ADMISSIONS

Takes effect thirty days after enactment of the act.

No tax on admission less than fifty cents.—Section 500 (a) (1).

Law does not carry 5% penalty for failure to pay.

Where admission to cabaret, roof garden or other similar entertainment is 50 cents or less there is no tax.—Section 500 (a) (5).

To admissions not taxable are added National Guard organizations, Reserve Officers organizations, posts or organizations of war veterans or auxiliary units of any such posts or organizations.—Section 500 (b).

AUTO TAXES

Effective thirty days after the enactment of this act.

No tax on automobile, truck or wagon chassis costing less than $1,000. If over $1,000, 3%. Sec. 600 (1) (a).

No tax on automobile truck or wagon bodies or automobile wagon bodies (including parts or accessories

thereof sold with or in connection therewith) costing less than $200. If over $200, 3%.

Sale of trucks or wagons shall be considered a sale of the chassis and of the bodies.

Tires and inner tubes, parts or accessories sold to any person other than a manufacturer or producer of automobile truck or wagon chassis or bodies or other automobile chassis or bodies or motorcycles subject to 2½%.—Section 600 (3).

BROKERS TAX

$50 tax does not apply to brokers exclusively negotiating purchases and sales of produce or merchandise.

Other brokers who are members of stock or produce exchanges pay an additional tax based on the value of the seat, whether they pay the $50 or not.—Section 701 (1).

CAPITAL STOCK TAX

No change from 1921 law.

DUES OR MEMBERSHIP FEES TAX

Dues paid to a local fraternal organization among the students of a college or university are exempt.—Section 501.

JEWELRY TAX

Does not apply to any article costing less than $30.

New exemptions: Surgical instruments, musical instruments, eye glasses, spectacles, silver-plated flat table ware or articles used for religious purposes. Does not apply to watches sold or leased for less than $60.—Section 604.

OCCUPATION TAX

In case of automobiles used in carrying school children to and from school the $10 tax does not apply.—Section 701 (8).

STAMP TAXES

Tax does not apply in case of stocks and bonds issued by domestic building and loan associations *substantially* all of the business of which is confined to making loans to members.

Rates on sales of produce on exchanges reduced from 2 cents to 1 cent per $100 or fraction thereof.

Stamp tax on playing cards raised from eight cents to ten cents.—Section 800.

GENERAL MISCELLANEOUS TAXES

Mah-Jong, pung chow, and parts thereof, 10%.

X-ray films and plates exempt from the 5% tax.—Section 600 (5).

TAX AND PENALTIES REPEALED ON

Carpets, rugs, trunks, valises, purses, lamps, fans, etc.

Candy.

Cereal beverages and soft drinks.

Circus.

Dirk knives.

Dues or membership fees, *penalty* of 5% for failure to pay tax.

Hunting and bowie knives.

Jewelry tax 5% *penalty* for failure to pay.

Liveries, livery boots and hats, riding habits, hunting garments.

Motion picture film tax on leases from one affiliated corporation to another.

Smoking stands.

Stamp tax on drafts, checks and promissory notes.

Telephone and telegraph message tax.

Yachts, motor boats and canoes.

$15 tax on public exhibitions not specifically described.

5% penalty for failure to pay excise taxes.

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CANCER OF THE BREAST, ORAL CAVITY, AND BONE

By Dr. Jos. Bloodgood
Professor Clinical Surgery, Johns Hopkins University, Baltimore

Delivered Before the West Virginia Medical Association, Wheeling, May 13, 1924.

I asked the Mayor to stay a few minutes because I wanted him to hear what I had to say about his paper. I have had the good fortune to hear many mayors speak, and it seems to me this is the first time I have heard a mayor get beyond the presentation of the keys. This is the first time in my experience that a mayor of a city, in an address of welcome, has given a few facts, and very important facts. It seems to me to confirm the remarks of one of your many candidates for governor, that preventive medicine is here, and those who really share with the medical profession the preservation of the health of the people—the officers whom you elect—appreciate what preventive medicine is. I would like to see that speech of the Mayor's broadcasted throughout this country, if you could get it on the Associated Press wires.

Here are your deaths for 1923. Since that chart was made up a serum for pneumonia has apparently been discovered. Let us think for a moment what that means. A young man, only graduated from Johns Hopkins in 1918—six years ago—is given the credit for this serum in pneumonia, which has ranked, since the pandemic of influenza in 1918, as the chief cause of death almost everywhere. But to whom does that go back? To Pasteur, the father of bacteriology. Why is that possible in this country? Because of the higher education of the men and women going into medicine. That would be impossible if we did not have these great schools of medicine, where men and women must have preliminary training in science. I do not know to how many men we have

to give this great scientific training to make one like that. My children were asking me about it at breakfast the other morning. We happened to have fish roe, and I said, "I shouldn't wonder if we do not have to have as many as there are eggs in this fish roe."

Now, tuberculosis — years ago Wainright, of Scranton, at the invitation of Osler, came down and showed us that miners in Pennsylvania had less tuberculosis than other people. If there are deaths from tuberculosis, outside of miners, there is some cause for it.

Diarrhea—you have wiped out typhoid, the most common cause of diarrhea, and that diarrhea must be infant diarrhea. There must be something wrong with your milk. When I went to Baltimore what had we in the wards? Pneumonia and typhoid fever. What was in the children's wards? Diarrhea. All that went beyond a certain period died. We could give them medicine but we did not know the other treatment, and continued to feed them the poison while we fought it.

Heart disease, largely caused by teeth, the infected roots of teeth. We have to learn how to recognize the root abscess before the toothache, because the shot of poison, as a rule, is given before the tooth manifests itself in any way.

Nephritis—much dates back to scarlet fever and syphilis, perhaps to whooping cough and diphtheria. The other causes we do not know.

Now let us take cancer. Even if I do not show you the lantern slides I may be able to retain your interest, though that is the hardest thing in the world to do. There is no difficulty in getting people to write; the difficulty is in getting people to read what you write. It is interesting to know that the great journals are as dissatisfied with what they publish as the average doctor is dissatisfied with the education he has. But they tell me that if they should publish in their papers what they feel the people should read, the papers would not be read. Therefore, the great difficulty is not to discover the truth but to get the truth to the people, to get them to listen and understand. Most of the audiences are like the audiences in Vermont when a Republican goes there to speak. It is very difficult to get them to listen to that part of scientific medicine to which they should listen.

Now, let us briefly sketch cancer. Remember, I have been working on what we call the statistics of cancer since 1895, when Dr. Halsted published his first article on cancer of the breast—almost thirty years. I am familiar with it in my own laboratory, that now has almost forty thousand records. The element of lost cases is insignificant—less than five per cent; we know what has happened to almost every one. I am familiar with the surgical statistics of the world; I am familiar with the statistics of radium and X-ray up to date. Now, what do we know from this continuous study, you might say, of the great clinics of the world, in regard to cancer? First, there was a startling thing in the first decade, up to 1900, which has become a less significant thing since 1920. Due to what? To better surgery? No. To radium and X-ray? No. The startling thing in regard to the human race as it came to the great clinics of the world for cancer was that more than fifty per cent had reached the hopeless stage. Do you realize that cancer in almost every lo-

cality has a period of months or even years in which there is so little discomfort that the patient, otherwise uninstructed, pays no attention to it? Pays no attention to the lump in the breast; pays no attention to the sore mouth; pays no attention to the unusual discharge from the vagina; pays no attention, except to buy medicine, to the frequent indigestion; pays no attention to the pain in the arm; pays no attention to the frequent micturition at night. That is, cancer is a slow growth, and the average patient will pay no attention until it is too late. That is why the public today thinks cancer a blood disease, and the average public is right—cancer is a blood disease and is disseminated by the blood. Now we have reduced, in almost every locality, the inoperability from more than fifty to less than ten percent. But remember, because you can remove the lump in the breast, because you can remove the sore from the lip or the tongue, because you resect the colon, because you remove the local growth with its neighboring glands, remember a large per cent of those are incurable, because they are inoperable. That is the inoperable group, many of which are incurable because the cells have gone beyond the stage of removability. Another thing we must emphasize to ourselves and to the public—we all know that removal of the local growth can not cure the disease if it has gone somewhere else, but the profession and the public do not realize that, because the local growth can be removed, the condition is just as hopeless as if the local growth could not be removed. Then we must realize that today we have no cure for malignant disease when it is disseminated, no cure for malignant disease when it is extensive. Radium and X-ray do not cure malignant disease that is disseminated. Radium and X-ray have one great advantage over surgery in certain localities — now, remember that this is not my opinion; this is the consensus of opinion of the workers in this country, who have no prejudices—radium and X-ray have this advantage over surgery, they promise some thing when the local growth has gone beyond surgical removal. But, while they offer something when the local growth has gone beyond surgery, they do not offer much. I think that has been demonstrated in the results of radium and X-ray in cancer.

Education, then, has decreased inoperable cancer. It has brought many under the medical profession at the period in which the disease is local, but it has not contributed much to the curability of cancer. The Mayor has demonstrated to you that typhoid fever has disappeared here, by clean water. Well, didn't you have to educate the people to vote for that money before you got the clean water? Don't you still have to have the people behind it? You had to demonstrate it to them. Now, remember a thing that very few realize, that in many cases cancer is preceded by a local growth or a local condition that is not cancer, and often the patient is aware of that local condition that is not cancer just as much as he is aware later of the local condition which is cancer. We simply have to get that truth to them, that where there is a local condition that precedes cancer, but is not cancer, of which the patient is aware, we should be able to get them in that stage. And if we do, cancer is a preventable disease. In 1921 I had the greatest difficulty in getting the

editor of the *American Medical Association Journal* to publish my paper on cancer as a preventable disease, and I found out that he had read only the title. It was only in 1891 that we called it a preventable disease. Let us look at it. Cancer of the mouth is a preventable disease. It kills one thousand a year. Cancer of the skin is preventable; it kills four thousand a year. Cancer of the uterus is a preventable disease, yet it kills twelve thousand a year—let us say we can save nine thousand. Now, cancer of the breast. The average per cent of cures in cancer of the breast, published in 1895 by Halsted, for five years, was about twenty per cent of those submitted to operation. In 1913 I published the results of a study of every cancer of the stomach of which we had a record in Johns Hopkins and in the Union Protestant Hospital. Of those in which the period had been five years, 1.7 per cent had been cured. Think of it. With all our wonderful surgery of the stomach, this is what we do. "The operation was successful, and the patient died." Of every one hundred individuals coming to that clinic with a cancer of the stomach, a little more than one was saved. We would have had to do two hundred, almost, to save two. Think of it. Now, we have increased the number of cases in which we are able to do a resection of the stomach, but we have been able to increase very slightly the number of cases in which we are able to cure by resection of the stomach. Why? Because indigestion is very common today, and it is treated without a physician.

Let us see what we have really accomplished by education. In 1921 I published an article on cancer of the tongue as a preventable disease. I have had the good fortune to be in one place since 1892. It has been my good fortune that since the beginning the hospital had sufficient funds to keep good records—although I want you to know that in those first years Dr. Halsted, who got a salary of $5,000 from the hospital, practically put that $5,000 back into the hospital. The hospital did not give him a secretary, did not even give him a technician to cut his sections. He gave those to the hospital. In the first ten years of those records one man lived. One man consulted Dr. Halsted or Dr. Finney or the surgical group of Johns Hopkins for a sore tongue that was not cancer. That was less than three per cent of the total. How many men consult my clinic today for a sore tongue that is not cancer? Seventy-five per cent. We can prevent cancer of the tongue by cleaning the teeth and keeping them off tobacco. Rarely do we have cancer of the tongue without tobacco, and rarely do we have cancer with clean, smooth teeth. That one man who came and who did not have cancer was a surgeon in the United States Army. That was the only case of early cancer of the tongue that Dr. Halsted ever operated on, and he cured that one. That man lived twenty-three years. We are not doing better surgery today; we are better preachers. Preaching is a very important thing in the practice of medicine. If you have late cancer in your community here you are poor preachers. You may be good surgeons, but of what use is your good surgery? Of what use is amputation of the breast when the patient dies of metatasis later? It is a waste of money, as all good surgeons know. Of what good are all these trained surgeons who are doing

all these miracles if they can not do them in time? We must preach. The next time, Mr. Mayor, this society meets here I want you to preach to the surgeons as you preached this morning about other things. It is simply a question, in regard to cancer of the mouth, of teaching the public that mouths must be clean to keep from having cancer.

Now let us take the skin. I am going to give you something and you will not believe it. I am going to give you something that is vastly more important, to me, than radium, but you will not believe it. Years ago, when Jacobi had a little scaly thing on his nose he put radium on it. It cured it, and he pronounced to the world that his cancer had been cured. I believe that most of these things which are cured by radium, by X-ray, by surgery, by cancer pastes, are not cancer. The disadvantage the surgeon had was that when he studied the tissue cut out, it was not cancer. Most of them were not cancer. I have had this year 107 cases of epithelioma of the face and body that most of you would have used some form of treatment for, but if you had cut it out and looked at it you would have found it was not cancer. Cancer of the skin begins, as a rule, in a zone of skin that is, to use a good Anglo-Saxon word, dirty. The skin, as we get older becomes rough. If you live in Wheeling you get the dust from your mines, the skin becomes irritated and you scratch it. How many years it takes to become a cancer I do not know.

Now, pigmented moles. I operated on a surgeon some two years ago that had a pigmented mole on his scalp. The orderly told me it would take an hour to clean his scalp. What we found under a mass of accumulated dirt was not a mole at all, but a wart. Therefore, the only thing we have to do with any irritated area of the skin is to clean it, then protect it. A human being scratches as much as a dog. Scratching and a dirty, scaly area of the skin—equal cancer. Tobacco and old, ragged, dirty teeth equal cancer of the mouth. We have one rule for things we feel might not be cancer. First, soap and water; next, X-ray and radium. If they have no effect, cut it out.

MALIGNANT TUMORS—TREATMENT WITH ROENTGEN RAY

By ALEX R. MACKENZIE, M. D.
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Read Before the Cabell County Medical Society, January 22, 1925.

Theories, opinions and methods have been passing through a transitional stage in the past few years in regard to malignancy and the treatment with the Roentgen ray, more especially the Roentgen ray of "shorter wave length."

Any one presenting a paper on this subject before a society would, if permitted, make many changes in it before it was sent to press a short time afterwards, and a great deal of wisdom would be shown by the author in so doing.

Since the higher voltage came into vogue a great amount of interest has been shown concerning its use. It has incited enthusiasm which has in turn incited more enthusiasm, not only in the field of Radiology but in Medicine and the allied branches.

New demands have been made on the physicist, chemist, pathologist, physiologist and clinicians. Theories

and opinions have been advanced, run rampant and exploded before the week-end. Now as a result there is a tendency to reach a conservative level with standardization of dosage and methods—although we can not prophesy too strongly as to what the future may hold in store. If this renewed enthusiasm has not done anything else, we must admit it has been healthy.

The man who works in the field of Radiology must above all possess an over-supply of optimism to cope with the situation in the face of criticism and persecution, for there always exists the Soi Distant Specialist in all branches of medicine and surgery, their only and best qualification of being able to act as an obstacle to medical progress.

The Radiologist should be also a man with mature conservative judgment, capable of reasoning sanely, for even when the best judgment is used the wrong decision can be made and much harm easily done.

Some of the self-styled masters to whom I refer have been forced by degrees to admit that the Roentgen ray when intelligently used, to say the least, has been a very useful adjunct in the treatment of malignancy.

The American Society for the Control of Cancer estimates the number of cancer cases in the United States at one time to be 300,000. Statistics are quoted from many prominent cancer workers and Newcomer concludes that while X-ray and Radium are curing from 15 to 30 per cent of inoperable cases, the surgeons are yet blind to the facts.

I do not entirely agree with Newcomer because there are many thinking surgeons who do appreciate cooperation and have given encouragement for original work and better results in Radiology. Gaylord found that of the specimens sent to the New York State Institute for examination having been removed as being cancer of the breast only 28% were shown to be malignant microscopically, so it would appear that the surgeon is taking no chances about questionable cases, and that their past pleas of "If I could have only seen the case early enough I could have done so and so and which would have increased my percentage of cures" has to some extent been gratified.

So with Radiologist, the same applies and in justice to the surgeon and Radiologist the same is desired.

Halsted in discussing cancer of the breast says notwithstanding the present-day extensive operations, death from metastasis occurred in 23.4% of the cases even where the axilla was microscopically negative.

Deaver expresses his general dissatisfaction with operation of a palliative nature since in certain cases the disease has been excited to greater activity by the incomplete operation and the life of this patient considerably shortened. Greenough states that when the axillary glands are palpably involved only 12% are cured by operation alone, but he adds with proper "raying" this may be increased to 20%.

Finister asserts that when the axillary glands are involved the number of final cures by surgery alone is 4.3% and this latter figure Ewing confirms and claims 4.3% represents the average success by surgery unaided. So depending on surgery alone we have one success to nineteen failures, with carcinoma of the breast.

An experiment was carried out in Germany a few years ago to deter-

mine the relative value of treating carcinoma of the breast. Three groups of fifty cases each were gathered. Patients were relegated to the different groups exactly as they appeared. All were clinically carcinoma. Cases in group one were operated on, the particular operation being that deemed best suited to the individual case. Cases in group two were treated with X-ray and Radium. Cases in group three were given no active treatment. Group three had an average life which was larger than the group operated upon and the Radiated group outlived the other two groups.

Today the literature is full of reports of failures with Radio therapy and no wonder. There is no branch of medicine where so much empiricism, guesswork, mimicry and charlatanism occur as in the so-called medical application of Radium and X-ray. Much of the work is attempted by men whose only qualification is their having access to some sort of an equipment. Despite all this the results in legitimate and scientific hands are such that Ewing comes out flatly with the statement, "That Radio therapy of malignancy is the first rational treatment of cancer ever devised." There is a general consensus of opinion of Radio therapy that the greater amount of raying should be done after operation rather than before, but the time to lock the stable door is while the horse is still there, and the time to use the X-rays and Radium is before the cancer cells have been disseminated into lymphatics and the blood stream and transported to different organs detached tumor cells, each in itself a potential new growth.

The effect of Roentgen ray and Radio active substances on the living cells and tissues is too lengthy to be incorporated in a short paper. The chemistry is complex and while no decision has been reached as to the exact chemical changes existing within the cells, a great amount of diligent work has and is being done by Biological chemists on the physical-chemical changes occurring after irridation.

The theory is still as yet a question as to whether the action of the ray is direct or indirect. Some observers think it direct, others indirect, and while others think that it is both, this leaves it an open question.

Edsall and Pemberton demonstrated that the body cells liberate an enzyme after exposure to X-ray, or gama rays, and that this enzyme circulating in the tissues was responsible for some of the remote effects we observed as due to radiation.

Waro Nakahara, of Rockefeller Institute, has studied the fate of cancer grafts inoculated into an X-rayed area (given an erythemia dose of X-ray), and has shown that cancer cells show a series of degenerative changes in every way comparable to the frequently described stages of cancer cell degeneration following X-ray treatment by direct exposure. Each advocate has his arguments fortified with proof.

A better understanding of the Biochemical changes and the part the endocrine system may play in each and every case probably will be of great assistance. For it has been found that a 60% dose delivered to the pituitary gland, 30% from each side, will cause a myomata of the uterus to disappear and a menorrhagia to check.

Single, massive maximum dose advocates have come and gone and there are only a few who still adhere

to the method. While the method is ideal, it probably kills the tumor cells but the over-irridation in a great many cases lowers the resistance and kills the host.

If the resistance is broken down with severe reactions due to too heavy dosage or overlapping of dosage, the battle is usually lost.

In every case a complete history of the case should be made including in it such questions as: Have you been taking any drugs of any kind? If X-ray or Radium was used, who used it? How did you react? If operated, who performed the operation? What kind? How did you react? For the fact that it has been shown that calcium metabolism is very low in carcinoma is indication for charging our patients with calcium and has always given my patients relief from so-called Radio sickness or toxaemia following irridation.

It is a crime not to have a Wasserman, blood count, Haemaglobin, sections when such can be obtained on all cases for our own protection and the protection of our patients, with a complete physical examination. After all the evidence is in, clinical judgment should rule, how does the patient look, degree of resistance to disease, etc., if a Wasserman is reported negative or the section benign, no doubt another section may prove of value and give our pathologist and patient the benefit of the doubt, as it so often happens that a benign and malignant tumor may lie in close proximity to each other.

Those who followed in the footsteps of Holzknecht have been awarded better results and more cures. Holzknecht sticks to his original theory that an X-ray stimulation dose for cancer does not exist, as he expresses it, "If there exists a stimulating dose we have been stimulating since nineteen hundred and fifteen and such has not occurred."

Factors consisting of voltage, milliamperes, skin distance, size of area exposed, quality of tube, penetration, etc., while essential for the best therapy, primarily a thorough knowledge of physical and chemical laws are essential and represent a standard working technique and gives an important equation to work with. But the factors consisting of the patient's individual resistance to the type and individual characteristics of the tumor, not necessarily dependent on the type of cells, but to the degree of virulence of the tumor and its toxins represent the all-important equation to be reckoned with.

In the treatment of a malignant case, each case and tumor is a law unto itself and the factors used, decided on individually for each case.

An increased fibrosis, which we do not get in every case, is always desirable.

Temporary edema of cells with resulting endarteritis obliterans, with decreased vascularity I believe to be over-estimated. Tumors in our experience that are mostly vascular have given us the most disappointing results, and I believe the treatment should be augmented by using first electro-coagulation with low voltage and high milliamperage. Phaler, of Philadelphia, and others uses the combined methods in a great many cases with excellent results.

Salvarsan at the height of radiation many claim has given them bet-

ter results in treatment of cases of sarcoma probably due to the tonic effect or probably due to clearing up an old irritative, pathological underlying process of luetic origin. Although of mild degree congenital in origin despite the fact that the Wasserman has been negative, Iodides, etc., have been used with ionization in mind. I have never felt this was entirely free from danger, and were the claims traced down I feel we would find mere failures.

The attention of Radiologists has been aroused recently over the work of Sydney Russ and others of Middlesex Hospital, London, on the immunization of cancer against their own tumor cells, by excision of a part of the local growth, grinding this very fine, then giving it in twice the lethal dose and transplanting into the recti muscles.

I believe in the future that it will be generally the method of choice, or some method will crystalize from it. I have seen results from this method, while in only a few cases, results of such importance, enough to excite my intense interest in the field of research because direct radiation alone is not all that is to be expected and should be augmented by combined methods, etc., in certain cases to suit the individual case.

I have reason and facts for making the statement that in nearly every case when in doubt or where the clinical pictures probably look hopeless, should be explored surgically, with the least amount of traumatism, because the whole situation may look and prove to be entirely different.
421 Eleventh St.

THE ACCESSORY SINUSES—AN ARGUMENT FOR CONSERVATIVE TREATMENT BASED ON ANATOMICAL FACTS

By Raymond A. Tomassene, M. D.
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Read Before the West Virginia State Medical Association, Wheeling, May 14, 1924.

The purpose of this paper is not literally to condemn good surgical judgment as applied to the nose and accessory sinuses, but to impress upon the rhinologist some of the more or less constant anatomy of this honey-combed area; then having in mind this very basic anatomy ask ourselves if we shouldn't be more conservative in the treatment of their diseased states.

This very essential anatomy is too frequently overlooked, and the function of the nose and sinuses is too often interfered with. We must not forget that our aim in diseased conditions, especially of this area, is the returning of the nose to as near its normal condition as possible, with the least amount of damage or destruction to its tissues. The nose acts as the protector of our air passages by cleansing and modifying the air currents passing through it. Therefore, the size of the openings of the two sides should be as nearly equal as possible, with turbinates in situ and the mucous membrane in normal condition.

With the normal nose in mind we examine to see if the air chambers are equal in size and if not, what makes the difference. Metzenbaum[s] has pointed out that certain physical conditions within the nose have a marked bearing on sinus involve-

ment. These he lists as: (*a*) a superior, posterior deflection of the septum; (*b*) a bullous middle turbinate usually accompanied by polypoid degeneration; (*c*) a middle turbinate, normal in size close to the sinus wall; (*d*) a shelflike inferior turbinate lying across the nares.

No doubt a deflected septum is to blame for most of the troubles in the nose. It is not only out of line itself, but causes pressure atrophy of the turbinates on one side, and nature in trying to equalize the air currents; enlarges the turbinates on the other side, and with these bulgings, thickenings, hypertrophies, and hyperplasias, the air is not properly filtered and modified and the drainage and aeration of the sinuses are interfered with.

Therefore, the intranasal conditions which predispose to accessory sinus disease are particularly those interfering with normal ventilation of the sinuses.

Today the pendulum is starting its backward swing toward conservatism in the handling of sinus cases, because in the past too much normal tissue has been removed, which not only took away our protection but left non-functioning scar tissue.

Let us look first at the underlying anatomy of the maxillary sinus. This as you all know is the largest of the pneumatic cavities, lies to the outer side of the nasal fossa and resembles in form a three-sided pyramid. It occupies the greater portion of the superior maxilla bone, so that its walls are very thin and often in places of papery delicacy. The median wall or base is directed toward the nasal fossa from which it is separated by a thin osseous partition formed by the palate bone, uncinate process of ethmoid, inferior turbinate and a small portion of the lachrymal. Above is the orbital wall. The anterior wall presents toward the face. Below, it projects into the alveolar process almost reaching the roots of the molar teeth. Internally are the ethmoid cells and occasionally the sphenoidal sinus. The normal ostium is on the upper anterior wall of the base and opens into the middle meatus via the hiatus semilumaris which empties into the ethmoidal infundibulum.

One must always recall the possibility of dealing with (*a*) a maxillary sinus incompletely divided by septai into subcompartments; (*b*) congenital dehiscences in the walls of the sinus; (*c*) accessory ostia; (*d*) abnormalities and anomalies such as over-developed or enlarged sinus, abnormally small sinus, peculiarly shaped sinus. However, valuable information may be learned of the size, contour, and relationship of the maxillary sinus by use of X-ray.

Andrews, in writing on surgery of the ethmoid labyrinth, calls attention to the function of the middle turbinate bones. He points out the tendency to maxillary sinus disease following the removal of the middle turbinate. He believes that one of the functions of the middle turbinate is to protect the antrum, probably by leading discharge from the frontal sinus and anterior ethmoidal cells away from the antrum and to cause the discharge to drop free into the nasal cavity. Another function of the middle turbinate is to direct part of the air current past the ostum maxillare in such a way that it will rarify and condense the air in the antrum with each inspiration and expiration.

That the middle turbinate and ethmoid cells have a function in main-

taining a proper lumen of the nostril is indicated by the fact that after removal the patient usually finds himself unable to prevent the discharge accumulating in the area once occupied by these structures. Continued crust formation is a common sequel. The discharge in this locality harbors and favors the development of micro-organisms which frequently invade adjacent cavities—the frontal, maxillary, and sphenoid sinuses.

What is more brilliant than the everyday teaching of Skillern[2], in his paper, "End Results of the Radical Operation on the Accessory Sinuses" in response to the question from his associates as to what is the ultimate condition of the patient after a radical on the frontal ethmoid. Is not this learned teaching an argument for conservative treatment rather than an advocate of radical surgery? Or could not this thesis be used as an excellent argument for conservatism in sinus surgery? Of the maxillary sinus, he says, "Certain false steps may be the cause of one of the following: (*a*) Anaethesia of the upper lip and teeth on the operated side; (*b*) Permanent fistula formation into the mouth; (*c*) Excessive dryness of the nose on the affected side; (*d*) Gradual return of the discharge after an apparent cure."

The frontal sinus, according to Schaeffer[1], originates from an anterior ethmoidal cell which in turn was the frontal recess. The sinuses are roughly triangular in shape and as a rule not symmetrical, one cavity being enlarged at the expense of the other, with a displacement of the intervening septum.

The frontal sinuses do not appear as distinct spaces until about the seventh year, and do not attain their full size until after puberty. The anatomy of the adult frontal sinus varies greatly, there being no constancy in size, shape, or type. The boundaries of the normal sinus are in front, the supra-orbital portion of the frontal bone; behind the cerebral wall, and below the orbital plate. The communication between the frontal sinus and the nose is formed by the frontal ostium, which lies on the posterior inferior surface of the inferior triangle in a position almost corresponding to the posterior wall of the sinus.

"There is no unvarying typical type of frontal sinus," says Schaeffer. "Great variations are encountered.

"While it is true," he adds, "that the right and left sinuses are separated by a bony partition, it is equally true that the dividing partition is rarely located in the mid-sagittal plane." He lays stress upon the clinical fact that the maxillary sinus is frequently a cess pool for drainage from the frontal region. Anatomically, he shows that the relationship between the infundibulum ethmoidale and the sinus frontalis or its duct is so intimate that drainage from these paranasal chambers finds its way into the infundibulum ethmoidale to the ostium maxillare and thence through into the maxillary sinus.

Of the frontal sinus on the supposition that an external operation through the brow with removal of one or more of the walls has been performed, the following more or less permanent unpleasant results may follow, according to Skillern: (*a*) persistence of pain; (*b*) hemianesthesia of the brow and scalp; (*c*) persistence of the discharge; (*d*) neuralgia about the cicatrix; (*e*) di-

plopia; (*f*) epiphora and finally blindness, meningitis and fistula formation.

Stucky[7], in his very timely discussion of Harris'[6] paper on "Causes of Failure in the Radical Operation in the Frontal Sinuses," states that the radical frontal often fails because we destroy the function of the sinus. The frontal sinus, like all the accessory cavities, is an air chamber, and our surgery must do more than surgery of any other part of the body; we must maintain ventilation and drainage or the function of that sinus is destroyed. Aeration is absolutely necessary to its function. In his judgment, no portion of the body has greater recuperative or reparative power than the attic of the nose if we would but give it a chance. He believes a great deal of harm is done by over-treatment of cases through interference with the function of the nose..

The ethmoid labyrinth, according to Skillern, embraces all that portion lying between the two lateral plates of the orbit. It is impossible to say, in many instances, whether a cell belongs to the anterior or posterior ethmoidal group merely from its position, hence Schaeffer prefers the classification be based on the location of the ostium. He divides the anterior group which communicates with the middle meatus into (*a*) frontal or pre-ethmoidal group cells communicating with frontal recess; (*b*) infundibular group cells communicating with the ethmoidal infundibulum; (*c*) bullar group cells communicating with the region of ethmoidal bulla.

The posterior cells are somewhat more regularly placed, one being forward at the junction of the middle and superior turbinate, one lying laterally and one posterior and superior; there is, however, no constancy in the number of posterior ethmoidal cells.

The anatomic relations of this field is indeed noteworthy. Recall, if you will, the relative position of the optic nerve at the foramen, how thin the bony wall is which separates it from the cells, and how, as the nerve courses forward toward the eyeball, it diverges more and more from the posterior ethmoid cells. Schaeffer reminds us of this relation in connection with blindness of nasal origin, and also points out how infection of this field may extend into the orbit, giving rise to an orbital cellulitis. The cranial fossa, he adds, may be involved, and ethmoidal infection extend via the ethmoidal veins, or the very intimate ophthalmic vein may carry infection into the dural cavernous sinuses.

Of the ethmoids I am afraid that our limitations, as far as the surgical anatomy of this area are concerned, are oft-times overlooked. The present-day literature has been literally crowded with new operative procedures. Most of these new operations have been properly broadcasted, but those who have "stood by," listening in on account of the modifications presented, have found none which have not been made indistinct by too much "static," or improper wave-length, if you please. Surely no one part of sinusology has been more juggled about than have the poor ethmoids, and truly there is no sinus condition where it is easier to advise operation than it is on this fenced-off region. What an easy task it is to go in and break down cells which, without proper authority, we say are diseased. Here again Skillern mentions the following untow-

ard results or complications: (*a*) continuance of the discharge; (*b*) continuance of the pain; (*c*) partial occlusion of the nostril; (*d*) ocular symptoms which did not obtain previous to operation.

The importance of the ethmoid labyrinth is better appreciated when we realize that it is involved to a greater or less extent in all intranasal inflammatory conditions. One with considerable experience in dealing with the ethmoid would have in mind the anatomic varations which he is liable to encounter and thus approaches each case in a cautious manner. Ethmoid operating is not such a simple procedure as one might first think. The post-operative complications may be dangerous, more so perhaps than any other intra-nasal procedure.

What is the topography of the sphenoid? Dorsally, or posteriorly is the hypophysis cerebri and sometimes the brain stem. Laterally (the thinnest wall), are the dural cavernous sinuses, with the internal carotid artery, the third, fourth, and sixth cranial and ophthalmic and maxillary nerves. Above is the optic commissure, below the vidian nerve, posterior nares and nasopharanyx.

The vertical wall projects dorsal and below forming an obtuse angle at its junction with the cribiform plate of the ethmoid. It contains the ostium.

It is essential for ophthalmologists to understand the relationships which exist between the accessory sinuses and optic nerve and chiasm, because disease of the sinuses may lead to optic neuritis and even blindness. Especially the sphenoids and post-ethmoids concern us in this connection. In a vast majority of the cases the optic commissure bears an intimate relation to the sphenoidal sinus. This varies according to the size, shape, and location of the sinus. The commissure is frequently above one or both sinuses. Then the thickness of bone intervening between the sinus and optic commissure varies from a papery delicacy to that of a substantial thickness.

The two most important sequels which may follow surgery on the sphenoid mentioned by Skillern are: (*a*) gradual closure of the opening before suppuration has ceased; (*b*) reinfection with intermittent suppuration.

When a patient undergoes an operation, particularly on these areas he expects to be cured, and should some slight trace of the old symptoms or signs linger, or new ones appear, it is bound to be a source of dissatisfaction. Correct surgery should be founded on physiologic and anatomic factors, and so it is in the treatment of these cavities.

Stucky calls attention to the needless and often dangerous use of surgical interference in the treatment of acute infection of the nasal accessory cavities, because the average case of acute infection of these cavities will yield to medical treatment aided by the mildest and least irritating local treatment. He also pleads for a wider range of medical knowledge and for a more thorough appreciation of the relationship of diseases of the nose and ear to general conditions.

He points out one important fact, often overlooked, that the treatment of pathologic conditions in otorhinology differs from that of any other portion of the body in that these cavities with their accessories require constant ventilation as well as con-

stant drainage, or the existing pathologic conditions can not be permanently eradicated.

Finally, kindly be advised that these sinus cases are particularly prone to make the rounds. They enjoy consultations of the collective nature where a number of specialists get together to decide whether this case should or should not be operated. Such a method appeals powerfully to the patient and his friends. It is popular, dramatic, and probably worthless.

The diagnosis of these difficult cases and the question of operative procedure can best be established by the work of an individual surgeon, who conducts a routine and careful examination to which he is willing to devote unlimited time. When all his data are available, he may perhaps with profit lay them before one or more of his colleagues, and get the latter to check doubtful points which his work has revealed. This is not the method of the sensational novelist, or of the equally sensational player who wishes to draw the winning tile, being predominating, prevailing, and East Wind, but it is the method which best subserves the interests of our patients.

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1. The Nose and Olfactory Organ—J. Parsons Schaeffer.
2. End Results of Radical Operations on the Accessory Sinuses—Skillern, Annals Otology, Rhino Laryngology.
3. Surgery of Ethmoid Labyrinth—Andrews.
4. Accessory Sinuses—Skillern.
5. Treatment of Acute Infection of Accessory Nasal Cavities—J. A. Stucky, Southern Medical Journal, November 1918.
6. Causes of Failure in the Radical Operation of the Frontal Sinus—Harris, A. M. A., Boston, 1921.
7. Discussion of Preceding Paper—Stucky.
8. Year Book—Metzenbaum.

SOME ORIGINAL AND OTHER IDEAS ABOUT CHRONIC TONSILITIS

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Some reference will be made to hypertrophied adenoids. And as you may surmise from the title no attempt will be made to cover the whole field. I hope you will not object to an absolutely frank expression of opinion.

I would define the condition as a constant inflammation of the tonsil. In choosing this subject I realize the difficulty of adding anything of worth to the tons of literature on the condition; also the room for much difference of opinion is vividly before me. But at least it is desirable to keep a subject of such unquestioned importance before us constantly. And there are three conditions existing today that make the subject timely. My remarks may be of little value to you gentlemen present; but my hope is, that through you they will be of value to the profession generally and to the people as a whole. The first of these conditions is a widespread tendency to discount the value of the tonsil operation; and the second condition is the prevalence of a great deal of very indifferent work. The third condition is the almost universal custom of considering the diseased tonsil only after the appearance of complications and subjective symptoms.

Now I will briefly narrate a few ideas based upon observation and reading. One thing that seems striking is that in looking over the *J. A. M. A.* since the February 25th number 1922, there is not a single article, or abstract, or communication that

does not insinuate that tonsilectomy is the source of a great deal of good.

So Much for Generalization

Now let us look without too much detail into the anatomy and physiology of the tonsil and its fossa, and of the palate. The tonsil is an oblong flattened lymphoid mass, perhaps averaging about one by one-half by one-quarter inch with some eight to fifteen crypts which open freely into the throat. The bed of the tonsil is formed by the superior constrictor, palate-glossus, palato-pharyngeus and styloglossus muscles; the latter not usually being mentioned. The tensor palati, levator palati, and azygos uvulae, raise the palate to allow the food to pass and render it tense to facilitate the same process. The superior constrictor contracts upon the food and helps force it out of the pharynx. The palato glossus contracts in front of the food and helps prevent its return into the mouth. The palatoglossus also raises the base of the tongue and influences its form, thereby affecting manipulation of food and enunciation. The palato-pharyngeus contracts above the food, preventing it being forced into the nose. It has some help from the azygos uvulae. It also assists with the salpingo-pharyngeus above in raising the constrictor muscles over the food. The styloglossus also is very important in manipulating the tongue for the handling of food and for enunciation, as well as in raising the base of the tongue and retracting it toward the pharynx.

Every one of these muscles has an important function and nearly every one of them is sacrificed to some extent with alarming frequency; and not only by the inexperienced and average doctor, but by good surgeons.

Now as for the function of the tonsil. A very plausible, and it seems to me a very probable function of the tonsil and lymphoid tissue of the tongue, naso pharynx and mouth, is the protection during infancy, especially during the first few days of infancy,—of the respiratory system and alimentary tract beyond the pharynx, from the bacteria which swarm in the mouth a few hours after birth and perhaps also, in a form not yet recognized, in the nose; these organisms are entirely new to the area and would probably rapidly spread to the respiratory tract below and alimentary canal and overwhelm the host, unless there was some barrier. True, the germs are carried down by the food, but there may be so much dilution in this process that the alimentary canal, supposing it to be an unfavorable environment, can take care of them; or the protective function may be for the respiratory tract only. Of course if this theory of function is correct, removal of the tonsils a few hours after birth would be a dangerous performance and this point would be easily determined on the lower animals. There may be an important internal secretion, but, if such be the case, it certainly seems to be well compensated for by some other organ of internal secretion. Suffice it to say that the function is not nearly so important at this stage of the game as the pathology and treatment. Also the lymphatic glands of Shaeffer scattered all over the mouth almost certainly have the same function and help make up for the loss of tonsils.

Under bacteriology and microscopical pathology, I would only call your attention to the fact that over nine-tenths of the tonsils bacteriolo-

gically reported, in the *J. A. M. A.* in two years showed a definite pathological condition, that in about nine-tenths of these the organism present was the streptococcus and very frequently the streptococcus haemolyticus. The obvious inference is that the infection is a dangerous one.

ETIOLOGY. Such things as heredity, climate and environment seem to favor the condition to some extent, but I believe have very little to do with it; and that the infectious disease, especially those with a severe involvement common in the throat, such as the exanthemata, influenza and acute tonsilitis, are the causes of the condition. And further, I believe that these causes act mechanically in nearly every instance; that they bring about an irritation of the tonsillar tissue, which results in narrowing of the crypt orifices. This narrowing is explained by contraction of the increased fibrous tissue; which logically would be most increased nearer the surface of the tonsil and near the orifices of the crypts, since the inflammation is as a rule first and most near the surface. This narrowing results in retention of epithelial debris, which furnishes a good culture medium, and bacteria; and on account of the abnormal pressure in the crypt resulting from the increase of dead epithelium with insufficient outlet causes to some extent mechanical expression of bacteria into the surrounding tissues.

PATHOLOGY. The gross pathology has been dealt with under etiology, but I would add that the size of the tonsil is immaterial, absolutely, a large tonsil not necessarily being incompatible with normality and a very small one quite possibly being very pathological. I say this realizing that it is contrary to the teaching of some eminent authorities and without claiming that the contention is not open to a great deal of criticism. Of course, if it causes mechanical obstruction, then it is a menace to health.

DIAGNOSIS. The diagnosis is easy in most cases. The history is of great importance. Abnormally red pillars constantly present, or expressible yellowish material in any very noticeable quantity, are sufficient separately and both are present in the great majority of cases. There are cases in which the diagnosis is difficult but they are exceptional, and then a tentative diagnosis and a very conservative one is based on the existence of one or more of the usual complications or symptoms of the condition, such as rheumatism or general malaise; and then only after eliminating all other causes that are as apt to be guilty as the normal appearing tonsils.

SYMPTOMS. Symptoms may be almost absent but if we inquire carefully we will nearly always find that the patient has excessive secretion in the throat and slight discomfort and irritability. Often he does not realize this and having had it for an indefinite time considers his throat in a normal condition. Usualy there is a bad breath, bad taste in the mouth mornings, sometimes a history of frequent colds or sore throats, often of headaches, malaise, vague neuralgias and occasionally of a complication. Objectively there are present nearly always, abnormal redness of the pillars, expressible detritus and increased secretion. An abnormal constant redness of the anterior pillar should be considered just as pathognomic of serious trouble in the tonsil

as abdominal rigidity is rightly considered pathognomonic of serious abdominal trouble.

COMPLICATIONS. Rheumatism could probably be more than half eliminated if diseases tonsils were removed before the occurrence of the rheumatism. Better late than never, but we have no reason to be surprised at the persistence of rheumatism after tonsilectomy, once the rheumatism is established and secondary foci remain and often remaining indefinitely. The fact that there is often an exacerbation of the rheumatism or of endocarditis—which also could be eliminated to a large extent by removal of diseased tonsils before the occurrence of the heart lesion—lends strong support to our belief that these two conditions are in a large percentage of cases due to chronic tonsilitis. These exacerbations can frequently be avoided by not squeezing the tonsil when removing it, until it is well free from its bed. Iritis, certain cases of conjunctivitis, corneal ulcer, otitis media, sinusitis, mouth infection, laryngitis and bronchitis, are often complications and in some of these conditions cure after tonsilectomy is nothing short of miraculous. Appendicitis, gall bladder infection, nephritis, gastric ulcer, goiter and tuberculosis are of less frequent occurrence, as are meningitis, brain abscess, septicemia, etc.

TREATMENT. I would, just preliminary to treatment again say that the tonsil probably in early infancy has an important function, the importance diminishing with age or infection and diminishing rapidly, so that by the age of five it is probably negligible and compensated for; either by acquired active immunity, or by the physiological action of some other organ, or, assuming a dual function, by both. Certainly we have not the slightest reason to believe that they have any function in the adult, and it is quite logical to expect an organ without a function to become diseased. However, this may be, and even granting the possibility of a function in the adult, in view of the following facts and of many other equally convincing facts; first that Cody of Houston, Texas, in reviewing 32,000 cases of tonsilectomy found mouth breathing relieved in 89%; throat infection diminished or rendered harmless in 93%; colds diminished in 82%; ear conditions benefited in 78%; metastatic condition helped or cured in 75%; enlarged glands reduced in about half; malnutrition benefited in about 60%; mentality improved in about one-half, worse in 2%; voice improved in 62%, worse in 3%; 86% helped or cured; 1% worse, the latter being unavoidable; second that tuberculosis has been reported present by good bacteriologists in one and one-quarter per cent of cases with no previous suspicion of its existence; third, that tuberculous ophthalmia may be secondary to tonsillar tuberculosis; fourth, that meningitis and choked disc have been reported by A. Poppi of Berne as due to tonsilitis and cured by tonsilectomy, avoiding decompression in several cases; fifth, that 10,000 cases have recently been reported from Rochester, New York, without a death and few complications; sixth, that lung abscess, so much written about, occurs only once in about 2500 to 3000 cases, as done by all operators; that we may discount the above and still have a strong case; in view of these statements and others just as convincing, none of us will I am sure feel that there is any question about the dis-

eased tonsil being more harmful than useful, or about the desirability of its removal.

Also from the standpoint of common decency and cleanliness, all of us can see the desirability of eliminating these two aggregations or small cess pools within our mouths; (the diseased tonsillar crypts are not less offensive than small cess polls and taken altogether they are not negligible in size). It may be said that the condition is no worse than a normal intestine, (and it is very similar) but this contention cannot be maintained; for who wants the intestine or a small part of it opening into the back of the mouth, poluting the air for all who come near us?

The three things I wish most to emphasize, and the reason for the paper, comes next. The thing of paramount importance today, lest the work be discredited, is not whether tonsilectomy is needed but the manner of the doing of it. And next of importance is the continuation of tonsilectomy on a large scale, even a larger scale than we have been doing it; not in every locality because some localities have been well taken care of, but believe me, gentlemen, the country districts are full of children who are silently, all too silently, crying out for the need of this work. The third point I would emphasize is that we treat chronic tonsilitis rather than its symptoms or complications. Of course we all realize that with the present uncertainty, and possibly, ultimate danger in the X-Ray and radium—which do seem to be of special usefulness in cervical adenitis—the rather disgusting effect of electrocoagulation, and with nothing any better available than surgery, the treatment remains removal. And why any one should be willing to risk interfering with the good work that has been done by tonsilectomy is beyond our comprehension. It forces into mind, regardless of my inclination to keep it out, the possibility of a desire on the part of certan of the medical profession for notoriety by being "different," or a desire in some rare but very harmful instance, for pecuniary return by leaving these people in a diseased state; I realize the unpleasantness of the insinuation, and of course I am speaking in the first instance of the average objector only; and in the second instance of a rare bird who however contaminates most communities.

I grant you that some tonsils have been needlessly removed; but the good done by removal of tonsils that do not appear to be very bad on casual examination, outweighs ten times the bad from the needless removals; with the one provision that it is properly done and care is used in treating such things as acute diseases and active syphilis before operating. It has been a long and arduous task to educate the people up to having surgery done, and no one should lightly or premeditately throw a bolt in the cog wheels, because of his personal desires or of his indifference; and thus jeopardize the health and lives of the thousands of children who are going about often literally suffocating by inches for want of oxygen, or absorbing poison constantly, or both. There is no practical difference in allowing this condition, and in feeding a normal child a little poison with each meal, while partially closing his nostrils with adhesive plaster.

A very frequent defect in the surgery being done is the lack of thoroughness, or even a simple messing up, in removal of the adenoids, which contain the same virulent germs that

the tonsils contain. Tonsils are being literally and habitually dragged out of their fossae along with delicate little muscles, leaving ugly spaces behind. There is no reason why every tonsil should not be almost entirely separated gently from the muscles, or entirely separated and no snare used at all. Severance of the styloglossus muscle or its nerves may account for some of the cases we see, where the patient, with an apparently well done tonsilectomy, persistently and indefinitely, complains about discomfort and difficulty in swallowing. I have noticed in some of these cases a difference in elevation of the two sides of the base of the tongue, with a marked fossa between the epiglottis and the tongue on one side, and a very small one on the other. This may be an anomaly often, but it can undoubtedly be accounted for, or in some cases aggravated by loss of function of the stylo glossus muscles.

Another thing that would seem to be entirely unnecessary and unquestionably harmful, notwithstanding some prominent men take the contrary view, and men whom we would suppose are eminently qualified to do the work in the proper manner; is the use of general anaesthesia in adults where no adenoids are to be removed. There is not the slightest need of it. It is almost or quite painless with a local and the pain is not objectionable to the patient when morphine is used. The recollection of the pain without morphine is the disagreeable part. Some will object that it is very much more difficult to control bleeding with a local. Such is not the case and the contrary is more nearly correct. There is no more reason for saturating people with ether or other general anaesthetic for removing tonsils than for filling teeth. I base the statement principally on observation at an institution whose work is not excelled, if it is equalled, anywhere in the world; as well as on my personal experience. There may be some more dread on the part of some patients (the reverse is often the true situation and frequently they go through extreme mental torture, not knowing it is worse than useless), but we are responsible for their looking upon it with such apprehension and that apprehension can be largely prevented with morphine and hyoscine or either alone. True there have been some fatalities as well as with a general anaesthetic; but fatalities with not over six drachms of one half of one per cent novocain, containing not over 6 m, 1-1000 adrenalin, which is ample, are negligible.

Another thing that is frequently done is to remove tonsils without giving the condition of the sinuses and other foci, or a constitutional disease such as diabetes, syphilis, etc., any consideration; when often some other condition is of principal importance, and no evident results are obtained. This is usually inexcusable. The principal offender should receive first attention.

As to radium and the X-ray as used today, the results will probably be ultimately disappointing, because of the lack of reduction in fibrous tissue, and the consequent increase of persistence in the mechanical pathology. There seems to be some question about the effect of radium as to the formation or disappearance of fibrous tissue. If it causes a diminution of fibrous tissue and lymphoid tissue, the hope of it being modified or helped in such a way as to eradicate the disease safely is not without

foundation, but that is for future development and in the experimental state.

The ideal treatment would be one that would rid the tonsil of nearly or all its fibrous tissue and a good portion of its lymphoid tissue, in order to enlarge the mouths of the crypts, and that would sterilize the tonsil under the epithelial covering; all with less trauma than that following tonsilectomy with no other questionable or harmful ultimate effect. When we consider the strides medicine has made in the past twenty years; the effect of radium on the tonsils; the recent results of intravenous therapy in acute septicemias and localized infections; and, possibly to some extent effecting the condition, the truly remarkable effect of chlorine in superficial respiratory infections; when we consider the possibility of controling the effect of radium still further and modifying it so that it will have a selective action on fibrous tissue, with less reaction than at present; and the possibility of sterilizing the tonsil with intravenous therapy; this goal is not remote. But for the present the treatment unquestionably remains a complete enucleation of the tonsil only. An incomplete removal is better by far than a removal of other structures which cannot be replaced, for the removal can be completed with good final results.

To summarize briefly:

(1) The function of the tonsil is at present of little consequence; the function of the throat very important.

(2) The prevailing organism found is the streptococcus and it is usually found.

(3) The etiology is directly mechanical; indirectly, infectious.

(4) Abnormally red pillars and expressible detritus are enough for a diagnosis and are pathognomonic.

(5) Symptoms may be and often are negligible.

(6) Size, except from an obstructive standpoint, is negligible.

(7) Complications are frequent and serious and should be prevented rather than cured.

(8) Treatment is removal of the tonsil **only.**

(9) Local anaesthesia in adults is the only fair method to the patient.

(10) We have reason to hope for a simpler and effective method of treatment in the perhaps distant future.

(11) Tonsilectomy is the outstanding accomplishment of modern medicine, of far greater importance than even vaccination or diphtheria antitoxin, not to mention abdominal surgery.

(12) We should separate the people from these little pet cess pools, painlessly if possible, otherwise, for the present.

(13) Chronic tonsilitis should be diagnosed and receive treatment — enucleation—regardless of the presence of symptoms or complications, just as carcinoma is diagnosed and removed as early as possible.

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(1). J. A. M. A. February 25, 1922, H. D. Kayler, Geo. F. Dick, of Chicago.

Quantity of bacteria more apt to cause disease than the kind. Large tonsils (spongy) contain fewer per gram and in total than small ones with fibrous tissue.

(2). Abs. March 11, 1922, Dr. Mounier, Paris, France. Death from tincture of iodine painting.

(3). Abs. June 10, 1922, Archives Internal Medicine, Chicago, page 635. Hambrecht Nuzum.

218 patients said to need Tny. Microscope showed Path. in 93%. Haemolitic strep. found in 96.1%. Same germ in adenoids, predominant in 85.4%.

(4). Abs. June 24, 1922, Journal Radiology, Omaha. DeQuick, New York, treatment malig. neoplasms of tonsils.

Indicates radium cures about 25% and the same of lymphosarcoma, and in the latter surgery has no place.

(5). Abs. Februery 25, 1922. Journal of Diseases of Children for Februery 1922, p. 139, A. D. Kaiser, Rochester, N. Y., subject was effect of tonsilectomy on nutrition in 1200 children; 34%

showed malnutrition before, and 15.9% nine to twelve months later.

(6). J. A. M. A. June 17, 1922. Albert D. Kaiser, Rochester, N. Y. Effect of tonsilectomy on general health in 5000 children.

Hypertrophy without infection, removed, caused the least improvement in general health, that 84% of the whole group showed general improvement, that in 10,000 cases there was not a fatality and few complications, also that a good many did not get rid of malnutrition.

(7). Abs. April 8, 1922. British Med. Journal, March 4, 1922, p. 341. End results of removal of tonsils and adenoids. H. S. Sington.

Attendance on cases was very much reduced in all of 52 cases investigated.

(8). J. A. M. A. April 29, 1922. Regular correspondent London. Council laryngolotical section Royal Society Med. recommended that selection of cases and care be under especially trained men, and the care of cases be ample.

(9). J. A. M. A. April 1, 1922. Letter to the Editor. J. W. Robinson, Los Angeles, Cal., Dept. Health Officer.

The history of some innocent looking tonsils is often valuable, making a diagnosis in the absence of physical signs.

(10). Abs. June 10, 1922, American Ped. Sec., Society Proceedings.

Indications for tonsilectomy in infancy and childhood. Dr. Henry Heiman, N. Y. All diseased and hypertrophied tonsils shall be removed, not otherwise. Tonsilitis is a local manifestation of a general disease.

(11). J .A. M. A. April 29, 1922. Pulmonary Abscess 202 cases following operation on upper respiratory tract. Wm. Frederick Moore, Philadelphia.

Vast majority of inspiratory, rare by blood, rarer by lymphatics, occurs once in 2500 to 3000 cases.

(12). J. A. M. A. April 22, 1922. The school child before and after tonsils and adenoids removal. Littleton Davis, Roanoke, Va.

Early removal gives mechanical relief for a time. The cause remains much longer.

(13). Abs. April 22, 1922. Southern Medical Journal, Radiology or surgery in diseased tonsils. R. H. Lafferty and C. C. Phillips, Charlotte, N. C.

X-Ray reaches all the lymphoid tissues of the neck.

(14). Com. to the Editor, Nov. 4, 1922. Cecil M. Jack, Decatur, Ill. Tubercular ophthalmia was secondary to tubercular tonsilitis.

(15). Abs. Oct. 28, 1922. Polska Gazeta Lekarska, Warsaw. The importance of tonsils. A. Laskiewicz. There is no indications of tonsilular function. The lymphatic glands of Shaffer probably have the same function as the tonsils.

(16). July 1, 1922, Society Proceedings, Association of American Physician, May 2-4, 1922. Treatment of tonsils by radiation and radium salt, Dr. Francis Williams, Boston.

Radium has a selective action on lymphoid tissue and can be confined to the tonsillar area safely.

(17). Abs. Nov. 11, 1922. Minn. State Medical Association. Oct. 12-14, 1922. The Tonsil Question. Dr. F. S. Bissel, Dr. Floyd Grave, Minneapolis. Roentgen Ray and radium therapy in treatment of pathological tonsils.

Study of 30,000 cases shows permanent improvement after operation in one half. Radium and X-Ray are safe and in cervical adenitis from infected tonsils and in lymphoid hyperplasia show a striking benefit.

(18). J. A. M. A. Sept. 30, 1922. Roentgen Therapy of Infected Tonsils. Lederer.

Abs. Sept. 30, 1922. Walters and others.

(19). Abs. Dec. 9, 1922. Southern Medical Association. Nov. 13-16, 1922. Roentgen Ray Treatment of chronically infected tonsils and adenoids, Dr. Charles A. Waters, Baltimore.

Especially useful where operation is contra-indicated, and especially effective in children on account of lymphoid nature. May supplant surgery.

(20) Com. Aug. 12, 1922. Relation of Anaesthetic to Pul. abscess, following nose and throat surgery, C. N. Chipman, Washington, D. C.

Use care in position, control of hemmorhage, operate without temp. and acute infection.

(21) Abstract, April 14, 1923, Revista de Medicinia y Cirugia, Havana, February 25, 1923, Indications for Tonsilectomy, Fernandez Soto.

Immunity to respiratory infection after seven years of age, use local anaesthesia.

(22) J. A. M. A. May 26, 1923, Lessons to be learned from Tonsilectomy in adult life, Walter Calvarez, San Francisco.

Over 300 cases, relief not probable unless there is occasional sore throat, use care and judgment in selection; not too conservative with serious condition, or with a disease that can be influenced by removal of focal infection.

(23). Abs. Dec. 21, 1923, Weiner Klinische Wochenschrift, Venna, August 16, 1923, Complications of Tonsilectomy, W. Falta and F. Depisch.

Exacerbations of nephritis, endocarditis and arthritis followed. Same issue Abs. Dr. Schleimer, advises non expression of tonsils until half out.

(24). Abs. Dec. 8, 1923, Texas State Journal of Medicine, Cody, Houston, Texas, results of tonsilectomy in 32,386 cases.

(25). J. A. M. A. Sept. 8, 1923, The Removal of Tonsils with special reference to methods other than complete enucleation, Burt Tussel Shirly, Detroit.

Indicates that X-Ray is not equal to surgery and should be used only when there is contra-indication to surgery, stresses careful work.

(26). Abs. June 16, 1923, Mediznische Klinik, Berlin, March 11, 1923, p. 306, P. Fein, Tonsils as portals of infection.

Should not be removed unless there is recurrent tonsilitis, inflammation or enlargement, then should be.

(27). J. A. M. A. February 3, 1923, Observation on the results of Roentgen therapy in chronic tonsilitis, James W. Babcock, N. Y.

X-Ray causes no improvement and no loss of lymphoid tissue, or of fibrous tissue, surgery is best.

(28). J. A. M. A. June 23, 1923, The electro coagulation method of treating diseased tonsils.

Unsafe, inefficient, very disagreeable afterward, inaccurate.

(29). Abs. May 12, 1923, Paris Medical, February 3, 1923, T. Nogier, roentgen ray in treatment of hypertrophied tonsils.

Method of choice in surgery is contra-indicated.

Same issue, Abs. Radium treatment hypertrophied tonsils, F. H. Williams. Prefers radium to the X-Ray, more exact and dosage better controlled.

(30). Com. March 31, 1923, Report of case, Corneal ulcer cured by tonsilectomy, Chas. B. Williams, Mineral Wells, Texas.

Treatment for one month without result, tonsilectomy abscess found in normal appearing tonsil. Ulcer healed promptly.

(32). J. A. M. A. April 28, 1923, Analysis of some causes of tubercles in the tonsils, W. V. Mullin, Colorado Springs, Col.

T. B. found in 1.25% of cases with no T. B. evidence on physical examination, and in about 4% of all cases.

(32). Abs. Feb. 10, 1923, Ugeskrift for Laeger, Copenhagen, Dec. 7, 1922, F. Norsk, consequences of tonsilectomy. Good in 229 adults, including rheumatic cases.

(33). J. A. M. A. Jan. 6, 1923, Fatal infection following tonsilectomy, Harrison Tumpeer and Abraham Levinson, Chicago.

Two deaths after operating on acutely inflamed tonsils, better to wait, although over 525 cases of other men operated with acute tonsilitis and other diseases were all without mortality.

(34). Abs. Dec. 8, 1923, Archives of internal medicine, Chicago, Oct. 1923, A. L. Bloomfield, A. R. Felty, Baltimore, bacteriologic observation on acute tonsilitis, Epidemiology and susceptibilty.

In a series studied disease was due to Beta haemolitic streptococci in all cases. Persists after the attack. Removal of tonsils confers high degree of immunity against throat inflammation. Tonsilitis usually occurs in noncarriers of the germ.

(35). Abs. Aug. 11, 1923, Lancet, London, June 16, 1923, unhealthy tonsils associated with cervical adenitis, W. G. Howarth and S. R. Gloyne.

In majority of cases cervical adenitis not tubercular, late when present, and is streptococcic. Tonsils are invaded by micro-organisms soon after birth.

(36). Com. July 21, 1923, Report of two cases iritis, one with corneal ulcer, Richard M. Nelson, Atlanta, Ga.

Cured in 24 hours by tonsilectomy after several weeks treatment with no results.

(37). Abs. Sept. 8, 1923, Annals O. R. L. Relation between thyrotoxicosis and tonsillar infection, L. E. Brown, Akron, Ohio.

Emphasized the relation but other foci should be looked for.

(38). J. A. M. A. Feb. 16, 1924, A study of the acute infections of the throat and respiratory system, D. F. Smiley, Ithica, N. Y.

The main cause of frequent colds not yet determined.

(39). Abs. Feb. 16, 1924, Pediatria, Naples, Policlinico, Rome, Jan. 7, 1924.

Return of tonsils after removal. Nothing said about efficiency of removal.

(40). Abs. Apr. 19, 1924, N. Y. State Journal of Medicine, sore throat following tonsilectomy, Dr. A. C. Howell and M. Schmidt.

Three cases proved syphilitic.

(41). Abs. March 1, 1924, Atlantic Medical Journal, Harrisburg, Pa. Diagnosis and treatment of chronic or latent tonsilitis, J. Daland, Philadelphia, Pa.

Surgical removal infected remnant or in contra-indication X-Ray or cleansing.

(42). J. A. M. A. Mar. 1, 1924, Treatment of Septicemia and Local Infections by Mercurochrome 220 Soluble and by Gentian Violet, Hugh H. Young, Justina H. Hill, Baltimore.

Desperate cases of colon group sep. cured. Some staph. and strep. by others.

(43). J. A. M. A. March 8, 1924, Rheumatism, its manifestations in childhood today. Tonsilectomy in its relation to recurrence of rheumatism, Eugenia Ingerman, May G. Wilson, New York.

4% less recurrence in 88 cases after tonsilectomy.

(44). Abs. March 8, 1924, Annals of Surgery, Philadelphia, Jan. 1924. Bacteriology of extirpated tonsils and its relation to epidemic tonsilitis, T. Nakimura, Rochester, Minn.

Strep. most common and in larger numbers, increase with cold weather and incidents of tonsilitis.

(45). Abs. Mar. 8, 1924. Revista Oto Neuro Optalmologia, Berne. Treatment of optic neuritis, A. Poppi.

(46). J. A. M. A. Mar. 8, 1924, Chlorine as a therapeutic agent in certain respiratory diseases, E. B. Vedder, H. P. Sawyer, Edgewood, Arsenal, Md.

Coryza, acute laryngitis and pharyngitis, acute bronchitis, chronic laryngitis, chronic bronchitis, whooping cough and influenza, were remarkably benefited or cured.

SURGICAL TREATMENT OF GASTRIC AND DUODENAL ULCERS

By W. S. Fulton, M. D.
Wheeling, W. Va.

Read Before the West Virginia State Medical Association, Wheeling, May 14, 1924.

The internist and the surgeon are still far apart in their estimation of the necessity for the surgical treatment of peptic ulcer, and of the value of such treatment, but the lines of divergence are slowly converging. They are now quite generally agreed that, other things being equal, in all patients with chronic mechanical obstruction and in those who suffer from repeated hemorrhage, or show evidence of acute or chronic perforation, surgical treatment is clearly indicated. They agree also that in other types of the disease the patient should have as careful medical treatment as circumstances will permit, until cure of chronicity is established. It goes without saying that recent ulcers should be treated medically. It is of the chronic and perforating type of ulcers that I wish to speak at this time.

The selection of the proper surgical procedure depends on some knowledge of the etiology of the ulcer, of the physiology and the pathological condition present. The condition resembles ulceration in other portions of the body, as on the leg. When a recent injury has caused an ulceration such a lesion does not require excision. If, however, there are varicose veins and the ulcer has become indurated and has persisted for months or years, its surgical removal is indicated, together with correction of the underlying aggravating pathological condition by excision of the varicose veins.

Surgeons and physicians can only assist nature. Suturing a wound is only a temporary aid, which apposes, immobilizes and rests the injured tissues; unless nature heals the apposition they will fall apart when the sutures are removed. In like manner operations on the stomach should be followed, not only by general rest in bed for a sufficient time but also by local physiological rest, which can only be partial in this instance, and is secured by a proper and scientific regulation of diet, so that the stomach receives only the necessary quantity of nourishment, administered in such a manner and at such times as

will give it the least possible amount of work to do.

Living tissue cannot be treated in the same manner as inanimate things, and recognition of the best means of giving a diseased organ rest relative or absolute, is one of the greatest therapeutic resources in either medicine or surgery.

The etiology of ulcers of the stomach and duodenum has not been fully explained, though much light has been thrown on it. The work of Reeves in demonstrating the peculiar arrangement of the vascular supply of the pyloric portion of the stomach and first portion of the duodenum, is interesting because this circulation seems favorable for the development of thrombi. The pylorus is equipped with strong and active muscles. The caliber of the stomach tapers off to the pylorus, producing more pressure and friction in this region. These facts together with the sudden change in reaction from acidity in the stomach to alkalinity in the duodenum, doubtless influence the formation of pyloric and duodenal ulcers.

Most gastric and duodenal ulcers seem to be haematogenous in origin. At the time of formation of the ulcer, there probably were other lesions such as choleocysitis, pancreatitis and nephritis, which cleared up and left the ulcer as the sole surviving lesion. The work of Rosenow in this regard is exceedingly interesting. If however, after the other lesions have healed, the ulcer still exists, its elimination seems to be indicated.

The removal of a focus of infection has been emphasized in recent years. While this doctrine may have occasionally been carried too far, efforts made to remove any source of toxic absorption no matter how small are founded on correct principles. If the sepsis from an apical abscess of a tooth is a cause of distant pathological lesion, certainly an ulcer of the stomach or duodenum, which is almost constantly massaged by peristalic waves, cannot be overlooked as a source of toxic products.

The object of surgical treatment in these cases is to remove the pathological condition and to restore as near as possible the physiology of the stomach.

Only a few years since the surgeon began to save from certain death the victims of that most drastic of acute abdominal seizures, perforated ulcers of the stomach and duodenum. Yet most of the points concerning its treatment can already be regarded as settled. All success is based on early treatment. Better an early operation by an indifferent surgeon than a late operation by a master surgeon. The second essential is the efficient suture of the opening. Other makeshift means as omental plugs, drainage to the original site, or tamponage have been tried with ungratifying results.

Some of the foreign authors have reported splendid results from the excision of the ulcer, but it is generally agreed among surgeons that excision of an acute perforated ulcer, as originally seen a few hours after its occurrence, offers nothing of immediate life-saving value to compensate for the added time, trauma and possible infection of the operation. There is, however, no general agreement on simultaneous gastro-jejunostomy in perforated ulcer. It has been done by numerous men for the past twenty years and from its results it has been demonstrated beyond doubt that this operation can be done with safety if the surgeon uses surgical judgment in selecting his cases,

and more than that, it demonstrates that the operation is practical in the vast majority of cases. In markedly shocked cases it should never be performed, only doing that which is necessary, namely, primary suture of the perforation. Many observers advocate only primary suture entirely, concluding that a perforation spontaneously heals the ulcer and a gastro-enterostomy is useless. Yet statistics from their various reports show no greater mortality from gastro-enterestomy than from primary suture. In unskilled hands, of course, the mortality will be much greater and even in skilled hands will raise the death rate in desperately sick patients. So, unless the surgeon is able to anastomose quickly and and with irreproachable technique, simple suture is the safer operation, as the importance of gastro-enterostomy as a primary procedure is not so great as to warrant accepting the obviously increased operative risk. We do not believe it increases the mortality in selected cases and on the contrary we believe it promotes convalescence and actually diminishes mortality. Accumulating statistics and more active follow-up records are dispelling the fallacy that perforation cures ulcer and tends to show that primary gastro-enterostomy lessens the likelihood of future ulcer symptoms and complications.

The surgical treatment of chronic ulcers of the stomach and duodenum may be said to be in the development stage as far as indications and selection of the proper surgical procedures are concerned. Those who favor the radical methods blame gastro-enterostomy for their failures, while the adherents of the latter consider the radical method too dangerous and insist at the same time that a relapse cannot with certainty be prevented by this operation.

Radical operations for cancer of the stomach have attracted the attention of the surgeons for forty years and for the past twenty years has been resorted to with increasing frequency in cases of benign lesions of the stomach. The more experienced surgeons are inclining more and more to some form of gastectomy. Finisterer of Vienna goes so far as to perform gastrectomy in almost every case, whether he is able to remove the ulcer (ulcers low down in the duodenum or in the cardia), theorizing that by removal of the acid secreting glands he secures a lower acidity of the stomach contents and at the same time secures better drainage of the stomach contents.

Gastro-enterostomy will cure more than ninety per cent of duodenal ulcers and the excellent pyloro-plasty of Finney with excision of the ulcer, will add at least 5% to this successful surgical group. There remains, however, a small but definite group of duodenal ulcers with deep excavations which may cause severe hemorrhages in which gastro-enterostomy fail to relieve the hemorrhages and other severe symptoms and pylorplastic operation cannot well be supplied. In such cases at least partial gastectomy will have to be resorted to, as a matter of choice.

The field of partial gastrectomy is much wider in ulcers of the stomach than that of ulcers of the duodenum. Gastric ulcers are usually greater in extent. They often slowly perforate, forming excavations into the pancreas and lead to the formation of extensive and crippling adhesions. Hemorrhages from these deep excavations are not infrequent and may prove fatal and at best in the case

of large ulcers, a crippled inefficient organ remains after excision of the ulcer, with or without gastro-enterostomy. In the smaller gastric ulcers of the lesser curvature which comprise about 75% of the ulcers of the stomach, cautery or simply excision with gastro-enterostomy has proved very successful and the mortality has been as low as simply gastro-enterostomy. For extensive ulcerations in the region of the pylorus, the partial gastrectomy of Rodman (Billroth II) has held a steady place in the esteem of conservative surgeons. Judd has shown that gastric resection in continuity for the larger ulcers of the body of the stomach gives satisfactory results. The Billroth 1, the Polya methods of partial gastrectomy, all have their special fields of usefulness. Each case must be treated on its merits and the decision as to the procedure in a given case cannot always be made until surgical exposure makes accurate examination of the lesions possible. In this equation the general condition of the patient is important and in many cases determines the method of procedure. Many surgeons in the past preferred to do a two-stage operation, first doing a gastro-enterostomy and followed in ten days or two weeks with gastectomy. In two instances in our experience while doing this method, on exploration of the abdomen at the second operation the ulcerated mass, which was quite large at the first operation, had entirely disappeared.

Generally speaking, in cases of gastric and duodenal ulcers which relapse subsequent to operation, partial gastrectomy is indicated. The advocate of any one type of operation for all ulcers of the stomach and duodenum is basing his conclusions on a very unique experience. Admitting the force of argument in all cases, we do not feel that gastro-enterostomy will cure all cases, neither do we feel that partial gastrectomy with removal of the acid and [illegible] bearing portion of the stomach such a wide field in peptic ulcer as some of its more radical adherents would lead us to believe. One cannot readily satisfy himself on examination of the specimen removed finding a large amount of gastric tissue sacrificed unnecessarily.

The recent theory of cancer of the stomach, being primarily simply ulcer, with cancer grafts interposed, has been almost universally discarded. At least so much so that we no longer feel justified in removing large areas of the stomach for that reason alone.

THE IRRITABLE BLADDER

By C. J. Reynolds, M. D.
Bluefield, W. Va.

Read Before the West Virginia State Medical Association, Wheeling, May 14, 1924.

It is not my purpose in discussing this condition to try to bring something new to your attention for all who are pacifiers to human ailments have sooner or later become heir to cases that will fall under this head. However, I would like to revive or stimulate thought on an ailment which occasionally confronts us, and which drives the patient into a depressed and disheartened state that is rivaled only by that of the attending physician who tries to lend succor but usually only to his discredit. For after his noble, persistent and determined efforts he frequently fails to glimpse the harvest moon, and in

despair is ready and sometimes eager to pass the buck with the conclusion of "What's the use?"

The subject of irritable bladder may convey to your minds that painful and irritable bladder which is accompanied by frequency and which may result from any of a multitude of causes, and which is usually accompanied by pyuria or hematuria, but that is beyond the scope of this paper and will be touched upon only insofar as a condition to be eliminated before using this label. The disease which I have in mind and which I can't believe is one in itself is that condition in which the patient suffers with painful and frequent urination and in which after careful searching no definite accountable pathology or etiology can be demonstrated either locally or generally.

In this condition the amount of urine is usually not increased above normal. The urinary findings are negative with the exception of an occasional leukocyte or erythrocyte; the patient has marked frequency accompanied by pain. They become irritable, nervous, depressed, and may lose weight. The condition usually dates back months or even years, and they usually have run the gamut of doctors and still triumphantly carry their ailment. It occurs more frequently in women and usually in middle life. They all are of nervous temperament, which is probably excited or aggravated by the disturbance of the bladder, loss of sleep, worry, and mental anguish.

There are many things which may provoke these symptoms and which must be eliminated before we are safe in saying the condition is simply an irritable bladder. The conditions which occur in the kidneys are pyelitis, pyo- and hydro-nephrosis, tuberculosis, renal congestion, and calculus. Those in the ureter are stricture and calculus, and in the bladder a calculus, fissure, tumor, diverticulum, acute or chronic cystitis, or submucous ulcer. Inflammatory conditions of the prostate, seminal vesicles or posterior urethra will also cause the disturbance.

However, the causes of urinary disturbance are not confined to lesions of the genito-urinary tract directly, but may be excited reflexively by mal positions of the uterus, tumors of the cervix or fundus, cystocele, peri-cystic pressure or adhesions, pelvic inflammation, and occasionally by an appendix abscess. Rectal troubles such as tumors and fissures also play an etiological part. In syphilis of the nervous system the pains of crises may be referred to the bladder.

These conditions should be investigated and carefully weighed in considering a urinary disturbance with these presenting symptoms. Fortunately by a careful physical, cystoscopic and proctoscopic examination and by the aid of the laboratory these conditions can be located or eliminated and we are enabled to postulate a prognosis.

As stated before, these victims are of a nervous temperament, are irritable and depressed, and the history dates back to the beginning of a prolonged bladder disturbance. They have been persistently annoyed by the inconvenience and the loss of sleep and worry brings on a physical impairment which is out of proportion to the apparent cause.

A careful searching examination reveals nothing positive of importance. The urinary examination shows only an occasional pus or r.b.c. On cystoscopic examination the capacity of

the bladder may be diminished, and the bladder is irritable, being easily excited to spasmodc contraction by slight over-distension or pressure of the cystoscope. Careful examination of the bladder wall fails to show any departure from normal with the possible exception of a slight edema of the trigone or prominence of vessels in this area. Examination of the urethra, ureters and kidneys fail to reveal any pathology. This condition is that to which the name cystalgia is sometimes applied, and one which is classified under the head of neuroses of the bladder for the want of a better name. But like the term "neurasthenia" has been concocted to cover an obscurity, so is this condition placed in a similar group to remain until sufficient data as to its etiology and pathology has been accumulated and studied. Since the condition is not sufficient to cause death it is rare to find suitable material to study the histo-pathology. However, what work has been done along this line fails to reveal any definite pathology with the exception of an increased vascularity of the trigone.

In considering the possible cause a review of the physiology of the bladder is in order. The muscle walls and the sphincter are supplied by motor fibers from the hypogastric and N. erigenes. These nerves becoming reflexively stimulated by an increased intravesical pressure causes a relaxation of the sphincter and a contraction of the detrusor muscles, resulting in an emptying of the bladder. There is a reflex center in the spinal cord that plays a part in this mechanism, and a stimulating or inhibitory influence is also constantly exerted over this center by the brain. Thus we can readily see that any condition which alters the sensibility of the terminal sensory fibers in the bladder mucosa, whether it be due to increased vascularity or changes in the constituents of the urine causing an irritation of the terminal sensory endings would tend to excite the trouble causing reaction to stimuli that ordinarily does not cause response. Likewise any condition that would increase the reflex activity either peripherally or centrally, or interfere with the normal cerebral inhibition over the spinal center might be one of the exciting or contributory factors. It is also probable that the influence of the mind may be an important factor in prolonging the ailment once the hyper reflex paths have been blazed, and the inhibitory power diminished. Possibly the threshold limit is also lowered. This being the case it is easy to understand why encouragement and physic procedure do sometimes aid in recovery since it would tend to increase the volitional inhibitory influence of the brain over the lower centers.

The most frequent precursions to this disturbance is tuberculosis and gonorrhea of the bladder, and this condition follows on what is presumably a healed process, but which has left this miserable reminder of its former presence. However, it occurs in patients with no antecedent ills. It is possible that the original processes having healed, and the surface becoming covered with normal epithelium, the sensory terminals become entangled in the scarry tissue and by the contraction of the ageing fibrils irritates the nerve terminals and makes them hypersensitive. Thus they respond more readily to increased intravesical pressure and the irritating influence of the urine.

However, this is speculative. The fact is that the condition exists and must be treated. Conditions of faulty metabolism either general or due to dietetic errors or intestinal putrefaction result in an irritating hyperacid urine. Gout, oxaluria, or phosphaturia may sometimes excite the condition. Food allergy has been added as a direct contributory cause and is supposed to act in a similar way as it does in causing asthma and urticara. Focal infections may play a part possibly by causing a submucous infiltration or inflammation similarly as is found in submucous ulcer of the bladder. Possibly it is more generalized or less severe. Finally we must consider the condition as being a type of localized neuritis confined to this area, and producing a cystalgia and frequency. At any rate the condition is dependent upon an abnormal sensibility in the nerves of the bladder or somewhere in their course.

In the treatment of this condition it is first necessary to do a careful urological examination. General diseases, such as diabetes, syphilis, exophthalmic goitre, etc., must be investigated. The rectum, throat, genital organs and all other sources of reflex irritation must be investigated and attended to. The habits must be regulated and the urine kept bland. Acids must be avoided and mild alkalis producing drugs must be administered to render the urine alkaline. Dilitation of the bladder and urethra seem to be of no benefit. Painting the trigone through the cystoscope with a 10% solution of silver nitrate sometimes gives temporary relief but usually this has to be repeated every two or three weeks. Rarely is a patient permanently cured by this procedure. Equally as good results can be sometimes obtained by washing out the bladder with distilled water, followed by the instilling of 1% silver nitrate for two minutes, and then washing out the residue. Some have reported occasional cure with X-Ray treatment. I have had gratifying results in one case by superficial fulguration of the mucosa of the trigone. Injecting the trigone with quinine and urea hydrochloride sometimes gives relief for several months. This acts by producing a fibrosis of the trigone and anaesthesia. On the same theory as injecting saline for neuritis, it appears that it might work in this condition. If due to allergy this type should be determined and attempts at immunity be made. Some cases react well to suggestion and some to physic procedures. Sad to say these cases don't respond to treatment satisfactorily, and they are liable to grow despondent. Great care should be exercised in promising relief as in most cases it does not come and disappointment renders them worse.

Discussion

Dr. F. E. Roberts, Wheeling: I have listened with a great deal of interest to the paper. Of course, Dr. Reynolds is considering cases in which, as he said, all means of diagnosis have been used and no cause found. As he said, these cases are certainly distressing. They try our patience, coming in week in and week out and not getting any better.

I would like to ask Dr. Reynolds if he has had any experience with railroad and street car men. This seems to be a common ailment of railroad and street car conductors. I have had a number. They are all right if they quit work, but the symptoms return as soon as they go

back. If they change their occupation they are relieved.

Dr. Reynolds, closing the discussion: In answer to Dr. Roberts' question, I have had some experience with men in those occupations; not much, though. I do not know why I should not have had more of that particular type than I have. I would like to attribute it to their highly nervous state of mind, but I have found it in other people. I occasionally run across these cases in men, but most of them are in women of middle age, anywhere from thirty to fifty.

TUBERCULOSIS
THE GREAT WHITE PLAGUE

By DR. G. D. LIND

(Continued from February)

In the sanatoria for the treatment of tuberculosis very gratifying results are shown. The number of recoveries are indeed remarkable when we consider the fact that a large percent of those who place themselves under treatment are already far advanced in the disease. The Imperial Health office of Berlin in 1901 published a statement of the results of treatment in Germany. There were 6,108 cases treated. Over 67% were restored so that they could follow their usual occupations, 7% could earn a living at some different occupation, 14% were able to earn part of a living. The annual report of the Massachusetts sanatorium for 1903 gives nearly 49% cured, and 43% improved. In the Adirondack Sanatorium over 70% have been apparently cured.

Now, what must you and I do personally to escape this dread affection, and to secure immunity to our families? The first thing is to learn what the physicians by patient research experiment and study have found out about the nature of the disease. This I have tried to explain, but will recapitulate for the sake of emphasis.

1. The disease is widespread and dangerous. You cannot run away from it. It cannot be kept out of the country by quarantine.

2. The disease is contagious, or more appropriately, infectious, but not so much so as some other diseases. The cause can be avoided.

3. The disease is not hereditary in the direct sense, but possibly a weakness, or a lessening of resistance to the germs may be inherited. If your parents or uncles or aunts have died of consumption, be only the more careful yourself.

4. The disease is curable—*but not by medicines.* Don't believe what an advertising doctor tells you. An advertising doctor is no doctor in the real sense of the term. He has a so-called cure which he has bought or stolen. A reputable, real doctor does not advertise. He does not boast of what he has done or can do. He does the best he can according to the best knowledge of all physicians. The experience of all others is his experience. Experience has proven that a treatment consisting mainly of fresh air, sunshine and plenty of nourishing and palatable food, with care to prevent reinfection will cure the majority of cases, if not too far gone when treatment is begun.

If you, my friend, have reason to suspect that this disease is working in your system, consult your family

physician, or some physician in good standing, not a traveling physician, nor one who advertises. Have him make a careful and thorough examination, keep back no information you can give him. If he suspects the existence of the disease, put yourself immediately under treatment, not medical, but hygienic. If you can afford it go to some sanatorium devoted to the special treatment of this disease according to modern methods. Follow the directions of your physicians, and obey the commands of your nurse to the letter. As to change of climate, that is not always necessary nor desirable. If you live in a climate that is unusually moist, and subject to sudden changes, it is best to go where it is drier, and the climate more even. Every state should have one or more sanatoria for the treatment of those unable to pay for treatment in a private institution. I think it will come to this before many years. The saving to the state would be enormous, out of all proportion to the initial expense.

If that master of frenzied finance, whose methods are now being exposed, and whose gifts the church is debating whether they ought to accept them or not, would use three-fourths of his wealth, he might establish a sanatorium in every state for free treatment, and still have enough left to place him among the rich in this world, and perhaps the recording angel would drop a tear on his record that would blot out half of his frenzied misdeeds. He has forced money from every man, woman and child in America, and he ought to restore it in some way.

If you cannot afford to go to a private sanatorium, and there are no free public ones available, do not despair. You can make a sanatorium of your own home. Get all the fresh air you can day and night. Sleep in a room with the windows open, but keep well covered that you may not get chilled. Better sleep on a porch or in a shed or tent when the weather is not too severe. Sleep in a bed by yourself. Spend as much time in the sunshine as possible, if you can stand the heat of the sun. Take plenty of exercise if your occupation does not give it to you, but stop short of actual fatigue. Have something to occupy your mind other than your regular business, or profession. Have an avocation in addition to your vocation. Do something you don't have to do, but which will interest you and which you will learn to love. For instance, you may become a collector. If you have money to spend you may collect old and rare books, bric-a-brac coins, stamps and curios generally. If you haven't the money you may collect natural history specimens (as rocks, minerals, plants, shells). Study what you collect, classify them, love them. Such an avocation will take your mind away from your disease, and away from the cares of business or your profession, and be a real rest both to body, mind and soul. If you live in the city make any excuse whatever to get outings. Hunt or fish, row or play ball. If you are not physically able to get away from home and indulge in these recreations, learn to sew or knit, or do some simple constructive work with tools. Wear warm clothes, change them often. Sleep in different garments from those you wear in the day time. Have your bed aired all the time you are not in it. Attention has been called by a German authority to the fact that so-called night sweats of con-

sumptives are in a great measure due not to the disease, but to the extreme efforts to keep warm by extra clothing and close rooms. So you can go to the other extreme and cover up too much. Keep comfortable but do not take steam baths in your own perspiration. Avoid extremes in both heat and cold. Take a warm sponge bath all over once a week for cleanliness sake. In some cases a cold or cool sponge bath every day with vigorous rubbings to get up a glow of reaction will be beneficial.

Eat all you can without causing discomfort. Have your food fixed up in many different ways. Oh, the infinite value of a good cook. Lord Lytton's saying is very true; "We may live without friends, we may live without books, yet civilized man cannot live without cooks."

Your food must be tempting, relished, digested and assimilated. Poor cooking is responsible for half the indigestion. Eat eggs, raw or soft boiled, or poached, but never fried, with eyes open or shut. Drink buttermilk, don't drink beer, ale, porter, wine, gin, rum, brandy, whiskey nor patent medicines. They will do you no good, and possibly harm. The drinkers, not the good, die first. If you must use tobacco smoke dry,—don't chew nor chew your cigars.

If you do not have the disease you are in no danger of contracting it if the people about you obey sanitary laws. No nurse in a hospital was ever known to get the disease from the patients since we have come to know that it is infectious. No physician has taken it from his patients. As you have been told, but it will bear repetition, the germs are mainly carried into your lungs by breathing air loaded with them, and such air we have near where the spittle has been allowed to dry. Someone tried the experiment of putting 48 guinea pigs in a room where the spittle from a consumptive patient had been allowed two days to dry. All but two of the 48 guinea pigs contracted the disease. There is no doubt in the world that the disease is communicated in this way. Children spend most of their time on the floor or the ground near the home, and here is where the germs are the thickest. The child sometimes gets the disease and it is so slow to develop that he becomes an adult before it is discovered, and then we have been in the habit of saying he inherited it from his parents.

Now the important thing of all is to destroy these germs as soon as they are cast off from the body. It is estimated that the average consumptive throws out seven billions of germs every day. What is the lessen from what I have told you which is as true as any gospel of science or religion, for it has been proven again and again by scientific experts the world over. The lesson is a simple one. We must not permit a person who has tuberculosis to cough without holding a cloth before his face, which should be disinfected frequently. We should not permit him to spit anywhere except into a proper receptacle which can be destroyed or disinfected. Old newspapers are very good if the patient is careful to let it catch all spittle, and have it burned before it can possibly get dry or come in contact with any other object. Various forms of spittle receptacles have been devised, but all are objectionable if not properly managed. Spittoons containing sawdust wet with carbolic acid are used in some hospitals.

A room where a consumptive stays should never be swept with a dry broom. The floor or carpet should be covered with wet tea leaves, bits of wet paper, or wet sawdust, and the broom dampened. Then all the sweepings should be burned. A room without carpet is better than one with carpet. The furniture should not be of the upholstered kind — then the floor can be mopped and the furniture wiped with a damp cloth, and the broom be dispensed with entirely. Upholstered furniture is neither artistic nor wholesome. It catches germs and holds them so that you cannot get at them to remove them, and yet yields them readily to the air when handled.

The Central Railroad of New York has adopted a method of cleaning cars which is an ideal one from a health standpoint. The dust is sucked up through pipes by a vacuum pump of great power. The cushions, carpet and curtains are cleaned without raising any dust. We hope to live to see the day when this system will be adopted in all public and even private buildings.

There was a time in the history of the world when the broom was the housekeeper's friend, but the discoveries of science have wrought a change, and now if we are not extremely careful the broom is a very besom of destruction. It kicks up too much dangerous dust and fills the air with ghastly germs. The broom must be used aright, or it must go.

Bed clothes should be of the kind that can be boiled, and that should be done frequently. Feather beds should never have been invented. Pillows and mattresses should have double coverings, which can be washed by boiling. It would be well enough for everybody whether they have consumptives about them or not to observe these simple rules for cleanliness. Typhoid fever is an easily preventible disease because the germs are thrown off in those excreta which from time immemorial men have been more careful to dispose of than the secretions from their lungs, throat and mouth. If men had always been as careful in disposing of their spittle as they have of other excreta consumption would not be as prevalent as it is.

I cannot resist this opportunity to say a word in favor of the physicians as a class of humanity. Not long ago there was unveiled a statue of a man in a neighboring state. The inscription read, "He would have been known to the world as a patriot had he not been known as something greater, a physician." Could a greater compliment have been paid to a mortal man? The physician is the true altruist for he is in a measure destroying his own business to build up the race. What I am now going to say, and much that I have said has been said before, but

Though old the thought and oft expressed
'Tis wit at last who says it best,
I'll try my fortune with the rest.

When in the "wee sma' hours," or maybe when the cock's shrill clarion announces another day of pleasure and of toil, who hands the nurse the new life which he has so carefully guided into this world, possibly having saved two lives and a world of sorrow at the same time? The physician. Who does the last act which is of real benefit when the shades of night are closing around a well or ill-spent life? The physician. Who, and who only, save the God of Na-

tions, is capable of prolonging the average lifetime of the human race, and thus adding a wealth to the world such as a Croesus never dreamed of? The physician.

(This paper was read at the Annual Meeting of the West Virginia Medical Asciation in 1905. It never appeared in the transactions and is now published at the request of Dr. W. W. Golden, Elkins, W. Va., who was Secretary of the State Association when it was presented. As I remember it this was the public address for the session.—Ed.)

ANNOUNCEMENTS AND COMMUNICATIONS

February 6, 1925.

To All of the Secretaries of the Component Medical Societies Throughout the State of West Virginia:

Dear Doctors:

Will you kindly read this letter and these committees, below, at one or more of the meetings of your society, between now and the meeting of the State Medical Association here in June, 9, 10, 11 and 12.

Here are the committees and subcommittees, as appointed by the Mercer and McDowell County Medical Societies, to arrange for the entertainment of the State Medical meeting here in June. If there are any of your members or any member of the State society, or any doctor out of the state who is interested in our meeting, who wishes any information in regard to same, I wish you would have them write to any of the chairman of any of these committees or subcommittes.

General Arrangements: Dr. H. G. Steele, Chairman, 10 Bland St., Bluefield, W. Va.; Dr. J. Howard Anderson, Marytown, W. Va.; Dr. A. G. Rutherford, Welch, W. Va.; Dr. John H. Bird, Rock, W. Va.; Dr. W. H. Wallingford, Princeton, W. Va.

Sub-Committees

Finance: Dr. H. G. Steele, Treasurer, Bluefield, W. Va.; Dr. J. C. Killey, Assistant, Vivian, W. Va.; Dr. Carl Smith, Princeton, W. Va.; Dr. Uriah Vermillion, Athens, W. Va.; Dr. B. S. Clements, Matoaka, W. Va.

Meeting Halls, Committee Rooms, Etc.: Dr. David Littlejohn, Chairman, City Hall, Bluefield, W. Va.; Dr. J. B. Kirk, Giles & Princeton Ave., Bluefield, W. Va.; Dr. Thomas E. Peery, Peery Building, Bluefield, W. Va.

Commercial Exhibits: Dr. David Littlejohn, Chairman, Bluefield, W. Va.; Dr. Wade H. St. Clair, Bluefield Sanatorium, Bluefield, W. Va.; Dr. C. M. Scott, St. Lukes Hospital, Bluefield, W. Va.

Hotels: Dr. F. T. Ridley, Chairman, Peery Building, Bluefield, W. Va.; Dr. E. M. Tanner, Bluefield Sanatorium, Bluefield, W. Va.; Dr. John McGuire, Peery Building, Bluefield, W. Va.

Entertainment: Dr. O. S. Hare, Chairman, Peery Building, Bluefield, W. Va.; Dr. J. Howard Anderson, Marytown, W. Va.; Dr. S. R. Holroyd, Athens, W. Va.; Dr. G. G. Rhudy, Peery Building, Bluefield, W. Va.

Publicity: Dr. W. L. Peck, Chairman, Coalwood, W. Va.; Dr. A. G. Rutherford, Miners Hospital, Welch,

W. Va.; Dr. David Littlejohn, Bluefield, W. Va.; Dr. H. G. Steele, Bluefield, W. Va.

Automobiles: Dr. T. E. Vass, Chairman, Princeton Ave., Bluefield, W. Va.; Dr. Chas. T. St. Clair, Bluefield, W. Va.; Dr. A. H. Hoge, St. Lukes Hospital, Bluefield, W. Va.; Dr. W. B. Stevens, Eckman, W. Va.; Dr. J. E. Blaydes, Bluefield, W. Va.

Scientific Exhibits: Dr. H. G. Camper, Chairman, Welch, W. Va.; Dr. G. L. Todd, Princeton, W. Va.; Dr. C. J. Reynolds, Bluefield, W. Va.

Clinics: Dr. A. H. Hoge, Chairman, Bluefield, W. Va.; Dr. Wade H. St. Clair; Dr. A. G. Rutherford, Welch, W. Va.; Dr. Chas. F. Hicks, Welch, W. Va. (Grace Hospital); Dr. G. L. Todd, Princeton, W. Va.; Dr. W. H. Wallingford, Princeton, W. Va.

Badges: Dr. W. C. Slusher, Chairman, Peery Building, Bluefield, W. Va.; Dr. H. H. Haggart, Bluefield, W. Va.; Dr. E. W. Horton, Bluefield, W. Va.

Reception: Dr. J. Howard Anderson, Chairman, Marytown, W. Va.; Dr. S. R. Holroyd, Vice-Chairman, Athens, W. Va.; Dr. A. H. Hoge, Secretary, Bluefield, W. Va.; all members of McDowell and Mercer County Societies.

Golf Tournament and Use Country Clubs: Dr. W. W. Rixey, Chairman, Memorial Hospital, Princeton, W. Va.; Dr. W. B. Stevens, Eckman, W. Va.; Dr. R. V. Shanklin, Gary, W. Va.; Dr. John H. Bird, Rock, W. Va.; Dr. Chas. T. St. Clair, Bluefield, W. Va.

Ladies' Reception and Entertainment: Mrs. Wade St. Clair, Chairman, Bluefield, W. Va.; Mrs. W. B. Stevens, Vice-Chairman, Eckman, W. Va.; Mrs. A. H. Hoge, Secretary, Bluefield, W. Va.; all doctors' wives.

Registration: Miss Verna Echols, Bluefield Sanatorium, Bluefield, W. Va.; Miss Amelia Burton, St. Lukes Hospital, Bluefield, W. Va.

Within the next few days each secretary will be mailed from this office a few envelopes advertising on the back the State Meeting here in June. I wish you would write a letter to that many of your members insisting on them, or as many of them as can, to arrange and come to the state meeting at Bluefield, in June.

In other words, I want each of you secretaries to get interested in this meeting and do everything in your power to make it a howling success.

It is as much your meeting or more than any member of the McDowell or Mercer Medical Societies, and we want you all to come who can possibly get here.

Watch your State Journal as we hope to have something about the Bluefield meeting in it each month.

If there is any further information you or any member of the state society desire, I will appreciate it if you will write to me, or any member of these committees, and I am quite sure any of us will be glad to furnish you with any information that we can.

I am yours fraternally,

Signed, H. G. STEELE,
Chairman of General Arrangements Committee.

February 13, 1925.

DR. J. R. BLOSS,
Huntington, W. Va.

My Dear Dr. Bloss:

As chairman of the Hotels Committee, for the coming meeting of the West Virginia State Medical Association, I wish to submit some data, in order that you may publish it in the *Journal*, if you wish.

There are four modern hotels in this city, all of them run on the European plan. Rates are as follows:

Hotel West Virginian, 240 rooms, each with bath; 100 rooms will be available for this meeting. For one person, $3.00 to $5.00. For two persons, $5.00 to $7.50.

Hotel Matz, 225 rooms; from 100 to 125 rooms will be available for the meeting. Single rooms, without bath, $1.75, $2.00 and $2.25. Double, without bath, $3.00 up. Single rooms, with bath, $2.00, $2.25, $2.50 and $2.75. Double, with bath, $3.50 up.

Commercial Hotel, 76 rooms; 30 rooms will be available for the meeting. Single, without bath, $1.25 and $1.50. Double, without bath, $2.00 and $2.50. Single, with bath, $2.00. Double, with bath, $3.00. Some rooms have two beds, and the rate for these is, without bath $3.00; with bath, $4.00.

New Altamont Hotel, 80 rooms; 30 will be available for the meeting. Single, without bath, $1.50. Single, with bath, $2.00. Double, without bath, $2.50. Double, with bath, $3.00.

With kindest regards and best wishes,

Very truly yours,

FRANCIS T. RIDLEY.

Fairmont, W. Va.,
Feb. 13, 1925.

DR. J. R. BLOSS, Editor
West Va. Medical Journal.

My Dear Bloss: I have followed with interest the reports of the epidemic of diphtheria at Nome, Alaska. It seems, indeed, that the eyes of the nation were focused on this small and somewhat isolated hamlet. Meanwhile the progress of dog-teams and other means of conveyance, bearing diphtheria antitoxin, of which Nome unfortunately had a very limited supply, and that old, was a source of interest and much comment.

It seems rather remarkable since "Chiropractic" has penetrated to every nook and corner of our country that some member of this cult did not rise up, throw himself into the breach and by means of "spinal adjustments" control the situation, pending the arrival of the antitoxin. It would have been a wonderful opportunity to have had the nation rise up, as a unit, and call him blessed. If there was no chiropractor on the ground, there should at least have been someone capable of applying "Christian Science," or "New-Thought," and by this means the ravages of the disease might(?) have been stayed.

If any of these people were in Nome and modesty forbade them to interfere, some public-spirited citizen or citizens committee should have seen that they did their duty to humanity. We however heard nothing of any such action being taken or even contemplated.

Even though there were none of the last named cults in Nome or its immediate vicinity, this need not have

prevented the sufferers from receiving "treatment." The citizens committee, by making the proper appeals could have had "absent treatment" administered to those afflicted. The question is, why was this not done?

If I may be so bold as to suggest an answer to the above, it is this: When humanity faces a serious situation, a crisis in fact, it wants real, genuine help. Though it may dally with quacks and irregulars, it realizes full well that efficient aid is only to be had from those able and willing to give it, namely the regular medical man with his real medical methods.

Sincerely,

CLAUDE L. HOLLAND.

ANNOUNCEMENT

The Ninth Annual Clinical Session of the American Congress on Internal Medicine will be held in Washington, D. C., March 9-14, 1925.

Washington clinicians and investigators of attainment will devote the entire session to amphitheatre and group clinics, ward "rounds," laboratory conferences, lectures, demonstrations of special apparatus and methods, and the exhibition of unusual scientific collections. Civilian and governmental services are united in the aim to make the week useful and memorable.

Practitioners and laboratory workers interested in the progress of scientific, clinical and research medicine are invited to take advantage of the opportunities afforded by this session.

Address inquiries to the Secretary-General.

WM. GERRY MORGAN, *Pres.*

Frank Smithies, Sec'y.-Gen'l.
1002 N. Dearborn St.,
Chicago, Ill.

THE WEST VIRGINIA MEDICAL JOURNAL

JAS. R. BLOSS - - - - - - - - - - - - - *Editor*

WALTER E. VEST, Huntington
C. A. RAY, Charleston
HARRY M. HALL, Wheeling } - - - - - - - - *Associate Editors*

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All original articles for The Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all parts of the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

Advertising forms will go to press not later than the tenth of each month.

All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

Should be made by check, draft, money order, express order or registered letter to Sterrett O. Neale, Executive Secretary, 211 Smallridge Bldg., Charleston, W. Va.

Editorial Office: 804 Lincoln Place, Huntington, W. Va.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

AS YOU THINK

As you think, just so is the next meeting of the State Society far away or near at hand. As you think, just so is the State Society a big factor in your life or a remote gathering of men to which, as a kind of thing in fashion at the present time, you give a strictly casual allegiance because you *might* possibly be rendered uncomfortable if, to it you would be obliged to say you did not belong.

The actor, George Arliss, was interviewed the other day. He felt we have lost tremendously, in one great

respect, and that is in the art of friendship. We live too hurriedly, the stresses of our business world are too highly strung to permit the leisure for cultivation of those fine, lifelong frienships between men which have characterized previous times.

Some one asked if prohibition was not in a degree responsible. It may be, he replied, because it came so suddenly. He had wished that it might have been crowded out instead of legislated, by something that was better in every way. He said in England, especially the lower classes, this was being done, strange to say, by coffee and several other simple things.

The part about prohibition was not started for any purpose in this editorial, except that it is true, beverages did help to bring men together, say what you will. And now that they are gone or are supposed to be gone, according, again, as you see fit to think, it is up to the medical profession to set, as it has always set, the example that friendships in it are based on the interest we take in each other towards a common goal.

Is a medical society something more than a "high brow" union? Is it just an instrument to "get on" with, that is, a thing to hold office in, so that you can gratify the vanity in seeing your name emblazoned, or satisfy the longing for political adventure innate in every man's breast?

Is it just an assembling together to hear someone's method of prescribing a favorite course or removing an offending organ? Is it just a small percentage of the whole, who elect to gather each year and offer their direction to the other big remainder who stays at home and keeps its tongue in its cheek?

Sometimes it would seem to the onlooker as if "yes" might well be hurled at all these interrogation points.

Efforts to make the average American take an interest in things are pretty will attended by distress and discouragements. For a fine example, it is always thrilling to refer to the recent effort to get the electorate out to vote for a President of these United States. Yet it must be done —distress or no distress—discouragement or no discouragement. For let us say for purposes of hypothesis that to get together in a spirit of conviviality was with the scientific program, one of the great ties in a yearly meeting for some members.

As Arliss said, something must take its place for those that felt that way. There could be injected into this State Association an enthusiasm that would easily reach such a point that it would have the power to fill the gap any other agency ever achieved, be it what it may. And that is what it is hoped may be attained in this very society. To some this may be conspicuously like fatuity. To others, a mere array of words. But it is uttered with conviction. It could be quickly attained had the West Virginia State Association a doctor who had the courage of a Savonarola or a Joan of Arc, but there is none.

Because it takes a hardy soul to argue against not staying in that land of enchantment—the confines of "let well enough alone." Moves that are made in a spirit of progress are often mistaken for novelty and men with visions mistaken for selfish fools without enough work to do.

We have heard criticism of the new "secretary idea." For all we know, it might prove a failure. If it does, it is rather a reflection on us of this

state since it has worked elsewhere with the best of promise. But we all should support it and give it a fair trial. We have heard murmurings about the dues being raised. This is one of the things about the medical profession that, even as a boy, working with a preceptor, we did not understand. It was one of the things that made us stop and wonder if we wanted to enter it.

Collectively, doctors come pretty close at times to appearing as stingy, where a movement of their own is concerned. There are some queer concrete examples to be cited. A levy was made in a certain county society and almost 100% of them handed over $25.00 apiece. It was not all used. A rebate was given with the request it be mailed back for dues. Very slowly the money came back again when used for that purpose. We have no explanation for this. The levy was for entertainment.

We belong to the Rotary Club and once was the President, so we can say we were in a position to observe. We have inquired as to the other clubs, and hear the same news. Now we pay $35.00 a year dues into the Rotary club. All other doctors do the same. Do you ever hear of a doctor objecting or dropping out of any of these clubs? We never heard of one. We are a great believer in the Rotary idea but we would not think of saying the Rotary Club meant more to us than our medical society nor would we long hesitate to say which we would give up had we but one we could attend. Why is is then doctors object to very reasonable—rather low—dues in their own associations and yet never bat an eye when called on frequently for liberal amounts elsewhere?

Somebody may arise and say, the men in the clubs are those that do not object to the raise in the State dues. Personally, we believe this is ascribing to social clubs a power no doubt greater than they possess. Perhaps some doctors might care more for their non-professional neighbor's opinion than they do their fellow's. It is worth thinking about.

Perhaps most men who register so much protest against the usual procedures of their State Society are those who take but little interest in it and accept its good offices after the fashion some men believe the world owes them a living. No doubt abuses are in evidence in every State Society. We ourselves get tired of seeing the same names holding office continually, but it is so in the aforesaid social clubs—in lodges—in politics. Discussion in a local society generally narrows down to a few men. It's all because they do it and can be relied upon to do it. And after all that is what makes the same names in print all the time, everywhere. You call on these men; they are there and with no alibis.

We would like to see the percentage of those who believe a medical association ought to be the first and leading organization in the state—for sociability, for intelligence, for power, for progress, for science—increase. Say we had dues like the Rotary Club. We would have our own building in Charleston. We could be free of depending on exhibits at meetings; free from dependence on advertisements in the *Journal*. We could have a state museum. We could even afford a whole-time lecturer, who could go to every society in the state and give first-hand to each one what the others are do-

ing. In short, we could be where anybody would think twice before meddling with our aims and ideals. It is a far cry but it is pleasant to dream about. And as a writer in the A. M. A. *Bulletin* this month so ably writes, we are rather disliked because we are felt to keep aloof. He feels we should get out and spread our knowledge more freely because after all it is knowledge alone that is the only priceless gift that we can bestow.

Shall we of West Virginia be among the pioneers to give and give gracefully? There are a few things in which this State of West Virginia has an equal chance with three-fourths of the Union to be the very first. One of these is its medical society. With all their faults — and these probably have been the usual human quota—a few men have struggled along to make for us onlookers over many years the frame-work of a good medical association. This writer believes it is time for more of us onlookers to quit criticising and turn in and make the association a pattern to the country. No use denying it at the present time, we have too many men in the state who are merely selfish. They do not attend meetings. They pick up some little matter, like a two dollar raise in dues, and almost make the profession look ridiculous by feeling it is a hardship. Compare this spirit with the work of Ray, Rader, Vest, Anderson, Hupp, Reed, Schwinn, Bloss, Steele, Henry and all the others who year after year, amid a good deal of discouragement, have carried on. This writer has no crystal ball handy, but he believes we have a great society. Something we can't define makes him believe we have a certain sufficiency unto ourselves.

The more he sees men coming from other places the more he believes we have the power within us to become well nigh unto the best. We lack the research abilities and, if we had them, the place to work in, but some good-hearted West Virginian will give us that some day. But some of the best things in medicine have come from men working independently and alone like we have in West Virginia. Too many men in West Virginia expect the wisdom to come from the far off horizon and it is here at their door step. Can we not have a little more faith and help and co-operate, not from the faithful crowd, but from this big percentage of onlookers who for some reason still hesitate to swing in with their much needed help and enthusiasm? —H. M. H.

THE CLIQUE

What is the clique? 'Tis those who attend
All of the meetings, on whom we depend.
They never are absent unless they are sick.
These are the ones the grouch calls "The Clique."
The ones who are never behind with their dues,
Who come to the meetings and have their own views—
They'll serve on committees, and never say "die."
"The Clique" are the ones that always "get by."
We all should be proud of members like these.
You can call them "The Clique" or whatever you please.
They never attempt any duties to shirk.
These are "The Clique" that do most of the work.

But there are some people who always find fault,
And most of this kind are not worth their salt.
They like to start trouble, seldom will stick;
They like to put all the work on "The Clique."

—*Selected.*

Each year we hear so many complaints regarding the affairs of medical bodies and "the clique" running them, that the above seemed to us very trite.

We often wonder just why it is that medical men seem to have such a distaste for co-operation. It would appear that of all professions ours would most appreciate "team-work." This, however, seems almost an impossible hope. As our experience, and work, has carried us beyond the county society, the same complaint of a "clique" is always registered. This is true even to the national organization.

On a number of occasions since the Editor has had the honor of being one of the representatives of our State in the House of Delegates of the American Medical Association, he has been approached by entire strangers, when they discovered our identity, and this matter of "clique control" has had another airing.

At first we felt that there must be something rotten about the control of the clique of the A. M. A. Our experience was new and we were representing West Virginia and things should be straightened out. This first experience came at the Boston session. Possibly it was the native caution of our New England ancestry but at any rate it seemed fitting to stroll out into Boston Commons and do some meditating.

After an hour spent amid such surroundings, the conclusion was reached that it might be very well to do a little observing before reaching half-baked conclusions.

For five years now we have been watching and thinking. Of course a delegate of only four sessions is but a mere infant among those men who have been coming for ten, fifteen, twenty, twenty-five years. Delegates, like physicians, must have experience to be of much value.

We have discovered that these men are all earnestly striving to advance the welfare of our profession, and concomitantly the whole citizenship of the United States, with a spirit of conscientious zeal which almost reaches that of a religion. Instead of "a clique," it is our opinion that a search is constantly being made to find the thing which is best for the whole profession. The opinions, the ideas of the men out on the firing line are sought, and welcomed when found.

But!—and here is the whole of it —these ideas and opinions are mercilessly dissected and must contain true merit. If the merit is there then a great feeling of satisfaction envelopes the whole profession. If no merit is found then another member is added to that army who proclaim "a clique" to be in control and that the clique is throttling the profession.

It all comes back to the conclusion that the members who work (*and shirk not*) are always "The Clique."

MEMBERSHIP DUES

The importance of enrolling as large a number of members as possible prior to April 1 is being stressed in a letter from state headquarters to all secretaries of component societies. It is urged that every effort

be put forward so that each society may have its full representation at the Bluefield convention, June 9, 10, 11 and 12.

Under the state association's constitution and by-laws, each component society is entitled to one delegate for each 25 members, or fraction of the unit of 25. And the House of Delegates is the important governing body.

After all, members of the state association are stockholders in the organization, the members of the House of Delegates are the stockholders' representatives, and the Council is the board of directors. The good of the state association depends largely upon a large representation in the House of Delegates and for that reason alone, if for no other, every qualified member of the medical profession should make it his or her business to take an active interest in the association, thus working for the betterment of the whole organization.

The list of new members of the state association is increasing almost daily. Unusual interest is being shown because West Virginia has joined the ranks of states that have full-time secretaries in charge of business activities of the association.

A layman was chosen because it was the belief of the majority of members that a young physician with prospects would not abandon his career, neither would an older physician be willing to abandon his practice. The work of the state secretary had reached such a volume that it really was more than a physician, with a moderately active practice, could be expected to handle. So, the secretarial duties and the business managment of the *Journal* was placed in the hands of one man, creating a full-time secretarial position.

At the earliest possible moment, the secretary will visit each component society and explain in detail just what is being done. In the meantime, it is urged that each member obtain his 1925 certificate at once.

ME and GOD

The following advertisement appeared in one of the newspapers. It was sent to us to us by one of our correspondents. It is of a father with the treatment of lice, chiropractically, as stated under oath in a Canadian court by B. J. P. himself.

> Question.—"I have heard your patients say that 95% of disease is caused by nerve pressure in the spine. If this is true why did not God create better and stronger spines?
>
> Answer—When God created man did He foresee our present day environments? Did He foresee that our bodies would be subjected to all manner of physical abuse? Without attempting a Biblical explanation, we must accept facts as presented today, and the statement that fully 95 percent of diseased conditions are due to nerve pressure in the spine cannot be denied. Picture for yourself the main shaft of a machine capable of the various movements of the human spine; subject it to the same number of twists and wrenches that the spine has to endure. With this picture in mind, can you be astonished at the X-ray view of an abnormal spine? Is not the human body much more liable to have its parts strained out of normal position, and the effect more severe and lasting than the man-made machine, an inanimate thing? The logic of the Chiropractic philosophy is plain. It is devoid of theory. It is an established, time-proven fact. For further proof you should consult your Chiropractor.

In this connection it would seem that there is some light being shed on a way of meeting charlatanry.

In Wheeling we are informed that one Alexander Ross, D. C., is being held under bond for practicing medicine without a license.

This is the outcome of his treatment for several days of one Mrs. Susanna Holderman. When she died

of heart disease soon afterwards the City Health Commissioner, Dr. W. H. McLain, refused to sign the death certificate.

Following this the daily papers state the coroner ordered the arrest of Ross on the above charge.

There is one thing we admire about Commissioner McLain, and that is his fearlessness when it comes to the performance of his duty.

This idea rather appeals. If physicians would refuse to be cat's-paws for the various types of medical deceivers, we are prone to believe it would have quite marked therapeutic properties as a kind of absent treatment for this congenital absence of tissue capable of cerebration.

THE NEED OF THE RURAL DISTRICTS FOR PHYSICIANS

A recent communication from President Jeffers tells of the need of a physician at Sandyville, a small community near Ravenswood.

The sudden death of the only physician, Dr. Curry, has left them without a physician. In the summer season with good roads it is possible to secure the services of Ravenswood physicians. In winter the condition of the roads makes this impossible.

How these conditions are to be remedied and physicians provided for such localities as this one, is a grave problem. No one seems to be able to solve it.

Dr. Ogden's plea for a complete system of hard surfaced state roads is a good suggestion and will, when realized, go far toward ameliorating this distressing state of affairs.

Deep consideration must be given to the address of President Pusey, last year, at the Chicago session of the A. M. A. He maintains that the requirements at present are entirely too severe and that they must be modified. This has been our personal opinion for several years, but it does not meet the immediately urgent need for a physician in Sandyville.

IGNORANT PRETENSE—CRIMINAL

The practice of the healing art without the fundamentals of medical education is criminal.

Commenting upon the recent conviction of a Brooklyn chiropractor upon a charge of manslaughter, the *New York Times* editorially says:

"Ernest G. H. Meyer, one of the too many men who, without a medical education, have engaged in the practice of medicine, was convicted of manslaughter in a Brooklyn court this week and may receive a maximum sentence of from ten to twenty years in jail. As the jury recommended clemency, it is not likely that his punishment will be severe, but the conviction will stand as a precedent and shows that convictions can be obtained in spite of that absence of intention to do harm which always counts so heavily with jurors—and with judges too, for that matter.

"Meyer, who calls himself a 'chiropractor,' was summoned by misguided parents to treat a sick child. He performed some of the spinal manipulations which constitute the whole stock in trade of his class. Whatever the result of his exertions may have been, he did not discover that the child was suffering from diphtheria, a disease which almost any sane adult ought to at least suspect before it is far advanced, and a real doctor was not called in until just before the fatal termination. Then there was administered the antitoxin which in all probability would have saved the child's life if resort to it

had been timely, but it was too late and the little girl died, a victim of a double ignorance. This to the jurors was manslaughter.

"One comment on the verdict heard in the courtroom was that if it is to stand any 'chiropractor' unlucky enough to lose a patient can be sent to jail. The statement will excite neither dissatisfaction nor apprehension among people fairly well informed as to the preparation necessary for the practice of medicine and who have sense enough to know that there is more in it than surgery and the giving of drugs, to which all the 'irregulars'—euphemism for 'quacks' —desperately try to confine its definition."—Ed., *Ohio State Med. Jour.*

STATE AND GENERAL NEWS

The West Virginia Legislature will be making political history by the time this issue of *The Journal* reaches the membership. As this is written, copies of the bills have not been returned from the printer but judging from the large number introduced relating to the practice of medicine, the committees on medicine and sanitation in both houses will be among the most busy of all the committees.

Among the first "crop" of bills introduced at the preliminary session was the chiropractic proposal which would establish a separate board of chiropractic examiners, appointed by the governor, and intended to regulate the chiropractors in West Virginia. It is patterned after the so-called "Palmer Model Bill," so far as can be learned.

The bill in the senate was introduced by Senator John Kee of Bluefield and it is labelled "Senate Bill No. 260."

On the other hand, the medical profession in West Virginia proposes a bill which has been introduced in the Senate by Senator Clyde B. Johnson, of Charleston, and in the House by Dr. S. R. Holroyd, of Athens, and which would elevate the standard requirements of all persons intending to practice the art of healing.

Under this bill, all applicants for a license to practice any art of heal- would be compelled to pass a state medical board examination. If the applicant indicated a desire to specialize in chiropractic or the other so-called specialties, the state medical examining board would be empowered to call in one of the "specialists" who already had conformed to the state board's requirements and he, in turn, would assist the state board in examining the applicant with relation to the applicant's knowledge of the special branch.

The medical association's bill would require four years of high school, two years of college similar to the first two years in the college of arts and sciences at West Virginia University, and graduation from a Class A medical school before the applicant is eligible to take a state board test.

While both bills in the House and Senate would place jurisdiction over violations in the hands of a Justice of the Peace, Senator Johnson has introduced a bill of his own in the Senate which would subject the violators to injunction proceedings before civil district judges—and in event restraining orders are obtained and violated, the faker could be arraigned on contempt of court proceedings.

Another bill has been introduced in the House by Delegate Cotton of Ohio county, relating to the sale and manufacture of mattresses in West Virginia. This is a sanitation meas-

ure and there are those who declare it possesses real merit. It is patterned after the Pennsylvania law and would require all manufacturers of mattresses to set forth on printed tags just what the mattress is made of, and whether or not it is second hand. Ohio, Pennsylvania and Maryland have such restrictions but West Virginia has had the bars down, there being nothing to prevent mattresses junked in the other states from being recovered and sold for new in West Virginia.

Copies of all the bills will be available the latter part of February and all members are to be apprised of the contents of all having a bearing upon the health of the West Virginia public.

While legislation was being introduced in Charleston, to protect the public health from the inroads being made by quacks and fake healers, a serious case arose in Wheeling.

Mrs. Susanna Holderman, 50, went to a "Dr." Alexander Ross in South Wheeling with the complaint that she was not feeling well. He diagnosed her ailment as rheumatism and proceeded to give her "electric treatments." Mrs. Holderman died. An autopsy disclosed that she suffered from heart disease, according to Associated Press dispatches to Charleston.

Self-styled "Doctor" Ross was arrested on a charge of practicing medicine without a state license. He pleaded not guilty, contending that his "electric treatments" could not be construed as the practice of medicine. He is under $1,000 bond.

The executive secretary had an enlightening visit to Northern West Virginia the first week of February, visiting Morgantown, Clarksburg, and Parkersburg. Dr. Eldon B. Tucker, secretary of the Monongalia County society, reported two new members and almost an entire paid-up membership for 1925. A luncheon meeting of the Harrison county society was attended and members there were enthusiastic over the prospects of a central state headquarters where all business activities could be combined—activities which heretofore have fallen upon the shoulders of an active practitioner.

At Parkersburg, six new members were enrolled and the session continued until well after midnight at the Camden Memorial hospital.

The secretary also visited Bluefield February 26 to familiarize himself with details in connection with the state convention. At this time it seems that the approaching meeting will be one of the biggest and most instructive sessions in the state association's history. Nothing is being overlooked, apparently.

During March, the secretary expects to visit the Eastern Panhandle and several other societies, if his duties at Charleston during the month will permit. The legislature convenes March 11.

Dr. T. W. Moore and wife of Huntington, recently returned from a month vacation spent in Cuba and Florida.

Dr. L. M. Thacker, who was one of the most prominent physicians in Lincoln county, had practiced in Hamlin for more than thirty-five years. He died suddenly, death coming shortly after he had retired Wednesday, complaining of not feeling well.

He is survived by his widow, Mrs. L. M. Thacker, one son, Leslie, and one daughter, Mrs. Ralph Smith, of Louisville, Ky.

A very pleasing incident of Huntington's social calendar was the surprise party tendered Dr. W. D. Hereford by his thoughtful wife upon his return from a meeting of the Cabell County Medical Society. Dr. Hereford is the newly-elected president of this society and the guests included the members of the organization. The affair was quite a surprise as not the slightest hint was made to Dr. Hereford until he returned home and found the guests awaiting him. At a suitable hour a delicious supper was prettily served to Drs. R. M. Bobbitt, J. C. Matthews, A. R. McKenzie, R. Ruedeman, F. O. Marple, C. M. Hawes, C. M. Beckner, M. B. Moore, D. J. Cronin, W. B. Hunter, J. C. Ford, C. P. S. Ford, C. G. Willis, F. C. Hodges, William Strange, George Lyon, Wiley, C. T. Taylor, W. E. Vest, F. A. Fitch, B. J. Hume, Oscar Biern, A. K. Kessler, J. C. Kessler, J. S. Klumpp, I. I. Hirschman, J. E. Rader, G. W. Johnson, R. J. Wilkinson, John Steenbergen, L. V. Guthrie, J. A. Guthrie, A. S. Jones, J. E. Hubbard, James Bloss, Karl Prichard, I. N. Mayberry, Hoitash, and others.

The Inter-State Post Graduate Assembly clinic tour of American Physicians to Canada, British Isles and France, 1925, will include all the different branches and specialties of medicical science. Tour starts from Chicago by special trains, May 17, 1925. Physicians living in territory where it will be more convenient to go direct to Toronto will be provided with direct transportation to that city. May 18, 19, Toronto. May 20, trip through the Thousand Islands and the St. Lawrence Rapids. May 21-22, Montreal. May 23, early morning sail for Liverpool arriving in that city May 31. Ship program: An intensive professional trans-Atlantic program for the benefit of the physicians who are taking advantage of the tour will take place on board ship and will be contributed to by some of America's most distinguished physicians and surgeons. June 1-7, London. June 8-10, Liverpool, Manchester, Leeds. June 11-12, Dublin, June 13-15 Belfast. June 16-17, Glasgow. June 18-19, Edinburgh. June 20, Newcastle and University of Durham. June 21-27, Paris. Prices: Chicago to Chicago, with first-class, high grade hotels and cabin ocean passages, $990; with first-class medium grade hotels and cabin ocean passages, $910; with moderate priced hotels and third-class ocean passage, $750. Montreal to Montreal or New York, with first-class, high grade hotels and cabin ocean passages, $880; with first-class, medium grade hotels and cabin ocean passages, $800; with moderate priced hotels and third-class ocean passages, $640. The last classification is offered to doctors and medical students who are desirous of having the chance to avail themselves of the wonderful clinic opportunities of the tour. As this Association is purely an educational institution and is working for the medical profession as a whole the board of trustees decided at its annual meeting that this class should be included. For further information write Dr. William B. Peck, Freeport, Illinois. Officers of the tour: President, Dr. Charles H. Mayo, Rochester, Minnesota; chairman of the Orientation Commit-

tee, Dr. Addison C. Page, Des Moines, Iowa; director of the tour, Dr. William B. Peck, Freeport, Illinois; secretary, Dr. Edwin Henes, Jr., Milwaukee, Wisconsin.

That an innovation in public health measures is now being enforced in Salt Lake City is disclosed by an article that will appear in the January issue of *Venereal Disease Information*, a magazine published by the Division of Venereal Diseases of the United States Public Health Service.

According to this magazine, the Salt Lake City authorities have been making a systematic effort to quarantine all men and women found under circumstances which give rise to a reasonable suspicion that they have a venereal disease. Under this rule, any situation which will warrant a reasonable inference that the persons are engaged in prostitution or promiscuity provide legal sanction for compelling an examination, and, if an infection is shown, to establish a quarantine and enforce treatment. Both men and women are subject to the working of the measure.

This rule was recently put into effect by the board of health of Salt Lake City acting in cooperation with the Utah state board of health.

WHEELING NEWS NOTES

Doctor and Mrs. F. L. Hupp, Ivan Fawcett, H. M. Hall attended the opera in Pittsburgh. It was the yearly visit of the Chicago Opera Company. It is a short run from Wheeling, and for those who like it, quite well worth while. The Hupps were at "Tannahauser," Fawcetts at "Thais," Hall at "Boris Godounow," "Tannahauser" and "Thais."

Dr. and Mrs. Hupp went on to Atlantic City for a week's stay.

Several doctors have confided to us that they would as soon have their tonsils taken out under local as go to grand opera. It is all a matter of taste and choice of anaesthetic, we suppose.

Dr. Bond, our secretary, is still in Missouri where he has gone to recover his esprit de corps, or words to that effect.

Dr. E. L. Armbrecht was in Charleston for two or three days in January.

Dr. Hohm, interne under Dr. Fulton's service at the Ohio Valley, has been seriously ill with obstructive jaundice.

Dr. Charles Wilkins is still confined to his home. He is, however, gradually on the mend. The doctor's condition was a matter of some alarm and his friends are glad to hear of his recovery.

Dr. Robert Reed has been appointed to be the state representative for the Gorgas Memorial. This is a distinct honor for the doctor, who has had so many in a crowded life.

Charleston, W. Va., Feb. 24.—Chiropractors must pass the examinations required for the practice of medicine and surgery, the supreme court of appeals held today in a decision affrming the conviction and fine of E. E. Morrison in Raleigh county, on a charge of practicing medicine without a license.

"One who opens an office and announces to the public in any way that he is ready to treat the sick and afflicted and has actually treated cases . . . by adjustment of the segments of the spinal column according to the chiropractic method of treating human ailments and infirmities, is practicing medicine and sur-

gery as defined," by the code, the court ruled.

The provisions of the code, the syllabus continued, "requiring examination of and license to a person before he can lawfully practice medicine and surgery as therein defined, and imposing a penalty for practicing without such license, is applicable to a chiropractor who treats human ailments and infirmaties for reward as such," and is not in contravention of the constitution.

Morrison was indicted in the criminal court of Raleigh county, pleaded not guilty and submitted his case on an agreement statement of facts. The court found him guilty and imposed a $50 fine which was affirmed by the circuit court, whose action the supreme court today approved. The supreme court opinion was written by Judge Lively, and one member of the court, Judge Hatcher, who had been circuit judge in Raleigh county at the time the case was instituted there was absent during the supreme court's consideration of the case.

COUNTY SOCIETY REPORTS

The regular monthly meeting of the Marion County Medical Society was held after a very good dinner at the Fairmont Y. M. C. A., on Tuesday evening, the 27th.

Dr. E. W. Howard presided for the first time. The members present were Doctors E. W. Howard, W. F. Boyers, C. L. Holland, E. F. Sheppard, H. R. Johnson, C. W. Waddell, G. H. Traugh, L. N. Yost, C. M. Ramage, W. W. Orr, J. M. Trach, A. L. Peters, A. J. St. Lawrence and Dr. J. R. Tuckwiller, who has moved back to Fairmont officially. The meeting was mostly a discussion of clinical cases.

Two new members were elected to the society, Dr. Etlor Pitossyard and Dr. P. F. Priolean.

The society decided to request two joint meetings with the Monongalia County Medical Society this year, one in Fairmont and one in Morgantown, papers to be presented either by respective society members, or by imported speakers.

Following this the meeting adjourned.

G. H. TRAUGH, M. D., Secy.

Friday night, January 23rd, 1925, the Ohio County Medical Society had Dr. Alexis McGlanahan of Baltimore, Maryland.

This reporter arrived a little late and had to take a back seat, and the doctor does not talk very loud, and like most men who do that his voice would die in the most interesting spots, very much like your radio does when you are very anxious to get the name of the station.

His subject was tumors of the breast. He makes a division of three main branches. Tumors of Puberty, Lactation, Menopause. The first are usually tubercular or fibro-adenoma. He has also included cancer like Weiss of Pittsburgh does,—that is always be on the lookout for it whatever the age.

Lactation,—Chronic Mastitis, Cancer, or Tuberculosis, or benign cysts, —Cancer very malignant,—Menopause Cancer. Bleeding from the nipple may be papilloma in the duct, in which case manipulation may be able to break it down. May be cancer. May be Paget's disease which he practically classifies as cancer.

One of his most interesting talks was on the diagnosis of growths in the operating room. He stated that a growth that was puzzling to a good

surgeon in the operating room would be just as puzzling to the pathologist in a frozen section. (Dr. Shepp, pathologist at Ohio Valley General later arose and gave his side of the case as absolutely coinciding with the speaker,—therefore he made his decision *in the operating room. He excised the tumor instead of incising it.* If it had a capsule he went on the theory it was benign,—if it did not have it then he went on the theory it was malignant. He had had few errors in doing this. The writer has seen quite a little debate over this matter, and if a man of Dr. McGlanahan's standing finds few errors in doing this, we would be inclined to say it was surely acceptable.

His incision is a circular one with his own manner of making incision at a tangent. We so understood him to say he did not have complete first union throughout scar, that is there is a small denuded area when he gets through, on which he places small grafts. He applies graduated doses of X-Ray to the wound. Clovis asked him the dosage, but he intimated he left that to the X-Ray man. He begins at inner border and works outward, and attempts to include all the glands within the region. If the lymphatics along the lower border and sides were involved we understood him to believe case hopeless.

He rather surprised some of our fast workers by saying a breast amputation properly done required two hours,—that with very good assistants, who understood every move, it might be cut down, yet two hours he felt was quite the good average time if it was going to be thoroughly and properly done, and it of course should not be attempted unless it was.

He inclined to optimism as regards cancer of the breast, and thought headway was being made. His lecture notwithstanding it did not reach all parts of the room was well received, and incited a good deal of discussion. A great many questions were asked. Dr. McClure asked the earliest age for cancer. He was inclined to say almost any age, but said they now had a girl twenty-two who had had her cancer one year. Believed that X-Ray helped to make the hopeless cases less objectionable.

It was a good lecture, and space forbids the extensive list of questions asked as well as the full answers given.

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For Friday evening, January 30, 1925, the Ohio County Society had W. Wayne Babcock of Philadelphia, whose subject was "The Reconstruction of the Defective Anterior Abdominal Wall."

As this reporter looks back on the last twenty-five years of hearing and reading the efforts of the leaders in his profession, he is struck with the remarkable matter of fact way they have been accepted by their audiences. In every other activity other features besides those of the mere giving of the information have been noticed in the persons of the speakers. They seem to have been either overlooked or taken for granted in the medical profession. Here is our old friend Dr. Wayne Babcock. Consider his case if he had been a lecturer on the Polar regions, or the Gospel. It could easily be said of him he has a well groomed, easy, polished stage presence,—that his enunciation was perfect, while his use of language was a thing in itself. The more we see of the medical profession, and men like Babcock, the more we take pride in our profession for other qualities than those of the strict adherence to science,—so tonight it

was a distinct pleasure all around to have him as a guest, as it has others before him, who have come great distances and made their impressions in more ways than one.

The doctor began by going back to the period when man changed from down on "all fours" to the present upright position. He reminded his hearers that there still remains the evidence of the old bony plates, so to speak in the arrangement of the *Recti*. That the old symptoms of blood supply, nerve supply, *Musculature* still hold as they did in the older position. He dwelt on the very essential fact of the intra-abdominal pressure, and that oftentimes the best of executed operations fail because they disregard its laws and lines of "direct pull" so to speak. He talked of its many chances of injury —this abdominal wall,—and recited rather interesting stories of how Caesarian Sections done by the goring of wild animals turned out better than those done in some clinics (this some years ago of course). Also of a heavy man who had gone into an outhouse, was too heavy for its frail structure, had fallen down into the vault, was disemboweled by a beam on the way down, was buried, as the speaker said disinterred, and yet recovered with no infections because the *saphrophytes* came out like the allies in late unpleasantness,— victorious.

He spoke of one of the celebrated Dr. Munyon's cohorts who evidently used "thumbs down" instead of index finger up like the leader, and produced a ventral hernia while palpating the abdomen, with the result there was a suit.

He recalled how debilitating diseases like typhoid leave the abdomen flabby and weak with bad results as to its retention of its contents. Saw a case of sloughing of the abdomen from two weeks steady use of ice bags in typhoid fever. Same with almost obliteration in X-Ray use in a Diabetic.

He then showed slides, some of which were the finest we have seen, and made us wish the name of the artist had appeared on the screen like they do in the "movies." He makes a large incision clear across the whole abdomen, and two vertical ones at each end and takes out a great deal of fat in some cases. He makes a vertical in others. In others he combines both,—in some cases "the Mayo." In some he cuts down to bowel,—loosens adhesions, — maybe inverts their intestinal ends like stump in appendicitis, comes back to sac and may sew it to walls of recti. Sometimes he cuts the fascia in strips and then interlocks them like you would your fingers if you did that with your hands. In others he sews the walls together with silk worm, bringing it out over two rolls of gauze over cotton as they used to do with buttons. If pressure becomes too great remove part of cotton until proper tension is secured. If you try, he feels that you can usually get enough tissue without recourse to fascia lata,—but must never,—no never, depend on muscle anywhere for support,—it will tear and separate,—*it must always be to the fascia you are to look for support.* He recited two cases of repeated operations and scars resultant that had come to him. One neurasthenic girl had had twenty-six operations. She enjoyed them. With several big medical school hospitals in Philadelphia we presume Heaven sends some people into the world in that city with just such a temperament. Nature

will provide if you give her the opportunity. The other, a minister, had nine different, separate scars. The speaker intimated that in other days surgeons had had a high regard for the thought that you should, like the Levite, pass by on the other side. He carried the same thought into his hernia operation which was pictured on the screen with as clear and as beautiful drawing as we have ever seen. He makes a horizontal incision, not an oblique one. If you have a puzzling case, keep cutting into the mass holding what you incise with forceps, and letting them remain. You will not come back to work over what you have once done, which we know "can happen." He cut through the weakest part of the original hernia presenting,—if you don't he thinks you leave a vulnerable area. After you have sac,—cut it off as usual. Bring the stump up to muscle by a suture that passes through it and then down to Poupart's ligament. He relies on Kocher on this helping the wall. He believes you ought to decide on a way and stick to that, and that any of the usual methods will secure good results.

Dr. Fulton complimented the speaker. Agreed with him about perfecting your method. Dr. Noome said too many men found they could not stitch muscles to Poupart's ligament. They often saw it for themselves when they had to reoperate. Believed most men had found operating on direct hernia after fifty years was reached by patient, futile.

Dr. Babcock has a mannerism. It it, "We have the impression." He told Noome that "we have the impression" that you ought to cut direct hernia the same as the others. It is worthy of Jusserand, is it not?

Dr. Hupp asked him to describe his "Repair of the Perineum" operation which he cheerfully did—using a blackboard. We once said we were for the blackboard, but we think Dr. Babcock had best leave his drawing to his artist when he has such a good one. It was a real evening and we are sorry for anyone who was not there.

Dr. McLain, health officer, reported that "a man without a diploma" was in the unenviable position of one without a country. His name we understood was Ross. One of his followers died. A physician (as always happens) was called in at the last minute. He did not sign the certificate. The healer so-called was arrested and is now out on bond. The society voted its support to the health officer.

Dr. LeMoyne Hupp gave his paper on "Intraperitoneal Rupture of the Bladder in Children," at the regular meeting of the Ohio County Medical Society on Friday evening. February 6th.

This is the subject Dr. Hupp received so much favorable comment upon when read at the Southern Medical Congress, and as it will doubtless appear in the *Medical Journal,* it will not be sketched here. Should it not be printed there we sincerely trust it will be produced in the *Journal.*

The doctor is one of those men who serve to refute that a "prophet is without honor in his own land." He always has a good audience of men who turn out to hear him because they know that anything he gives has been preceded by careful reading and preparation. We believe there is no one up in this locality who puts in more time on his work to polish it off to completeness.

This paper hinges upon a case the

doctor had in Bellaire, Ohio,—which happened to be one of those that impart a lot of information and start the operator to thinking. You have probably had one of the same kind. Sometimes we think of this when we see an overwhelming list of figures. We would be inclined to hazard the guess that as much has been learned and discovered in some single cases as in statistics running into hundreds. It brought out a lot of commendation and discussion. Doctors Linsz, Noome, Sammons, Fulton, Shepp, Roberts and others. Dr. Sammons especially gave a good discussion.

The chair was instructed to appoint two men to read papers at Bluefield.

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The January Clinical Conference was held at the Ohio Valley General Hospital on Tuesday evening, February 10th, and was a very interesting session. Dr. Fulton gave a resume of his experiences in attendance at the American Association for the Study of Goiter, January 28th, at Bloomington, Ill. He read a paper there, and has since been appointed one of its officers. He especially spoke of the enjoyable time at the banquet.

He stated that nothing new developed in the study of the disease,—that a great deal of good operating was done by men from a wide territory. The West especially was well represented. The conference voted that Basal Metabolism was a big help. He feels that this society is destined for big things.

Dr. Hupp read his paper about experiences at New Orleans while going through the wards of the hospitals where "The Dicks" were demonstrating their scarlet fever tests. The list of autopsies obtained at the hospital was found to have received a very definite boost. It had been 5 to 10%,—it jumped to about 35%. Each man was called upon to give the history and clinical side of his case. Dr. Shepp then gave the autopsy findings. There is no doubt about it that this is by far the best way to obtain information. It is given briefly. In passing we would say that this is the keystone of the arch —brevity. If you have men get up who insist on stringing their histories out into dull unimportant details that will surely kill the interest in this kind of work,—as for that matter it will any other.

These were brief, short, snappy. The pathologist gave his findings,—quickly given and right to the point, avoiding all normal findings where not important. One case was very interesting. The man had every symptom of pneumonia, was so diagnosed and almost every would have done the same. Autopsy: Anthracosis (massive), Pneumokoniosis, Pulmonary Edema. So many people have pigmentation of lung in West Virginia no one ever thinks of ascribing much to it. Carcinoma of the lung (most likely primary there) was another very good demonstration.

The exhibition of specimens as prepared by Dr. Sheppe are really very striking, and you are almost allowed to use a term formerly employed by an old professor of ours at Cleveland: "Gentlemen this specimen of cancer of the liver is positively beautiful—simply beautiful." So we come to the conclusion even medicine with its gloomy outlook has yet the artistic side.

Dr. W. H. Bond has temporarly retired as secretary and Dr. J. G. Thorner is secretary pro tem. Dr.

Bond has not felt entirely himself since his injury to his arm. He has gone out to his wife's former home, beyond St. Louis.

Dr. Holin, interne at Ohio Valley General, is ill with what appears to be the prevalent bronchitis of the season.

Mr. Ross, now out under bail for practicing without a license, has the usual alibis, we hear—electricity only —no drugs, etc. The new prosecuting attorney does not appear to be broadcasted as making any unusual effort to carry this case through. We hope some day that every community will spend a big sum of money to have a full time highly salaried prosecuting attorney, who will be there until he is removed for cause, and who will not have to consider politics. If there is anything this reporter is committed to it is the rather harsh principle that we ought not to help people out who employ these irregular healers. It is surprising the way almost any doctor up here in Wheeling will hear his profession made a football of, and then simply meet the later mixups by going in as a last resort and helping out the very ones who lately reviled him. It is positively touching, and no doubt noble. When this man Ross was confronted with a death, Dr. McMillen, we heard, was called to fix up the death certificate. However, this was controverted by the the health officer, Dr. McLain. "No doctor to fall back on means death to irregular healers," is on our banner as a slogan.

Wheeling has its periodical trial of a medical man for criminal abortion. If there is any one thing that throws the mask off of the general public, it is this, and it is amusing to hear how many people have one view in public,—another in private. —H. M. H.

BOOK REVIEWS

Modern Methods of Treatment, by Logan Clendening, M. D., Assistant Professor of Medicine and Therapeutics, Medical Department of University of Kansas; Attending Physician, Kansas City General Hospital, C. V. Mosby Co., St. Louis. $9.00.

This work in discussing the many form of therapy, emphasizes the great importance of rest, and before taking up the application of drugs reviews the important pharmacological action of those drugs which have, by experience been found to be most efficient, and discusses the methods of administration, the grouping of drugs as to their action and their application to different diseases.

The subject of prescription writing is made very simple and this is a matter that has been poorly learned by most medical men. The subject of Dietetics is treated in an interesting although scientific manner. Hydrotherapy is well treated as are medical gymnastics, massage, exercise, radio therapy, climates, waters, psychotherapy, gastric and duoedanal lavage.

Part Second gives an interesting application of the treatments of the different diseases, bringing the subjects up to the most recent investigations. A book well worth having. —John N. Simpson.

Eat Your Way to Health, by Robt. Hugh Rose, A.B., M.D., Instructor in Post Graduate Medical School, N. Y. C., published by Funk & Wagnalls Co., N. Y. C. $2.00.

A book thoroughly practical and based upon sound physiological principles. In it are discussed means of alterating the weight so to produce the ideal weight for health and beauty. The author believes much of high blood pressure can be lowered by re-

duction of body weight through dieting.

The problem of what and how much to eat, and how to vary the monotony is solved by 252 Complete Recipe Menus. With these at hand there is no reason why any one of average intelligence can not follow instructions and reach the desired end.

It will be found of especial value to the physician who is puzzled in trying to keep his middle aged female clientele beautiful and healthy. The method of presentation will render it interesting to any layman.—John N. Simpson.

International Clinics, J. B. Lippincott Co., Philadelphia, Pa. Three Vols., a Year. Price $10.00 Original papers on Medicine and Surgery from the leading clinics of the world. 1924 was the 24th series. Books of merit. For men wishing to keep up with recent investigation.—John N. Simpson.

A Manual of the Diseases of the Eye, for students and general practitioners, by Chas. H. May, M.D., Director and Visiting Surgeon Eye Service, Bellevue Hospital and Mt. Sinai Hospital, etc. Published by Wm. Wood & Co., N. Y.

Eleventh edition revised brings this book which has been the standard in its line for years up to date. Written in such a style as to be appreciated by the ordinary practitioner without the constant use of a medical dictionary. Every medical man, not a specialist in the diseases of the eye should have it; since it would save him from mistaken diagnosis and enable him to cure many cases now referred to specialists. The book is abundantly illustrated with many colored plates. Cost $4.00.—John N. Simpson.

MEDICINE AND SURGERY

EPINEPHRIN IN THE TREATMENT OF THE PAIN OF HERPES ZOSTER

W. W. Duke, Kansas City, Mo. (*Journal A. M. A.*, Dec. 13, 1924), has had four years' experience with epinephrin in the treatment of herpes zoster. He has been disappointed in its effect on the vesicular lesions but in more than half the cases it relieved the pain almost immediately if given in adequate dosage. In using epinephrin in this condition, it is necessary to adjust the dose to suit the individual case. The dose should be pushed until the patient experiences relief or an epinephrin tremor. The amount necessary to give relief or tremor varies in different individuals from 1 minim up to several cubic centimeters—in fact, it varies in the same individual at different times almost to this extent. As a general rule, it should be given subcutaneously in doses of about 0.5 c.c. at five-minute intervals, until the patient is either relieved or shows a distinct tremor. When the tremor appears, the pain in the majority of cases disappears. It usually returns in from two to twenty-four hours. The dose of epinephrin can then be repeated and continued indefinitely without injury to the patient. As a rule, it makes the use of morphin unnecessary, or at least reduces its necessity to an occasional dose.

VINCENT'S ANGINA OCCURRING IN A PATIENT UNDER TREATMENT FOR SYPHILIS

The case of Vincent's angina reported by Irwin C. Sutton, Hollywood, Calif. (*Journal A. M. A.*, Dec. 13, 1924), is of interest, occurring, as it did, in a patient who was receiving an

intramuscular injection of 0.4 gms. of sulpharsphenamin at short intervals, and no mercury. Five days after the last injection of sulpharsphenamin, the patient complained of feeling ill and of a severe sore throat. She was given a mild gargle and a purgative. Twenty-four hours later, superficial ulcers had appeared in the pharynx and were extending over the tonsils. A dark field examination revealed many large spirochetes with shallow, irregular undulations, easily distinguished from *Spirochaete pallida*. A smear stained with carbolfuchsin was then found to contain many spirochetes and fusiform bacilli, besides cocci and debris. The mouth was cleansed with hydrogen peroxid, the lesions were dried, and a stabilized arsphenamin (base) glucose solution was applied twice daily. Because of the rise in temperature, sulpharsphenamin was not given. At the end of six days, the throat lesions were practically healed, the fever had subsided, and the treatment for syphilis continued.

MEDICAL EDUCATION AND MEDICAL SERVICE

The difficulties in medical service in the cities are seen in the way our young men are seeking the special careers, says William Allen Pusey, Chicago (*Journal A. M. A.*, Jan. 24, 1925). The great expression of this fact is the way our present graduates show a preponderant tendency to go into the specialties. They are not going into general practice. The situation in the cities is not acute, because the supply of physicians of the older generation leaves for the present enough of that generation to meet the demands of general practice. But it is evident that, unless we can do something to change the trend, the time is not far distant when the problem of the general practitioner as we have always known him—the family doctor for the man of ordinary means—will be a serious one even in the cities. Another expression of the fact is the new difficulties in getting men to fill official and government positions that would naturally be filled by medical men when they are available. We are now compelled to look outside the profession to fill many positions having to do with medicine. The evidence is accumulating that we are producing only a very costly sort of physician and we are not now producing men to do the ordinary service of medicine for ordinary people in the cities or the country. With about 25,000,000 potential income tax payers in the country, 6,662,126 paid in 1921. The ordinary people are certainly over half of our entire population, urban as well as rural; so that the question of medical sevice for ordinary people is the biggest problem we have. Strong evidence is accumulating of the impending, and in places actual, breakdown of our present form of rural medical service. He wrote to the secretaries of the state medical societies asking whether the older generation of physicians in the rural districts is beng sufficiently replaced to meet the future needs of these districts. Thirty secretaries of state societies answered No. Four secretaries of state societies (Florida, Minnesota, North Carolina and Rhode Island, the latter having no rural districts) answered Yes. Reports from different sources show that medical practitioners in the country are not being replaced in approximately 90 per cent of the states. If this condition of affairs should continue for a

generation, it would mean that the rural districts would be without competent medical service. Unescapable evidence of the developing shortage in rural practitioners is shown by the average age now of country physicians. It is above 50 years for the whole country. In many parts of the country the people are already getting medically helpless. They are running to all sorts of irregular practitioners. Nurses are taking on the functions of physicians, and in many places we are encouraging this. The worst aspect of the situation is in connection with infant care and childbirth. The subject is a topic of investigation by medical societies, of official and other addresses, of conferences. It appears in medical journals in advertisements for a doctor in this community or that, in news notes, in telegrams to the public press. In offering voluntary subsidies and passing laws to allow towns to tax themselves for the support of a needed doctor. Are we, with our eyes open to the obstetric situation as it is developing, ready to turn over childbirth in the rural districts to midwives? Could there be a more sobering matter for our consideration than that midwives are becoming the only reliance in childbirth of half of the community, in many parts of the country where the practice was hitherto unknown; that we are in our following of European standards of medical education; reverting to European peasant conditions in the practice of midwifery in a very considerable part of our self-respecting population? Such facts cut right to the core of our duties in social service. They demand correction, if correction is within our power. They outweigh immeasureably any ideals of medical culture as such, if these ideals can be attained only by such sacrifice.

RECOVERY FROM SUBACUTE INFECTIVE ENDOCARDITIS FOLLOWING GENTIAN VIOLET THERAPY

Ralph H. Major, Kansas City (*Journal A. M. A.*, Jan. 24, 1925), cites the case of a woman, aged 25, with subacute infective endocarditis who made prompt recovery following intravenous use of gentian violet. The patient had a positive Wassermann reaction, and for this reason was given potassium iodid in gradually increasing doses, for a period of ten days. At the end of this time, there was no change in the patient's condition and she was still showing fever. The blood culture showed the streptococcus present in the blood stream. The same day, the patient was given intravenously 5 mg. of gentian violet per kilogram of body weight, in a 1:500 aqueous solution. Forty-eight hours after the first injection, the temperature was normal. A blood culture was taken and found to be sterile, and the patient was given another injection of gentian violet intravenously forty-eight hours later. A second blood culture was also negative, and the two subsequent blood cultures, while the patient was in the hospital, showed no growth. The patient received, in all, four intravenous injections of gentian violet. Since her discharge from the hospital, she has had three negative blood cultures. During one of the intravenous injections of gentian violet, the dyestuff extravasated into the tissues and set up a necrosis, which produced some sloughing and considerable discomfort to the patient. This cleared up, however, without any severe complications.

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ACUTE ABDOMINAL INJURY

By C. G. MORGAN, M. D., Moundsville, W. Va.

Read at Fifty-seventh Annual Meeting, W. Va. State Med. Assn., Wheeling, May, 1924.

Any abdominal injury, regardless of how trivial it may seem, should be regarded as a serious injury. For the case that may not at first show any marked symptoms, in few hours may become serious. Thus, the patient may lose his hope of recovery, because his doctor did not sense the gravity of his injury, and postponed operating till the time when operation could avail his patient nothing.

A good history of the case, and the nature of the trauma, will often greatly aid you in estimating the amount of violence the abdominal viscera have sustained. Sometimes it will also help in approximately localizing the injury. For instance, a boy was walking behind a horse at a distance of four or five feet. The horse kicked him. The impact of the horse's hoofs was heard distinctly by the man who was riding the horse, and by another boy who was walking along beside the horse. One hour after, when the boy was brought into the hospital, there was no marks of violence, externally, and very little pain. Deep pressure in the left upper abdomen elicited moderate pain. However, when the boy was caused to urinate the urine was apparently pure blood. When the abdomen was opened the cavity was found full of blood, the spleen badly torn and bleeding, and the left kidney crushed, with a vast amount of retro-peritoneal bleeding. Yet, despite all this pathology, he did not seem greatly shocked, a little quickening of the pulse and possibly a very little anemia.

Acute abdominal injuries may be penetrating, as in gunshot wounds, or concealed, as a ruptured intestine from a blow on the abdomen. You may have bruises over the abdomen,

or the external evidence over the abdominal wall may be slight, or almost nil.

If a hollow (and less vascular viscus), as an intestine is injured, you will probably have very little hemorrhage; but, if a solid (and more vascular) viscus, as kidney or spleen is injured, the hemorrhage will be severe. The two organs which early give the least evidence of injury, are the small intestine and spleen.

Symptoms: Usually vomiting; may contain blood. However, often but one time and early after injury. Shock may be present immediately following injury in case of very crushing violence. Shock coming on two, three or more hours after injury, with a quickening pulse, and anemia, means your patient is bleeding to death internally, and calls for the doing of an immediate laparotomy.

There are three cardinal symptoms which, when found together, in one who has received trauma to the abdomen, will enable you to make an early diagnosis of injury to the abdominal viscera. They are:

First: Pain, usually severe; second, rigidity of the abdominal muscles, particularly the recti; third, local tenderness on pressure. An uneven coutour of the abdomen, that is, a marked local protrusion, means an internal injury. Blood in the urine means injury to kidneys, ureter or bladder. A rectal examination should always be made when in doubt. Pain on pressure over Douglass' fold will clinch the diagnosis of internal injury. The pinched face, anxious expression, profuse vomiting and "board-like" abdomen (often boat-shaped) I shall not enumerate, as being diagnostic of internal injury, but rather, as the signs of peritonitis, and mean, in all probability, a quick dissolution of your patient.

Any case of penetrating injury should be opened as soon as is consistent with decent operating advantages. The time the operation is done will greatly influence the prognosis. Webb of Canada gave the statistics of twenty patients operated on by him that illustrates this very nicely.

In nine cases whose operation occurred within three hours of their injury, all nine had an uneventful recovery. In six whose operation occurred between three and ten hours after injury, three recovered and three died. While in five cases who were operated on after ten hours, only one recovered.

In any penetrating wound, while getting ready for operation, the surgeon should see that the patient is given anti-tetanic serum. In any abdominal injury, he should have the patient given saline solution either by hypodermoclysis or intravenously. Make a median incision from the umbilicus to the pubis. This will insure ample room for rapid and thorough exploration. Clamp all bleeding vessels, and the pulse will soon improve.

If there are multiple punctures of the intestines, keep all the punctures covered with gauze while repairing. If possible repair the intestines with a fine inverted catgut suture, reinforced with a subserous suture of Pagenstecher linen. If the lumen of the bowel would be too much impaired on account of too numerous wounds, or if the gut is severed, you will have to do a lateral anastomosis. If the large bowel is injured extensively a local omental graft is often employed. If the spleen or kidney is injured repair the injury if practicable, if not resect.

If the liver alone is injured, tamponing will be all that is necessary, since sutures will not hold well on account of the friability of this organ.

Bladder ruptures or punctures should be sutured.

If the stomach is injured, repair the posterior surface first, and later attend to the injuries on the anterior surface.

Cleanse the abdomen as carefully as possible. If the large bowel has been opened by injury, or if there has been a great amount of soiling of the peritoneal cavity, with infected material, place a drain in the most dependent portion of the peritoneal sac. If the peritoneal cavity has not been badly soiled, close up tight since nature will take care of an ordinary infection, and too many drains may possibly aid in producing peritonitis.

After Treatment: If any of the hollow viscera have been injured, give no food by mouth for 48 hours. If the patient needs stimulation use the ordinary stimulants. If the patient has lost a vast amount of blood, transfusion may be imperative. Keep on the alert for peritonitis and if it should supervene, treat it as best you can.

One final word: Take your abdominal injuries seriously. Make an earnest effort to diagnose these cases early. If you are of the opinion an internal injury has been sustained operate immediately. If after exhausting all your diagnostic measures you have the slightest suspicion of an intra-abdominal injury, you had better operate anyhow. By all means do not waste precious hours in watchful waiting, or in repeated and fruitless consultations. Give the patient the benefit of the doubt by making an exploratory operation, and finding out. Remember always, there are many men in their graves today, cut off in the full bloom of a useful manhood, victims of the policy of dallying.

USE OF MERCUROSCHROME IN TYPHOID FEVER

By HARRY M. HALL, M. D., Wheeling, West Virginia

In the presentation of the following case, it is well understood by the author of the article that one case does not prove the efficiency of a remedy any more than one swallow proves a summer. But if you are tired of winter, one swallow is a comforting sight and if you are likewise in a quandery with a man almost moribund anything that apparently brings him back from the threshold of "exodus" will be just as solacing.

And the case is offered in just such a spirit, not so much as a complicated pharmacological victory with pages of statistics in its wake but as an experience which may serve some one else directly, practically and simply to save the life of some patient as it undoubtedly did for the author which after all, is what we are here for.

The following is a brief history of the case presented by Dr. Scott, house physician at the Ohio Valley General Hospital, who was my associate in the case, to whom a great deal of the credit is due not only for the admirable way he handled the case, but also for his dexterity in painstakingly administering the drug and noting its reactions.

History: J. C., age 18, a helper in bakery, was taken ill a week before admission with malaise and loss of appetite. Persisted in his work but grad-

ually became weaker, and 2 days before admission was confined to his room with headache, backache, and rise in temperature. Bowels were constipated. Marked loss of appetite but no nausea or vomiting. On day of admission, patient was walking about his room when he fainted and was brought to the hospital. Physical examination at time of admission (Oct. 5, 1924) gave a toxic patient with coated tongue, moderate abdominal distension but no rose spots.

Laboratory examination gave Widal negative until 15 days after admission when it became postive in 1-20 dilution. White blood cell count throughout the course of disease remained between 6-7,000 with polymorphonuclear leucocytes between 50-60%. Blood culture taken 25 days after admission gave a pure culture of B. typhosus and did not become negative until 30 days later. Urine was practically negative throughout course of disease.

Patient was put on routine treatment for typhoid fever and temperature ranged 100°-104° for first 20 days. On the 20th day, patient developed severe chill and for two weeks had irregular, severe chills with rapid rises and fall of temperature. At one time from 97° to 106° in four hours. Thirty-two days after admission patient was started on mercurochrome 1% intravenously, 10 c.c. given each day for three doses, then 14 c.c. each day for six doses. This was followed by steady drop in temperature but on discontinuing the mercurochrome for one day patient had chill and elevation of temperature to 106°. 20 c.c. of 1% mercurochrome was given intravenously followed by fall in temperature. Two subsequent rises in temperature were controlled by 12 and 6 c.c. of mercurochrome, and convalescence was slow but uneventful. Patient was in hospital 122 days and received in all 152 c.c. of mercurochrome.

Patient was discharged from hospital on January 23, 1925, having lost 40 pounds of weight, but walking about and in fairly good physical condition except for general weakness and slight oedema of lower limbs. Patient has reported from time to time since and is in excellent physical condition.

Comments on the case are as follows: The man was genuinely toxic as measured by clinical, laboratory, and historical findings. The chills he had were as severe as any we have ever seen and in an experience of almost thirty years we have never seen a picture of greater intensity. The man, in the intervals, represented the classical "typhoid state" of apathy, stupor, and complete exhaustion, so much so, that in several instances student nurses on the floor had doubts about his being alive and so hastily reported. Some nourishment and water were given but none sufficient to meet his requirements. Having suspected typhoid clinically, we later had the laboratory absolutely confirm it not only by leukopenia, but also by Widal (1 to 20 dilution).

Having arrived at the conclusion, we had the most virulent form of typhoid infection, from the patient's standpoint, we were no better off than before insomuch that nothing we tried made the slightest impression on the saturations of toxicity that successively occurred. Empirically and with no logical reason we tried quinine hypodermically. No result. Dilution by saline. We had reaction from this but it was a poor one and resembled an anaphylaxsis. Without any precedent to guide us (although we have

understood since that there are four or five cases in literature, record of which as yet we have not seen, (nor do we know where to refer the reader) we experimentally tried mercurochrome—220 soluble (H. W. & D.) in a 1% solution administered intravenously as it has been given in septic cases.

In giving this, we well understood we were going against the time-honored rule of not administering calomel or mercury in any form in typhoid fever. We simply were at an extremity that demanded some quick relief. The results were highly gratifying as the chart will indicate. Let it not be understood all was clear sailing in this procedure. Time and again the virulent bacilli would seem to almost poetically resent the intrusion of a new factor. Gradually and we might add very gradually by following up one injection after another when caution dictated, otherwise the patient had further intermissions between the violent chills and in the course of time made a good recovery.

These injections were followed by the severest form of excessive cholera like diarrheas, which were just barely controlled by opium in some form or other, at one time morphine, and at others paregoric. That we did not have a perforation or at least a hemorrhage from the bowels will always remain unsolved unless the infection had left the Peyer's Patches in a semi-healed condition so to speak and became purely, simply, and solely a blood stream infection.

Furthermore, at no time did we have a sore mouth or other indications of salivation. There is no way to substantiate the matter, but it appeared to us as if the diarrhea in itself was compensatory and might have aided in the cure.

The patient aided in the happy conclusion by, as far as his typhoid state would permit, having a hopeful mental outlook and making no protest against the frequent procedures. Due credit is allowed for his nursing, which was very carefully followed and directed by Miss Hassig who took a great personal interest in the outcome. We are well aware there are some who have commented on this case by saying typhoid fever gets well or not as it sees fit (so to speak). The day we entertain such a notion we will seek another profession.

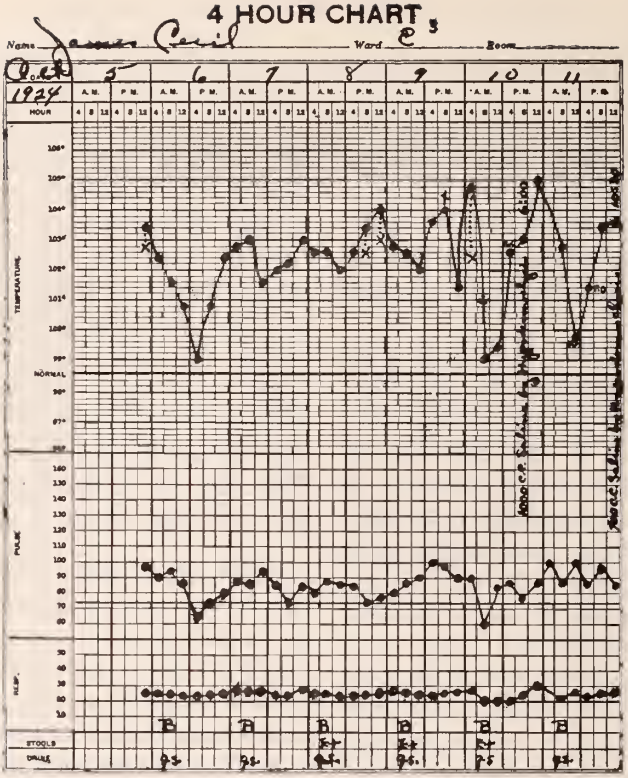
This case was nearly moribund. No other remedy was checking the onward course of the virulence. The result was as prompt, as clear and as well defined as the prompt results from anti-diphtheritic serum. Its reactions were pronounced. The pharmacological results were as true and as fully under control as if they had been done in a laboratory.

If we did not check them up and follow them as symptoms called for, the virulent process obtained the upper hand and so we rather let go our traditions of the past and matched virulence with injection irrespective of time elapsing between. Then we secured more rapid results.

Perhaps you may only care to try this on a so-called hopeless case as was done here. Well, that would be sufficient, would it not, for the consideration of the drug, since all else had failed

As was stated in the beginning, this is only one case and its presentation here is made purely in an address to clinicians.

The graphic charts of this patient follow. The X denotes red recording on original charts: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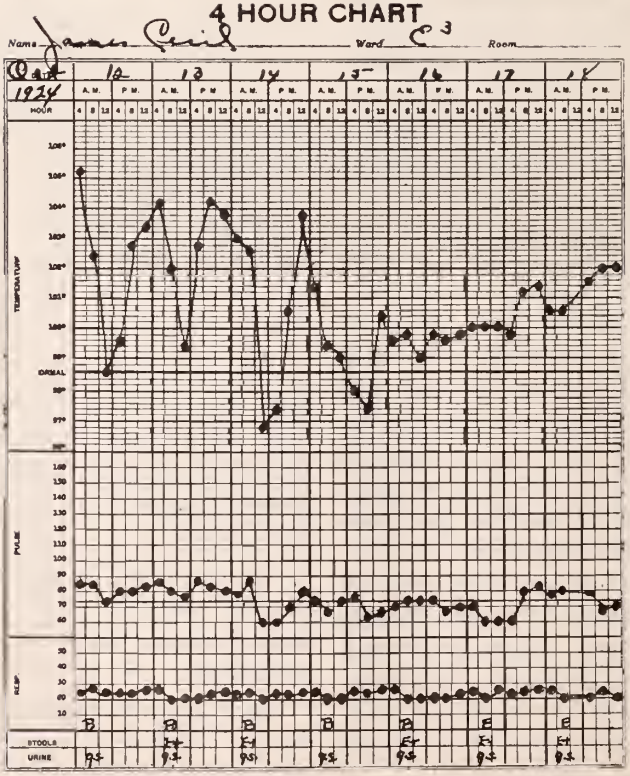
Ward C 2
Room
Oct
1924
HOUR
TEMPERATURE
NORMAL
PULSE
RESP.
STOOLS
URINE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Name
Ward C 3
Room
Oct
1924
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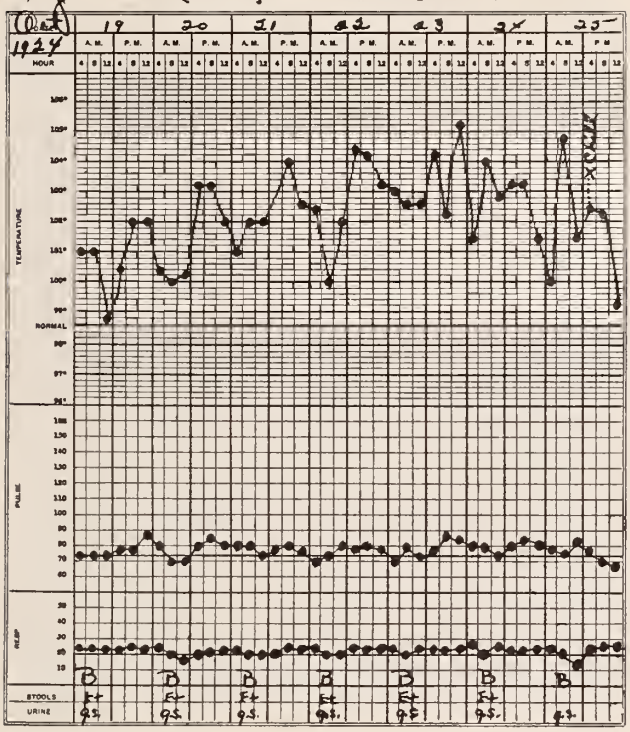
TEMPERATURE
NORMAL
PULSE
RESP.
STOOLS
URINE

4 HOUR CHART

Name James Cecil Ward C 3 Room



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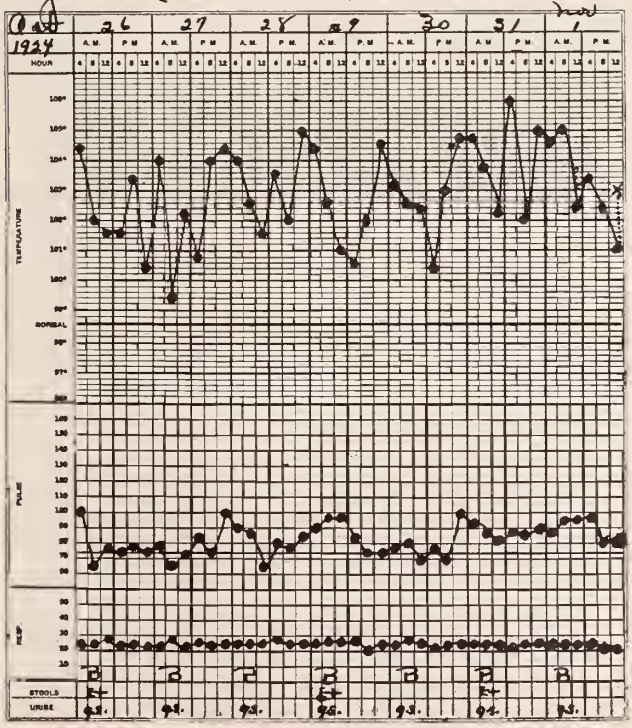

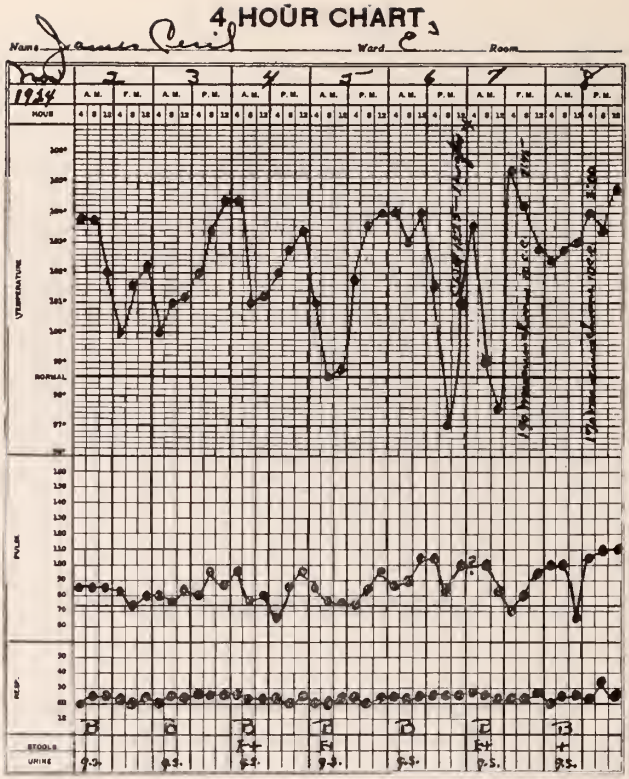
4 HOUR CHART 2
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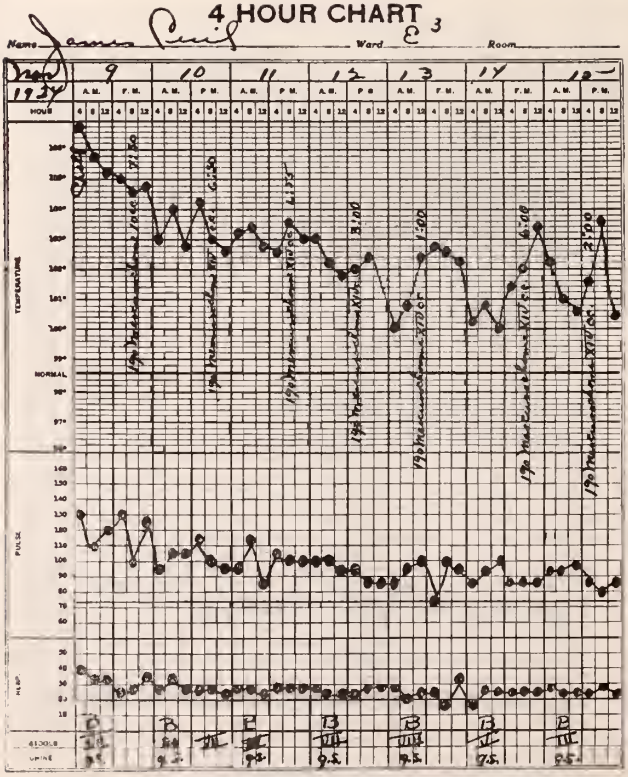
HOUR
TEMPERATURE
NORMAL
PULSE
RESP.
STOOLS
URINE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Ward E
Room
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A.M.
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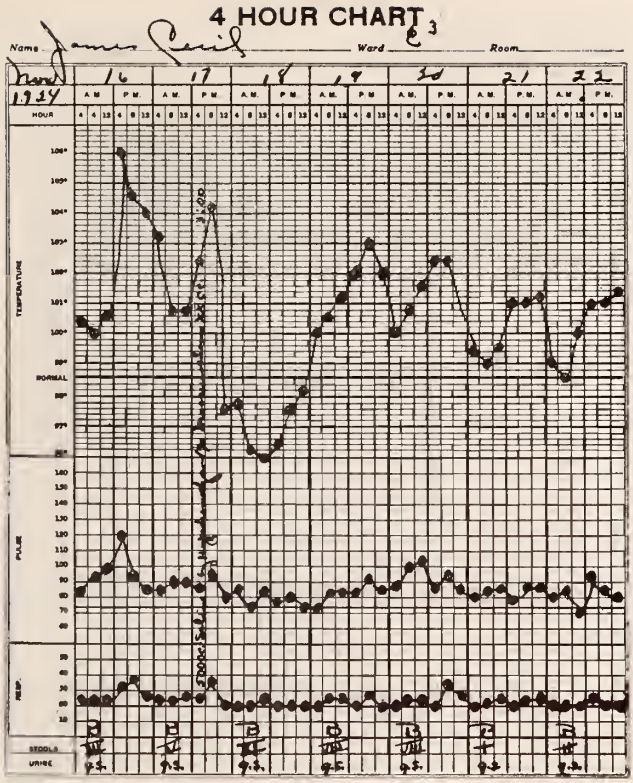
HOUR
TEMPERATURE
NORMAL
PULSE
RESP.
STOOLS
URINE


4 HOUR CHART 3
Name James Cecil
Ward E 3
Room
Nov 1924
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TEMPERATURE
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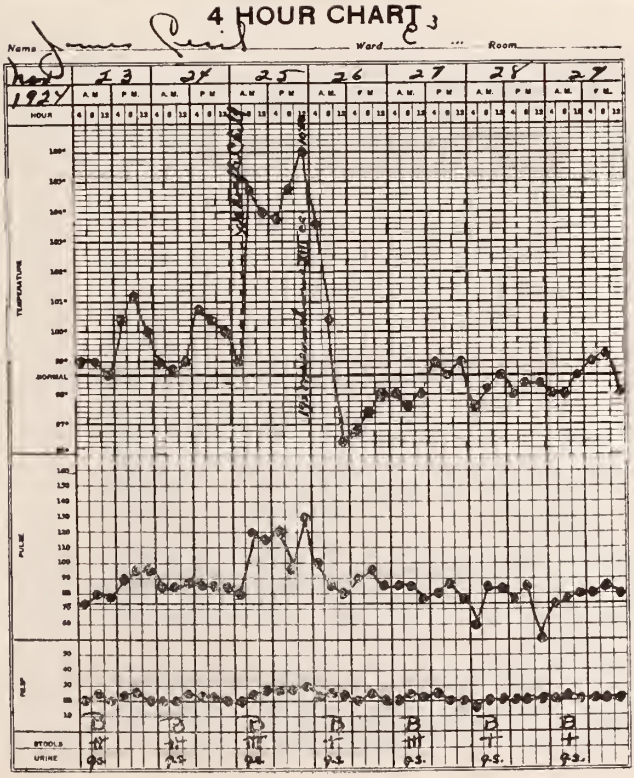
PULSE
RESP.
STOOLS
URINE


4 HOUR CHART 3
Name James Cecil
Ward
Room
Nov 1924
23 24 25 26 27 28 29
A.M. P.M.
HOUR
TEMPERATURE
NORMAL
PULSE
RESP.
STOOLS
URINE

4 HOUR CHART 3

Name James Cecil Ward E Room

Nov 30 Dec. 2 3 4 5 6

1924

A.M. P.M.

HOUR 4 8 12 4 8 12

TEMPERATURE 106° 105° 104° 103° 102° 101° 100° 99° NORMAL 98° 97° 96°

PULSE 150 140 130 120 110 100 90 80 70 60

RESP 50 40 30 20 10

STOOLS B B B B B B

URINE 98 98 98 98 98 98 98

4 HOUR CHART 3

Name James Cecil Ward E Room

Dec 7 8 9 10 11 12 13

1924

A.M. P.M.

HOUR 4 8 12 4 8 12

TEMPERATURE 106° 105° 104° 103° 102° 101° 100° 99° NORMAL 98° 97° 96°

PULSE 150 140 130 120 110 100 90 80 70 60

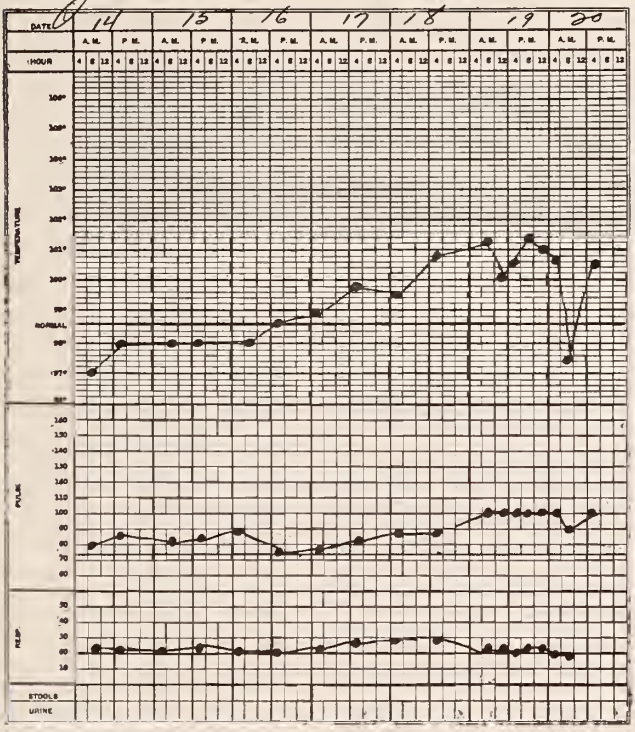
RESP 50 40 30 20 10

STOOLS B B B B

URINE 98 98 98 98

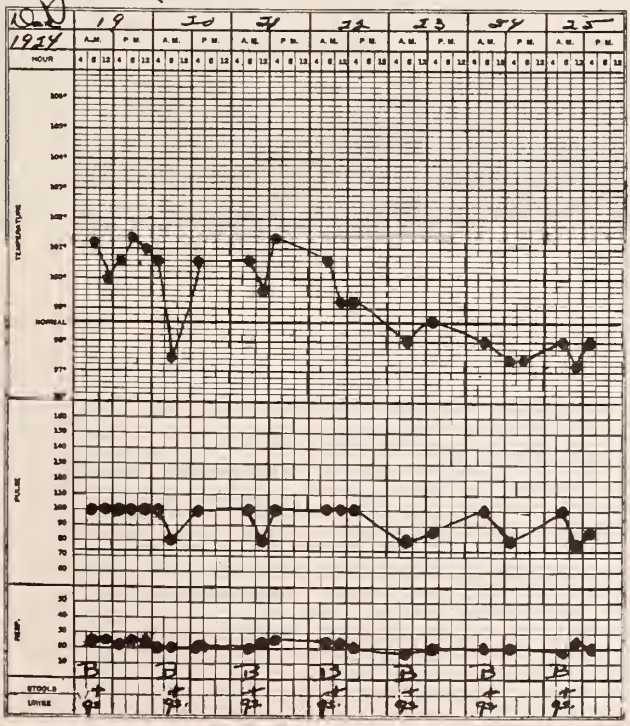
4 HOUR CHART

Name James Cecil Ward E 3 Room



4 HOUR CHART

Name James Cecil Ward E 3 Room



FIFTEEN YEARS EXPERIENCE WITH SPINAL ANESTHESIA

By DRS. A. P. BUTT and C. A. GROOMES
Elkins, W. Va.

Read at Annual Meeting West Virginia Medical Association, Wheeling, May 1924.

In the fall of 1907 I became a pupil of Dr. W. W. Babcock, of Philadelphia. There at the Samaritan Hospital I first saw spinal anesthesia used.

At this time I am under the impression that Dr. Babcock had used this form of anesthesia about 500 times. Now my impression is that he and his associates have used it about 17,000 times. Dr. Babcock's experience has been so large and he has written so much on this subject that I shall quote him quite extensively.

I returned to my home in Davis during the spring of 1908 and soon thereafter induced my first spinal anesthesia. The earliest notes I am able to find concerning its use state that the patient was a male, the disease emphysematous gangrene, that 1½ cc of a 4% solution of stovaine was used; that there was no nausea or pain.

To the surgeon the subject of anesthesia is ofttimes a variable equation. If, perchance, he has just had a nice run of anesthesia he may belittle the subject or unduly praise his anesthetist or the particular anesthesia he is using. If on the other hand he has been unfortunate in having an undue percentage of rigid abdomens, protruding vicera, shock, due to a large amount of ether, struggling patients, perhaps even death, he is likely to voice very different views.

During the past fifteen or sixteen years I have used spinal anesthesia with varying intensity. At times this was due, to some extent, to my failure to secure anesthesia, due of course almost entirely to my faulty technique. Usually, however, my failure to use it was due to some extent to unfavorable criticism on the part of those who most likely were unacquainted with it. As Dr. Babcock has well said, "It invites criticism from patient and colleague, because it is a method not in universal use. It is a peg upon which the neurotic or hysterical may hang many postoperative symptoms." In my opinion we hear too much unfavorable criticism of men who attempt other than routine anesthesias. At the meeting of the A. M. A. I have heard Crile's work criticised and one of our very greatest surgeons lowered himself just a trifle in my estimation by a rather unkind criticism of Farr's work on local anesthesia. I have no criticism of any surgeon's use of any anesthetic. On the other hand I have no patience with a man who is satisfied with any anesthetic. I believe the old toper said all whiskey was good, but some was better, so I would say all anesthetics are bad but some are worse than others.

DANGERS

All anesthetics are not only dangerous, but very dangerous. Some years ago I remember having seen anesthesia likened to a rope of uncertain length with which the patient was lowered into the grave, hoping but not certainly knowing, that he could be pulled out again. It seems to me the dangers of ether are under-estimated, the dangers of spinal anesthesia over-estimated.

In my own work there have been two deaths from ether. Both were children, both in for tonsilectomy. In neither case had the operation been started. One occurred while I was present, the other in my absence. A very few of these unfortunate occurrences are ever published.

The first meeting of this Association I ever attended was at Grafton. There I ran across my old professor, Jos. Branham. He failed to quite recognize me. To assist him I said, "I helped you to do a Whitehead operation on a red headed woman in Walbrook." He quickly replied: "I shall never forget it. She never passed a drop of urine after the operation and died." She was operated upon under ether anesthetic.

Dr. Babcock has gathered some statistics which would indicate that the death rate from ether ofttimes reaches one in 500. Of nitrous-oxide ether he tells us that a new apparatus was demonstrated in his clinic by an "expert." Of the six patients anesthetized one awoke with a hemiplegia, a second with a cortical palsy of the hand and forearm, a third with circumflex palsy while a fourth patient, a woman apparently in excellent condition, died on the table from the action of the anesthetic.

Baldwin of Columbus, gives us some names and details of 12 deaths from nitrous oxide anesthesia which he believes is about 1%.

Recently while on a fishing expedition in Georgia with Dr. B. Miller of Claxton, he told me of a death in his hands from ethyl chloride.

At the Garreston Hospital I was assisting at an operation upon the pharynx of a woman who had been anesthetized with morphine with chyoscine. The anesthetist carelessly or perhaps crinially left her for a few minutes. During this period she died.

On the 13th of March of this year a death occurred at the Union Memorial Hospital, presumably from an explosion of ethylene gas. While visiting Crile's Clinic some years ago I witnessed an explosion of some one or more of his gas tanks. I never knew which.

I have seen but one death that could by any stretch of the imagination be attributed to spinal anesthesia. This was during an operation for tuberculous abscess of the lung in a feeble infant of twenty-one months. This was in the early days of Dr. Babcock's use of spinal anesthesia and I am quite sure he would not now think of using it in any such case.

I have had but two cases of collapse that needed any special attention. These were most severe, so much so that I expected nothing but a fatal outcome. Both were cases of Caesarean section. In both collapse occurred before operation was begun. In addition to artificial respiration both were given an injection of adrenalin in the heart. In both cases the operation was completed and followed by an uneventful recovery.

In all I have had about twelve cases of Caesarean section under spinal anesthesia.

I expect to continue to use it in cases of abnormally high blood pressure but will abandon its use in Caesarean section in normal cases or use it in the horizontal position only.

I believe this violates one of the principles laid down by Dr. Babcock. He advises us not to use spinal anesthesia where the respiration is hampered.

I am accustomed to place all patients after the injection in the Trendelenberg position.

Local anesthetics are believed by many, to be entirely devoid of danger. Those who share this belief should read a recent report in the *Journal A. M. A.*, Vol. 82, No. 11, which gives an account of 43 deaths from this cause.

DANGERS OF SPINAL ANESTHESIA

They are very real and I am sure no one should attempt its administration without special preparation. However, is this not equally true of all other anesthetics?

In Dr. Babcock's first 5,000 spinal anesthesias, ten patients placed on the table in extremis died while under the anesthetic. A careful study of these cases will not convince the reader that death was in all cases undeniably due to the anesthetic. In many, if not all of them, their almost hopeless condition coupled with the operation was enough. In his last 10,000 cases there has been no mortality though alarming cases of collapse continue to occur, at rare intervals.

We will never be sure of mortality rate from anesthetics until we have a vast number of administrations and only deaths are counted when they occur before the operation is started or perhaps in which the operation is of a very trivial character, all of the patients to be in apparent good health.

Many of the dangers and disadvantages attributed to spinal anesthesias are to me fanciful or based on ignorance. I well remember one of our very best surgeons saying, "It did not relax the patient," while we all know it is, perhaps, the greatest of all agents for this purpose.

I can understand death, infection, nausea, vomiting and headache after spinal anesthesia but little else. Oftimes it is a case of after this but not because of this. Several instances illustrating this point have come under my personal observation. While writing this an old lady came to the City Hospital for an operation for gall stones. At the last moment she backed out. Within twenty-four hours of her return home she was paralyzed.

A few years ago a case was referred to me by Dr. J. L. Miller. I advised spinal anesthesia, but it was refused and ether was given. The patient never awoke and 41 hours afterwards died. Uremia was my diagnosis.

Several times while attempting to introduce the needle in the back of some nervous patient, his complaints induced me to desist and give ether instead. In a number of such instances they have complained of symptoms which they attributed to the spinal anesthesia which they supposed they had received but which in fact they never did receive.

I have never seen an infection but have always been fearful of it. Certainly I would allow none but a thorough master of asepsis to administer spinal anesthesia to me. This fear of infection is an occasional drawback to its use.

Thus in fracture work done while the patient is in bed rather than go and wash up as carefully as I would for a major operation, I prefer to give a general anesthetic.

The danger is, it seems to me, but little more than that of diagnostic puncture. This, it seems to me, should not be attempted by any one untrained in asepsis.

Another case, a woman of perhaps 50, also in for gall bladder operation.

Our intention was to give her spinal anesthesia, but at the last moment ether was substituted. Two days following the operation she began to complain of pain in her right leg, later in the left also. Ten days after this there was partial paralysis of both legs which became complete in a few days after her return home.

Who will deny that if spinal anesthesia had been used in both these cases it would have been blamed for these conditions.

SHOULD BE NO ROUTINE ANESTHESIA

My contention has always been that there should be no routine anesthetic, that its choice should depend on many factors among which I shall mention the following:

First, the general make-up of the patient, his apparent resistance, age, occupation, blood pressure, coincident disease, nervous equilibrium, presence of epidemics such as flu, pneumonia.

VARIATION IN CHARACTER OF PATIENTS IN VARIOUS CLINICS.

In certain large clinics we see a considerable proportion of elderly, ofttimes emaciated patients undergoing etherization at the hands of a most skilled etherizer, one whose life work it is. How often, not always however, they go quickly and quietly to sleep, like the closing of tired lids on tired eyes. How different the scene may be in a small West Virginia hospital. The anesthetist may be a very good physician or nurse, but it is seldom that he or she looks on it as a life time occupation.

Not unlikely the patient is a rugged woodsman or hardy coal miner; one who is by no means unacquainted with alcohol, red faced, used to outdoor life. Perhaps he has a shattered leg, not infrequently his friends have given him a few drinks of moonshine to help him keep up his nerve. A few whiffs of ether and the show starts. First the profanity, then he struggles, the whole operating room force is called on to hold him to the table by main strength and awkwardness. Ofttimes their efforts are only partially effectual. How shocking to see that shattered, bleeding leg performing flail like movements through the air.

Now it is perfectly true these things should not occur, nevertheless they do occur, and I am quite sure very many of you have witnessed it. The picture is not overdrawn.

How different the scenes under spinal anesthesia. Absolute, complete relaxation, the patient quiet and entirely conscious. If after thorough examination it is deemed advisable to amputate the leg the patient can be consulted about it and his consent obtained.

Second: The particular operation to be performed, the time likely to be consumed, the amount of pain to be expected, the degree of shock likely to be inflicted.

Third: The anesthetist available. The idea that any one is capable of giving an anesthetic is far from true, nor does one's capacity in other directions seem to serve as a very accurate index of his ability as an anesthetist. Certainly some very excellent physicians make very poor anesthetists.

TECHNIQUE

I have never used anything except Stovaine and for many years only a preparation of this put up in ampoules. The solution I use is lighter than the spinal fluid, hence the head

is lowered in event of danger. The dose is from 4 to 6 centigramms.

A 2cc. Luer syringe is used, the piston being sufficiently light to be moved by the intradural pressure. A needle of very small caliber, made of nickeloid or platinum is used. This introduced between the first and second lumbar vertebra in most of my work. Dr. Babcock introduces it between the 12th dorsal and first lumbar for work in upper abdomen.

Lower injections serve for many operations.

The solution is warm, it is mixed with the spinal fluid, a portion of this injected, more fluid withdrawn and slowly injected. This is usually done three times. Since using a very small needle I think the headaches have very materially diminished. In fact, I do not recall having had any for some time. The theory being that the larger needle permits more leakage.

It seems to me the temperature or the mixing greatly increases the effect of the anesthetic, also the speed with which it is introduced. Most certainly if one is using a ready-made soluion he should keep very plainly in mind the relative specific gravity of the solution and the spinal fluid.

To allow an inexperienced resident to inject a solution of unknown specific gravity into the spinal canal, perhaps with considerable force, then to allow the patient to sit upright on the table is to court disaster. Some of this, perhaps all of it, preceded the death of a patient in a large hospital in Philadelphia a few months ago.

If the solution is lighter than the spinal fluid the patient should be quickly but not roughly lowered to the recumbent position and the head placed lower than the hips.

In my opinion the preferable way to give the anesthetic would be while lying down, but it is so much easier given sitting up that we always adopt this plan when it is possible.

Labat uses Novocain and dissolves it in the spinal fluid. His technique was being used in Deaver's clinic some months ago.

I am at present undecided as to the wisdom of the preliminary use of morphine and hyoscine. It certainly increases the anesthesia and makes the patient more manageable, but I have always feared its effect upon the respiratory mechanism. I use it in a very considerable proportion of my cases, but am not altogether committed to it.

Dr. Babcock has stated that the subject selected for this form of anesthesia should be in position to withstand a very considerable fall in blood pressure. His advice to me was to use it in the strong. On the other hand it seemed to me that I saw Deaver choose the weak and debilitated for its use some years ago. Understand this was only my impression.

Patients with marked limitation in breathing capacity should be avoided. The kind of cases I particularly like to use it on are alcoholics, obstetrical cases, having high blood pressure, perhaps verging on or actually in eclampsia, operations upon the anus, bladder, and perineum. I have performed ten Caesarean sections under it with very satisfactory results. Two others as mentioned above were very unsatisfactory.

This form of anesthesia is ofttimes objected to by nervous patients, especially those who have formed mistaken ideas concerning its action, but I do not recall any patient who has been under spinal anesthesia once and

has chosen another form of anesthesia the second time.

All of us have had on very many occasions patients who have specifically asked for some other form of anesthesia than ether.

A large proportion of ones associates, both physicians and nurses, who have seen it used, prefer it for themselves. Only recently I operated on our anesthetist, a physician who has given many hundreds of anesthesias.

CONCLUSIONS

All anesthetics without exception are dangerous. Ether is probably the safest, especially in unskilled hands.

Spinal anesthesia should not be used by any one who has not carefully studied its technique and who is not prepared to forcefully combat any untoward manifestations by intravenous medication.

The absence of post-operative shock, nausea and vomiting, the very greatly enhanced ease to operator, the absence of injury to lungs and kidneys make spinal anesthesia much to be desired.

Given to selected patients by those who have studied its action it is sufficiently safe to justify its use.

PUERPERAL ECLAMPSIA

Read Before Harrison County Medical Society at Clarksburg, W. Va. December, 1924.

It is claimed that puerperal eclampsia occurs about once in every 500 labors. In lying-in hospitals it takes place in about 1% of cases.

Because of the comparative infrequency of the disease, it may seem that an apology is due this society for not selecting a more common condition for discussion upon this occasion. Be this as it may, the high maternal and infant mortality attendant upon puerperal eclampsia, our ignorance of its etiology, and the desire for a better understanding of it and for more efficient methods of combating it, seem excuse enough for this effort.

From the available records in St. Mary's Hospital only thirteen cases could be found. It is a small series upon which to base a paper, but sufficient to illustrate and bring to mind most of the important features of the malady.

In this series of cases, 45% were primiparas, one was para-10, and one para-8. It is generally stated that 70 or 80% of all cases of puerperal eclampsia occur in primiparous women.

One of the cases was a twin pregnancy and one of the twins exhibited eclampsia seizures soon after birth. It is claimed that twin pregnancies predispose to eclampsia on the part of the mother.

No case occurred earlier than seven months after conception. There were six cases at seven months, one at eight months, and six at term. A case of puerperal eclampsia has been reported as early as the third month, but as a rule it is not encountered until the latter half of pregnancy.

Among the cases reviewed ten were definitely ante partum or intrapartum, two were distinctly postpartum, and one had no convulsions at all, but belongs in the ante partum class.

This case of puerperal eclampsia without convulsions is most interesting. The woman was the mother of eight children and was seven months pregnant. She entered the hospital with a blood pressure of 215 systolic and 140 diastolic, complaining of severe abdominal pain and headache.

The urine showed albumin three plus and bile and many hyalin and granular casts. She was not delivered while under observation in the hospital. However no foetal movements were noticed the last nine days of her hospital stay and during this time her blood pressure dropped from 215 systolic to 150 systolic and general improvement was noted. The most reasonable explanation of this case seems to be that it was a definite ante-partum puerperal eclampsia and that the foetus died terminating the toxaemia without the occurrence of the convulsions. It is well known that death of the foetus is most apt to take place in eclamptic women and that the foetal death terminates the eclampsia.

We are apt to think of eclampsia and convulsions as synonymous terms, but such a view is incorrect. The convulsion is usually the most characteristic clinical feature of puerperal eclampsia, yet a number of authenticated cases (24 in all up to 1911) have been reported in which there were no convulsions, but which died in coma and exhibited at autopsy the characteristic hepatic and renal lesion. The case referred to here recovered and verification of the diagnosis by autopsy was not permitted.

It may be argued that the case described here as eclamptic without convulsions was a case of nephritis, but such a diagnosis does not seem warranted.

The average systolic blood pressure in these eclamptic women was 174. The case with the lowest blood pressure was a post partum eclampsia and resulted fatally. Her systolic pressure was only 140. The highest systolic pressure was 215. This woman recovered, but it was presumed that the foetus died.

The temperatures were variable. Four had temperatures of 103 or above and three of these died. In two of these cases the temperature went to 106 before death. Four had normal temperatures.

All cases showed marked albuminuria and the presence of casts. The degrees of albuminuria ranged from two plus to 4 plus and one urine became almost solid upon boiling. The blood urea was increased to 130 (30 being normal), yet the phenol-phthalein renal function test for two hours showed an excretion of 35% of the dye. This woman was an ante-partum eclampsia. She delivered spontaneously and left the hospital with only a trace of albumin, a few casts and a normal blood pressure. The foetus was still-born.

High grades of albuminuria and casts do not necessarily indicate profound renal lesions in these cases.

Albuminuria is almost constantly present in puerperal eclampsia, but there are a number of cases on record in which the urines were free from albumin at the time of the attacks.

Nine of these women, it was recorded, complained of headache preceding the eclampsia. In the other cases no mention was made of this symptom. However some of the charts contained rather lean histories, due in part to the unconscious state of the patients at the time the histories were written.

One case complained of blindness. She promptly had a convulsion and lapsed into a coma from which she never rallied. It was thought that this case may have suffered an intracranial hemorrhage.

There was no mention of jaundice in any case, but the urine showed the presence of bile in two instances. The

presence of jaundice in these patients is of grave import, indicating serious hepatic involvement.

No mention was made of the volume of urine excreted in a given length of time. The urinary output is invariably diminished in amount and may be almost suppressed.

Hemoglobinuria was observed in one case.

The pupils were usually contracted but it is probable that these patients had had morphia. It is stated that dilatation of the pupil is the usual finding in eclampsia.

Edema was present in seven cases. It was absent in one and in the remaining cases no mention was made of the condition.

TREATMENT

Fisher's solution by rectum was a favorite method of administering water and was given in many cases.

Purgation was employed, croton oil being the drug chosen for this purpose in several cases.

Veratrum viride was given.

To control the convulsions morphia was almost universally administered.

Hot packs were employed to promote sweating.

Four women delivered spontaneously and three of these recovered. Three of the spontaneous deliveries were at or near term.

There was no forceps delivery or version.

Caesarean section was performed in eight cases. The conservative section was the operation employed.

Ether was the anesthetic in all these Caesareans save one. Nitrous oxide and oxygen were given in this instance.

The results of treatment in these thirteen cases of puerperal eclampsia were not the most gratifying. However it should be remembered that it is a small series and we trust the total mortality of all the cases that have been treated in St. Mary's Hospital, were these cases available for study, would be found to be lower.

There were five maternal deaths among the thirteen cases, which means a mortality of 38.5%.

Because of the case of twins there were 14 babies and of these six died, making the foetal mortality 42.9%. It is true that there is a possibility of inaccuracy here in as much as it was not definitely proven that one foetus died. All full term babies lived.

Two seven months infants were still born. One of these was delivered by Caesarean section. The foetus appeared to have been dead 2 or 3 days. The surgeon thought he was able to hear the foetal heart beat faintly immediately prior to the operation.

Of the eight women delivered by Caesarean section, four died, giving a 50% maternal mortality for the Caesareanized cases. None of these women died upon the operating table, but one expired shortly after being returned to her bed. Therefore it seems only fair to attribute these mortalities to the disease rather than to the operations.

All the infants delivered by Caesarean were resusitated except the one which had been dead 2 or 3 days. It is true that three of the babies delivered by abdomino-uterine section died in from 2 hours to 4 days after operation, but all three were seven months infants.

There were two cases of post-partum eclampsia, as noted elsewhere. One of these died and the other developed post-partum insanity and left

the hospital showing little improvement in her mental condition. She later recovered fully.

This instance of psychosis following puerperal eclampsia is not so very unusual. Different observers state that it occurs in from 3 to 5% of cases.

Only one of the infants delivered of these 13 eclamptic women had convulsions after birth while under observation. This baby was one of full term twins and was referred to earlier in this paper.

No autopsy was performed upon any of the women that died. A necropsy was made upon one seven months child that died a few hours after birth. The findings recorded in this post-mortum examination were atelectasis and congestion of the lungs. It is apparent that this infant was not eclamptic.

The lesions in puerperal eclampsia are mainly in the liver, kidneys, brain and heart. The hepatic lesions are the only constant ones. They consist of areas of necrosis, small, but visible to the naked eye. The renal lesions are similar to those of an acute nephritis. They are not always present. The brain is said to show edema, hyperemia, anemia, thrombosis, or apoplexy. It may show nothing at all. The heart in most cases shows myocardial degeneration.

Concerning the etiology of puerperal eclampsia, it seems futile to say more than it appears that the essential feature in the morbid process is the circulation of some as yet unknown toxic substance in the blood, giving rise to the various lesions. Assuming that this is true, we do not know whether the toxin arises from the maternal or foetal organism, or both.

The diagnosis of eclampsia is usually easy. It need be confounded with no other disease. However, it is well to bear epilepsy in mind. Not long ago I was called to see a pregnant woman in the throes of a clonic convulsion and might have experienced the embarrassment of making a snap shot diagnosis of puerperal eclampsia had not some member of the household promptly volunteered the information that the patient was in the habit of having fits before she became pregnant. It also should not be forgotten that it is possible for an epileptic to have puerperal eclampsia.

As evidenced by the mortality figures of this small series of cases, it is plain that the prognosis in puerperal eclampsia is always serious. Williams states that the maternal mortality is from 20 to 25% and that of the foetus from 33 to 50%. Our maternal mortality was above the figures here given but the foetal death rate was within the bounds.

We hear a great deal these days about prenatal care as a means of preventing eclampsia. It is important to keep close watch upon the blood pressure, to examine the urine frequently, to make dietary changes and endeavor to promote elimination when signs of pre-eclamptic toxaemia appear. In this way there seems to be no doubt that cases of eclampsia are prevented. It is established, however, that in spite of the most faithful exercise of every known means of prophylaxis, eclampsia will at times, develope and destroy the patient or her babe no matter what the treatment be or how skillfully it may be administered.

The usual methods of the curative treatment of puerperal eclampsia

were fairly well illustrated in the series of cases reviewed here.

Bleeding, however, was not mentioned. As a rule the tendency now seems to be to class this procedure with such measures as wet cupping in the estimate of its therapeutic value. It however is recommended by obstetricians of national renown to be of great value in the treatment of puerperal toxaemia. It seems that the withdrawal of a quart of blood from an eclamptic patient with a high blood pressure might at least avert an apoplexy. Since it is certain that intra-cranial hemorrhage does occur in as many as 13% of cases of eclampsia, venesection in these cases seems to be a reasonable procedure. If Caesarean section is to be performed, it would not be advisable to bleed as this operation in itself is usually attended by sufficient hemorrhage. In fact it has been argued that the benefits derived from Caesarean operation depend almost entirely upon the loss of blood incident to the operation and that equally good results would follow venesection and the spontaneous termination of labor.

However out of the maze of uncertainty as to the best modes of treating puerperal eclampsia it seems to be most generally believed that if the foetus is viable and the mother does not improve promptly under treatment, the uterus should be emptied. If the cervix is fully dilated and spontaneous delivery not imminent, it is customary to apply forceps or perform version and extraction. If the cervix is only partially dilated and its canal obliterated, the dilatation may be completed by the method of Harris. In case of a multipara with a rigid, tight cervix and a roomy pelvis and relaxed pelvic outlet, vaginal hysterotomy is sometimes performed. In most cases however, where the cervix is not dilated nor its canal obliterated, the conservative Caesarean section is performed. Caesarean section ordinarily is the operation of choice in eclampsia where any other condition exists which makes it advisable, such as pelvic tumor, contracted pelvis, etc.

Your attention is called to a paper by Davidson in the May, 1921 number of *Surgery, Gynecology and Obstetrics*, entitled, "A New Procedure in the Treatment of Puerperal Eclampsia" and to another paper by the same title by the same writer in the February, 1923, number. Davidson's conception of this disease is that it is an hepato-renal block and that a sufficient amount of electrolyte in the form of water properly administered will break this so-called block and save the patient. Accordingly he recommends and practices passing the stomach tube upon these patients and pouring from a quart to a quart and a half of water into the stomach every four hours. In addition to the water he gives from one to one and a half ounces of epsom salts through the tube once in twenty-four hours. His argument is that the water given in this way may be of large amounts; that it is absorbed quickly into the portal circulation and is carried to the liver, where it is needed; that it gets into the circulation more promptly than it does if given by any other method, and is more speedily eliminated by the kidneys. He backs up his contention by reporting a series of twelve successive cases so treated without a maternal death and with but one foetal fatalty.

All this sounds very fine. Seriously this procedure of giving large volumes of water through the stomach

tube in this disease seems rational and might not be out of place in other conditions. However I do not join the writer in the belief that we may be able to bring the mortality of eclampsia down to the vanishing point by the adoption of this means of hydro-therapy. It certainly is worthy of thought and an honest trial, but it is hardly conceivable that a woman dying from an apoplexy as a part of her eclamptic pathology could be greatly benefited by filling her stomach with water. In this disease it is plain that recovery depends largely upon the severity of the attack.

I had an opportunity of seeing this mode of treatment tried out in one case of post-partum eclampsia. This woman was a patient of Dr. J. B. Winfield, and was treated outside the hospital. She was a very young primi-para and went into convulsions soon after delivery. She was unconscious for many days. She received a quart of water through the stomach tube every four hours for a number of days. She recovered.

My personal experience in the treatment of eclampsia has been limited to two cases. They were included in the list of thirteen reviewed. A few additional remarks concerning them may not be out of place.

One of these women had been previously delivered by Caesarean section for puerperal eclampsia. As a rule it is considered that eclampsia is not apt to occur twice in the same patient. This woman had several convulsions before reaching the hospital, was in a deep coma when admitted, and had a convulsion or two before going to the operating room. She was pregnant at term, but the cervix was not dilated. Her blood pressure was 180 systolic and she was generally edematous. Her urine contained a large amount of albumin and many hyalin and granular casts. Because of the condition of her cervix and due to the fact that a former Caesarean operation had been performed, another Caesarean operation was decided upon. Both mother and baby lived and neither had any convulsions after delivery.

The other case was a 28-year-old primi-para. Her physician was called to see her at one o'clock in the morning. At that time she complained of dizziness and headache. She was brought to the hospital at 7:30 a. m., and while being put to bed complained of blindness and went into a convulsion. This was followed by a deep coma from which she did not revive. The blood pressure was 190 systolic and the urine contained albumin and casts. She was not in labor, but about nine months pregnant. A Caesarean section was decided upon and the operation performed at 9:30 a. m. the morning she was admitted. Nitrous oxide and oxygen furnished the anaesthesia, but the anesthetist informed me afterward that very little nitrous oxide was given so deep was the coma. The baby lived, but the mother died 12 hours after the operation.

INTESTINAL OBSTRUCTION DUE TO ROUND WORMS. REPORT OF CASE

By
CLAUDE L. HOLLAND, M.D., F.A.C.P.

Dorothy F., female, aged 3 years and four months, was the third child of healthy parents. She was breast-fed for four months, then on Eagle Brand milk until about one year old.

Her general health had been fair, though she had never been robust.

She was thin, pale and of a nervous temperament. She had had none of the acute contagious diseases. Her worst illness was an attack of severe naso-pharyngitis, complicated by a lymph-adenitis of the cervical glands, about six months ago. This was followed by a mild attack of pyelitis which cleared up after a short time.

On January 17th, the child was as well as usual. On the morning of January 18, she suddenly complained of severe pain in the abdomen. Vomiting ensued soon after. The vomitus contained a quantity of pumpkin pie, the ingestion of which the mother had no knowledge. The bowels were freely evacuated soon after. The pain and vomiting continued.

She was seen at 11 a. m. The child was thin, pale and showed marked evidence of shock. The rectal temperature was 96.4 F. She was very uncomfortable, bending the body forward and crying out with pain which seemed to be paroxysmal and intermittent in character. She vomited frequently, being wracked with nausea, but brought up only mucous. There was frequent desire for stool, but nothing passed.

On physical examination the heart and lungs were negative. The level of the abdomen was that of the lower costal margin, there was some rigidity especially on the right side, no masses could be discerned. Rectal examination was negative.

Because of the extreme discomfort of the patient 1-24 grain of morphine was given hypodermically.

A tentative diagnosis of intussusception was made and consultation with a surgeon asked for. To this the parents demurred, pending the arrival of another physician, the child's uncle, from a nearby town. Late in the evening the child was better, no more vomiting, was fairly comfortable, and asked for food. None was given, however. Next morning the child was quite comfortable, but was weak and very hungry. Clear broth was given and later in the day a little toast. Next day my call was cancelled, message said, "Child is all right."

Patient was not seen again until the evening of January 23. I was called at this time because the child "was not doing well."

Physical examination was negative except that the child was thin, rather pale, presented a heavily coated tongue and had a tympantic abdomen. The bowels had moved, however, in the early part of the day. The temperature was normal.

A saline enema was ordered and calomel in divided doses was begun, to be followed by a mild saline next morning. She spent a fairly comfortable night, but next morning complained of pain in the abdomen and began to vomit persistently. I was hurriedly summoned. On arrival I found the patient evidently suffering much pain in the abdomen, which was intermittent in character and apparently corresponded to the intestinal peristaltic waves. Vomiting recurred at frequent intervals. Palpation of the abdomen revealed a sausage shaped mass in the left lower quadrant. The mass was clearly discernable on digital examination per rectum.

A diagnosis of intussuception was made and the patient removed to Cook Hospital, without delay. The abdomen was opened by Dr. H. H. Carr, assisted by Dr. C. L. Davis, both of whom concurred in the diagnosis.

The peritoneal cavity showed a considerable accumulation of serous ex-

udate. A tumor about eight inches in length was found in the upper portion of the ilium. This proved to be made up of a mass of interlaced round worms. At this point the gut which was greatly distended and discolored showed much engorgement, as did also the mesenteric blood vessels, supplying this portion.

The intestine was incised and with dressing forceps forty-nine Ascaris Lumbricords, most of which were very large, were extracted; after which the wounds were closed.

After five days a vermifuge consisting of santonin and calomel was given, and four more worms obtained. After another week a second dose was given without results. Other doses will be given later.

COMMENT

An interesting feature of the case is the fact that this child who had been reared by a very intelligent and careful mother had never been known to pass a worm per rectum.

The child in the beginning presented a typical picture of intussecption. All classical symptoms being present except a palpable mass in the abdomen, and bloody discharges from the bowel. The former is, however, only made out in about half of the true cases, while the latter is only seen after sufficient time has elapsed for the mucosa of the afflicted bowel to begin the pouring out of blood. Our belief was that we were dealing with a true case of intussuception which had been spontaneously relieved. On appearance of the second attack of pain and vomiting with a discernable tumor, we believed the condition had simply recurred with involvement of sufficient gas to make palpation possible. However, abdominal section revealed our error.

MELENA

By GILBERT R. NICKELTHWAITE, M.D.

Read before the Ninth Ohio District Medical Society, Portsmouth, October 13, 1924.

Melena means dark blood in the stools, so-called, tarry stools. When this is present it means that the blood has been poured out high up in the intestinal tract. In practically every case this means the upper intestinal tract or duodenum. It is very rare to see a tarry stool as a result of hemorrhage in the large intestine. Hemorrhages in the large intestine, or in the rectum, show themselves as fresh or relatively unaltered blood. They are common and relatively unimportant. Tarry stools, however, are relatively rare and much more important. They often escape observation, due to their color. Besides these two gross types, we have minute hemorrhages demonstrated by guiac, benzidine or the spectroscope.

Blood in the stools is demonstrated by the older or guiac test and the slightly newer or benzidine test. This latter test is made in the following manner, quoting from Emerson's Clinical Diagnosis and is supposed to detect blood in 1:300,000 dilution. A knife blade point of powdered Benzidine is mixed in a test tube with 2 c.c. of glacial acetic acid and 20 drops of 3% hydrogen peroxide. A particle of feces is then spread upon a scrupulously clean slide and a few drops of distilled water added if necessary. Three or four drops of the reagent are allowed to come in contact with the feces solution on the slide and in about 5 seconds, if the test is positive, there will be a bluish green color at the zone of contact.

"Benzidine was first recommended by C. and R. Adler. The Benzidine test is based on the principle that the easy oxydasis of the colorless Benzidine by means of the oxygen from the added hydrogen peroxide results in a higher oxidized combination of benzidine which is green or blue. Hydrogen peroxide will not allow its free oxygen to act except in the presence of blood coloring pigment."

Several modifications of the benzidine test have been made by combining the dry benzidine with an oxide containing a loosely combined oxygen molecule, usually a peroxide, in the form of a tablet. To this tablet is added the acetic acid and the suspected solution. Perhaps the best of these modifications is the Gregersen test (Aaron *J. A. M. A.*, 1924) as it combines simplicity and accurateness. Five years ago Gregersen made the important observation that all benzidine tests depend on the concentration of the benzidine solution. To insure a definite percentage of benzidine in every test, he recommends a powder consisting of .025 gm. of benzidine and .20 gm. of barium peroxide. When the reagent is wanted one powder is dissolved in 5 cc. of a 50% solution of glacial acetic acid which gives .5% benzidine solution. These tablets are now put out by Merck & Co. One tablet is dissolved in 5 cc. of a 50% acetic acid solution.

Both of these reagents will keep indefinitely and one can always be sure that the hydrogen peroxide is fresh.

To be sure of the activity of the benzidine solution, Gregersen prepares a blood test paper. (I would suggest here that the test papers used in the Tallqvist hemoglobin test would be ideal.) If when a drop of the benzidine solution is placed upon the paper, the latter turns deep blue, this is proof positive that the reagent is in proper condition.

For quantitive measurements Gregersen has adopted the following standards:

1. If it takes from 15 to 60 seconds for mere grenish blue or pale blue to develop this is called a weak positive reaction and is marked "one plus." The blood content in this case is less than 1%.

2. If it takes from 3 to 15 seconds and the coloring is deeper the reaction is definitely positive and marked "two plus." Here we have from 1 to 5% of blood.

3. When the change appears almost instantly and is deep blue, almost black, the reaction is strongly positive and is marked "three plus." More than 5% of blood is indicated.

There are several points to be kept in mind about this test:

1. Glassware must be kept scrupulously clean.

2. Abstinence from all meats and meat extractives for a period of three days.

3. One positive test does not mean as much as several positive tests. One negative test is usually sufficient for all clinical purposes.

Among the other tests for occult blood the spectroscopic test of Snapper is perhaps the most reliable of all. The feces are placed in a mortar and extracted with acetone. This withdraws much of the coloring matter and water, leaving a dry mass that is quite susceptible to spectroscopic analysis. The dry residue is transferred to a clean mortar and rubbed up thoroughly with glacial acetic acid, 1 part, ether 3 parts. After filtration, ¼ vol. of Pyridin is added, then a drop of ammon. sulphid

solution. This is examined in the spectroscope. If blood is present a hemochromogen spectrum band will be found on the boundary between yellow and green.

Ocult blood in the feces combined with signs and symptoms means ulcerative lesions in the stomach or intestines. First, however, we must rule out hemorrhage from the nose, mouth, throat and esophagus. Moreover, in cases of gastric ulcer occult blood in the feces is a most important objective symptom for it not only clinches the diagnosis but indicates whether or not the ulcer is healing.

Bleeding from a carcinoma can be differentiated from ulcer bleeding by the fact that ulcer bleeding may stop as shown by a negative test while in carcinoma the bleeding is continuous and the test for occult blood is always positive.

While on this subject, I would like to say a few words upon melena neonatorum and melena in other diseases. To quote from Townsends, Osler 8th edition, of 50 cases of hemorrhage in the newborn, 20 cases, nearly 50% were due to melena neonatorum. The disease is usually of brief duration, death occurring in from one to seven days. The temperature is often elevated. The nature of the disease is unknown. As a rule, nothing abnormal is found post-mortem. The general and not local nature of the affection, its self-limited character, the presence of fever, the greater prevalence in hospitals suggests an infectious origin. Not every case of bleeding from the stomach or bowels, however, belongs in this category. Ulcers of the esophagus, stomach and duodenum have been found in the new-born dead. These hemorrhages usually begin about the first three days of life. The blood is always dark colored, usually intimately mixed with the stool; very rarely in clots. The difference between meconium and melena can readily be determined by the benzedine test or microscope.

Besides melena in the new growths inflammations and trauma which are not within the scope of this paper, we have melena in several of the systemic diseases, such as purpura, small pox, and splenic anemia or Banti's disease. In purpura, for instance, gastric crises, pain, vomiting, melena and diarrhea may occur. These attacks have often been mistaken for appendicitis or intuscusception. Identical attacks also occur in angio-neurotic oedema.

In closing, I have tried to give you the simplest and best tests for melena, both qualitative and quantitative, with some practical applications to clinical medicine.

PROGRESS IN THE TREATMENT OF SYPHILIS

By CARROLL S. WRIGHT, M. D., Assistant Professor of Dermatology and Syphilology, Graduate School of Medicine, University of Pennsylvania, Philadelphia.

Read before the Cabell County Medical Society, Huntington, W. Va., November 13, 1924.

The past twenty years have added much to our knowledge of syphilis and have particularly advanced our methods of therapy. Beginning with the discovery of the spirochete by Schaudinn in 1905, and the application of the Bordet-Gengou reaction in the diagnosis of syphilis by Wassermann in 1906, there followed in 1909 the chemo-therapeutic research of Ehrlich, resulting in the discovery of "606" or Salvarsan, and "914" or

Neo-Salvarsan. The discovery of these remedies and their use in the treatment of syphilis resulted in an upheaval of the previous conceptions of the therapy of syphilis. The next epoch-making discovery of this score of years was that of Levaditi and Sazerac (1) in 1921 that bismuth, a drug long considered to be comparatively inert, has a powerful action against syphilis. During this period of years the conception of how this disease may be best treated has changed frequently and has varied with different writers. At a time like this when research is continually throwing new light on our knowledge of the disease and its treatment, it is difficult to outline any routine method of therapy. In order to arrive at a modern conception of how syphilis in its various phases may be best treated, it is essential to review our knowledge of the organic arsenicals and of bismuth.

Organic Arsenicals: Our main consideration in the treatment of syphilis is to exterminate every spirochete in the body. Ehrlich was so impressed with the powerful effect of arsphenamin as a spirocheticide that he expressed a belief in "therapia magna sterilizans," a method of therapy requiring but a single or few massive injections of the drug. It has taken many years to overcome this belief in the minds of the general medical profession, and these years have been fraught with danger to those unfortunate individuals who, infected with syphilis, received only one or only a few injections of the drug. Such therapy serves only to destroy part of the spirochetes and foci are left in some parts of the body undisturbed. At the same time the development of the natural antibodies is prevented, or at least held in check. As a result of this kind of treatment, recidives during the early years of arsphenamin therapy were common, particularly the neuro-recidives. At the present date we have arrived at the realization that one, or even several, injections of an arseno-benzene will not in the large majority of cases destroy all the spirochetes. It is now realized that several series of injections must be administered, the series being interspersed by the administration of a second drug to give the best results.

The arseno-benzenes, arsphenamin and neo-arsphenamin, are still the premier medicaments for the destruction of the spirochete of syphilis. Mercury has long since been relegated to an inferior position as an anti-syphilitic remedy, and even bismuth, for which great claims are made, is far less powerful as a spirocheticide. It is unfortunate that the arsphenamins have been misused, but "Abusus non tollit usus;" the abuse of a drug does not abrogate its use. We must realize that arsphenamin and neo-arsphenamin are double-edged swords, but when they are used wisely and cautiously they are most valuable remedies against this disease.

It has been a moot question as to which is the superior drug, asphenamin or neo-arsphenamin. Certainly the latter is much the easier to administer, and this difference may account for its greater popularity. Arsphenamin is the more uniform product of the two, and it will vary less when made in different laboratories than will neo-arsphenamin. Furthermore, it is more stable than neo-arsphenamin. However, the latter is better tolerated by the patient and is less liable to give rise to disturbing reactions. Moreover, it is distinctly safer to use, for the mortality after

neo-arsphenamine is decidedly less than after arsphenamine.

Our best means of judging the value of a parasiticide is by joint consideration of its therapeutic properties and its toxicity. Arsphenamine in 0.6 gram doses is more curative than the average neo-arsphenamines in 0.9 gram doses, but it is likewise more toxic. Schamberg, Kolmer and Raiziss[2], studying the arsphenamine and neo-arsphenamine of six laboratories in its destructive influence on the trypanosomes of horse syphilis, found that the activity of arsphenamine was 1.74 times greater than that of neo-arsphenamine. In a similar study of the toxicity of these products they found that arsphenamine was 2.4 times more toxic than neo-arsphenamine.

Brief mention should be made of sulph-arsphenamine. This drug is of distinct value when it is desired to give an arseno-benzene intramuscularly. It also has the property of being exceedingly stable in dry form and in watery solution. Sulph-arsphenamine should be used in doses not exceeding 0.3 gram, in order not to produce severe pain. It has one serious disadvantage, and that is its tendency to produce dermatitis. Belding[3], in his series of cases, found dermatitis to occur in 16% of adults and children under treatment. However, his studies were carried out with drug from only one manufacturer. Stokes and Behn[4], in a more recent article, found a much lower percentage in the occurrence of dermatitis.

Bismuth: With the exception of the discovery of arsphenamine by Ehrlich, the introduction of bismuth by Sazerac and Levaditi marks the greatest progress made in the therapy of syphilis in several centuries. It is the concensus of opinion that it is desirable to have a second weapon to use in place of, or in conjunction with the organic arsenicals, and for this purpose bismuth is rapidly gaining favor. There is no doubt but that preparations of bismuth will cause the disappearance of all syphilitic manifestations (except metalues)—more slowly than the arsphenamines, it is true, but more rapidly than mercury. Bismuth is also less toxic than mercury.

We are fortunate in having a third remedy which exerts a powerful influence against syphilis. Cases are not infrequently encountered in which there is an intolerance to arsenic or mercury, or both, or which prove arsenic or mercury resistant. In such cases bismuth has been found to give excellent results. Bismuth is also a remedy of preference to use in conjunction with arsenic. It is desirable to employ two remedies for certain phases of the disease, and certainly such combined treatment is more therapeutically active and more rapidly curative than the sole use of one or the other drug. Should bismuth be administered at the same time that the patient is receiving an arseno-benzene, it is to be used in smaller doses and the injections given less frequently.

The most widely used salts of bismuth are the tartro-bismuthates of potassium and sodium. These have proved to have a powerful antisyphilitic action, and at the same time a low toxicity. It is recommended that injections be given at intervals of four or five days, in doses of 0.1 to 0.2 gram when the drug is being used alone, and at intervals of one week in doses of 0.1 gram when it is being used in conjunction with an arseno-benzene.

One of the chief advantages of bismuth over mercury is its freedom from untoward symptoms when used in the above doses. A blue line along the gums is always to be expected, but is not a contra-indication to continuing the drug. Stomatitis, when it does occur, is usually mild. Digestive disturbances, albuminuria, and skin eruptions are rare.

I have been using bismuth exten sively at the Polyclinic Hospital for the past year and a half, and have been much impressed by its beneficial action in the various stages of the disease and by its low toxicity. In the doses recommended, it is certainly better tolerated than mercury. Its chief disadvantage is that it cannot be prescribed in the variety of ways which mercury can.

APPLICATION TO THE TREATMENT OF SYPHILIS

1. *Primary Syphilis*: The treatment of primary syphilis varies according to whether the blood Wasserman has become positive. If a lesion has been demonstrated to be a chancre by clinical and darkfield examinations, and the blood Wassermann is still negative, every effort should be exerted to prevent the development of a positive Wassermann reaction. This abortive method of treatment has received considerable attention on the continent. It is based on the assumption that at this stage of the disease when the Wassermann reaction is still negative, all of the spirochetes are at the original site of the infection and have not yet succeeded in breaking the lymphatic barriers and spreading through the circulation. The studies of Brown and Pearce on rabbits indicate that in this animal, generalization of spirochetes has already occurred by the time the local lesion appears, but there is no proof that the same is true in human syphilis.

In this stage of the disease it is most desirable to destroy every spirochete in the human economy. One injection of arsphenamin or neo-arsphenamine will not do this, nor will two or three. We cannot even be sure in every case that a course of twelve injections will destroy all the spirochetes, although it is true that in cases thus treated the Wassermann usually remains negative. Our Wassermann test of today is not sensitive enough to invariably indicate the pre presence or absence of a reacting substance in the blood. Meirowsky and Levan[5] have studied the abortive treatment of syphilis and report a number of failures, which led them to conclude that repeated courses of treatment are absolutely essential, even when case under treatment has never shown a positive Wassermann. The French commission for study of syphilis and marriage[6] concluded that two years of intensive treatment with repeated negative blood Wassermann and negative spinal fluid Wassermann are necessary for cases of this type before they can be pronounced cured and given permission to marry. It is my opinion that such a case should receive an initial course of twelve injections of neo-arsphenamine, the injections being given at weekly intervals; this in turn to be followed by a course of from twelve to twenty injections of bismuth, administering each week at least 0.2 gram of the drug; then a second course of twelve injections of neo-arsphenamine. Following this, therapy may be continued the second year with bismuth or mercury alone, providing the Wassermann reaction remains persistently negative.

If the Wassermann reaction is positive at the time the patient is examined, and secondary manifestations have not yet appeared, one of two methods of therapy may be pursued; either the patient will be treated with alternate courses of neo-arsphenamine and bismuth for a period of one or two years, and then therapy continued with bismuth or mercury until three years of treatment have been given, or else an injection of arsphenamine and an injection of bismuth may be given each week in courses of twelve of each for one year, with short rest periods between courses, and herapy then continued with bismuth or mercury until three years of treatment have been given. Mixed treatment should not be discontinued in favor of bismuth or mercury alone until the Wassermann reaction on both blood and spinal fluid is negative, unless there is an intolerance to one or the other drug. Should there be an intolerance to the arseno-benzenes, bismuth is the remedy of choice. Sazerac and Levaditi, and Fournier and Guenot, as well as other writers, have found that bismuth will in a large percentage of cases bring about an abortive cure.

In selecting the above limits of time for the duration of therapy, I have followed in a general way the opinions of the commission appointed in France for the study of the question of syphilis and marriage.

2. *Secondary Syphilis*: Once the secondary manifestations of the disease have appeared, intensive and long-continued therapy becomes a necessity. It has been found that when a patient with the lesions of secondary syphilis is treated with neo-arsphenamine, the Wassermann reaction is usually reversed after the eleventh or twelfth injection, and in a majority of cases by the fourteenth or fifteenth injection. This, however, is far from being evidence of a cure. In fact, if treatment is discontinued at this point, it predisposes to the development of isolated palsies or neuro-recidives. It is probable that a negative Wassermann at this stage indicates that the blood stream is temporarily free from reagin, but it is almost certain that foci of living spirochetes remain; perhaps in the liver, perhaps in the brain, in fact there may be living foci of spirochetes in almost any organ or tissue. It is to kill these remaining foci that treatments must be continued. Once the secondary manifestations have appeared, treatment should be given similar to that outlined above for primary cases which have developed a positive blood Wassermann. When the Wassermann reaction on the blood has been repeatedly negative, and it has been ascertained that the spinal fluid is negative and the patient is clinically cured, therapy may be continued with bismuth or mercury alone until fully three years have elapsed. In the words of Dr. Schamberg[7]: "It is far better in the interest of the patient that he should receive medication in excess of that which is necessary to cure, rather than that it should fall just short of the required amount."

3. *Tertiary Syphilis*: In treating tertiary syphilis we should consider the individual more than the disease. No definite rules of treatment can be laid down. Intensive therapy is rather to be avoided, and may in some instances do actual harm. Wile[8] has shown that in certain types of tertiary syphilis of the liver and in certain types of cardio-vascular disease, a too rapid effect from the anti-syphilitic remedies may work to a de-

cided disadvantage; in liver syphilis of the hepar lobatum type, too rapid a healing may result in closing off the portal circulation, with development of a long persisting ascites. In a case of aortic aneurism reported by Wile, too rapid healing resulted in rupture of the aneurism and death. Cases of this type should be treated very cautiously either with minute doses of arsphenamine, or with mercury or bismuth, thus permitting a slow healing. When the tertiary manifestations occur as cutaneous lesions, a course of arsphenamine or neo-arsphenamine may be given, but it usually suffices to continue the therapy with bismuth or mercury. In treating tertiary syphilis, we are treating a long-standing infection, and a cure if it is ever obtained, will only be obtained slowly. Our main interest at this stage of the disease should lie in keeping the individual in good health, rather than in attempting to destroy all the spirochetes in the body in a definite period of time.

Latent Syphilis: Under this heading may be classified those cases of syphilis which present no manifestations of the disease other than a positive Wassermann. It is a moot question as to how cases of this type may be best handled. If the infection has been recently acquired (from one to two years), intensive therapy such as would be used for an active secondary syphilis is probably the best method to follow, with the hope of obtaining a persistently negative Wassermann. In older cases, even intensive therapy may not result in final cure, for the spirochetes are firmly lodged in the tissues, and if the effort to dislodge them is too severe, actual harm may be done by the over use of anti-syphilitic drugs.

The treatment of neuro-syphilis is a subject unto itself, and not to be discussed in a short space of time.

CONCLUSIONS

1. Arsphenamine and neo-arsphenamine, wisely used, constitute our most valuable anti-syphilitic remedies.

2. Bismuth is an excellent remedy for use in such cases as are intolerant to the arsenicals, or which present recidives following arsenical therapy. It is also a valuable adjunct to arsenical therapy. This drug is characterized by a low toxicity, combined with a powerful anti-syphilitic action.

3. Therapy should be intensive and long-continued in cases of primary and secondary syphilis, with the hope of obtaining a complete cure.

4. Tertiary syphilis requires less intensive therapy, and the individual is to be considered more than the disease.

1. Sazerac and Levaditi: Annal. de l'Institut Pasteur; 34:1:1921.
2. Schamberg, Kolmer and Raiziss: Jour. Med. Sciences; 140:25:1920.
3. Belding: Arch. Derm. and Syph.; 9:470: 1924.
4. Stokes and Behn: Jour. Amer. Med. Assoc.; 83:242:1924.
5. Meirowsky and Leven: Munch. Med. Wochenschr.; 1920, p. 36; ibid. No. 68:106:1921.
6. Querat, Hudelo, Spillman, Gastin and Simon: Bull. Soc. de Derm. et Syph.: Vol. 21:235:1920.
7. Schamberg: Medical Society of Pennsylvania, Oct. 5th, 1921.
8. Wile: Amer. Jour. Med. Sciences: 144:415: 1923.

ANNOUNCEMENTS AND COMMUNICATIONS

No. 5238
STATE OF WEST VIRGINIA
v.
E. E. MORRISON
Raleigh County, Affirmed.
Lively, President.

1. The ejusdem generis rule of construction is only used to aid in determining the meaning of a statute which is of doubtful import, and is

never invoked where the intent of the statute is to be found in the ordinary meaning of the words used.

2. One who opens an office and announces to the public in any way that he is ready to treat the sick and afflicted, and has actually treated cases of paralysis, constipation, rheumatism, neuritis, sick headache, kidney trouble, lumbago, liver trouble and divers other diseases by adjustment of the segments of the spinal column according to the chiropractic method of treating human ailments and infirmities, is practicing "medicine and surgery" as defined by section 12, chapter 11, Acts 1915 (now found in Barnes Code of 1923 as section 8a, chapter 150).

3. The provision of said chapter 150 of Barnes Code of 1923, requiring examination of and license to a person before he can lawfully practice medicine and surgery as therein defined, and imposing penalty for practicing without such license, is applicable to a chiropractor who treats human ailments and infirmities for reward as such, and is not in contravention of sections 1 and 10, article III of the constitution of West Virginia, nor of section 1 of the 14th amendment to the constitution of the United States.

LIVELY, President.

E. E. Morrison was indicted in the criminal court of Raleigh county for practicing medicine and surgery as defined by chapter 150, section 8a, code 1923, without first having obtained a license to do so. The sufficiency of the indictment was challenged by a motion to quash and by demurrer, both of which were overruled. Upon a plea of not guilty the case was submitted to the court upon agreed statement of facts. The court found the defendant guilty and entered its judgment assessing against him a fine of $50. Upon a writ of error to the circuit court the judgment was affirmed. This writ followed.

It appears from the agreed statement of facts that the defendant practices the profession of chiropractic which, as defined, consists of the "palpitation and adjustment with the human hands of the movable segments of the spinal column of the human body to normal position for the purpose of releasing personal impulses and impinged nerves;" that said practice does not include the administering or prescribing of drugs or similar agency, nor the performance of any surgical operation; that on the first day of October, 1922, the defendant came to Beckley, West Virginia and opened an office for the means of practicing his profession as a chiropractor by the means aforesaid, and that the defendant advertised that he could by chiropractic methods cure backache, headache, nervousness, liver and kidney disorders, etc. It further appears from the statement of facts submitted that in the month of October, 1923, and within one year from the date of the finding of the indictment, the defendant treated by chiropractic methods and without the use of any drugs, powders, pills or any surgical method, Alfred McKinney, for neuritis, and Mrs. G. C. Meadows, the prosecuting witness, for periodical sick headache, for which services each of the parties paid him a fee of $25; that defendant has adjusted and attempted to cure the ailments of several hundred people, including men, women and children, by application of his said science, which, said ailments included paralysis, constipa-

tion, rheumatism, neuritis, sick headache, kidney trouble, lumbago, liver trouble, and divers other diseases; that defendant in the treatment of these cases prescribed no drugs and performed no surgical operations; and that defendant attempted to cure the human ailments hereinbefore set out and in the way aforesaid, without at any time having a license to practice medicine or surgery as defined in the 1923 Code of West Virginia.

The statutes applicable to the case are sections 8a, 9, 10 and 11, chapter 150, Code of 1923, and for convenience are here quoted:

COPY OF PRESENT LAW

1. The defendant relies mainly upon two propositions, the first of which is that the treatment administered to the persons named in the agreed statement of facts for which he received compensation, such treatment being the usual treatment given by chiropractors to relieve bodily infirmities and ailments, is not within the intent and meaning of the act requiring a license for the practice of medicine and surgery; that properly construed, section 8a, chapter 150, Code 1923, defining the practice of medicine and surgery read in connection with sections 9, 10 and 11 of that chapter, relate to the relief of human ailments and infirmities by any method employed under the various theories of medicine and surgery mentioned in those sections; and fall within the rule of ejusdem deneris; that these interpretative provisions of section 8a are limited to practitioners of medicine and surgery and osteopathy and the various schools of medicine in existence at the date of the enactment thereof, and provided for in section 9 of chapter 150; and that therefore as the practice of chiropractic is not mentioned that method of treatment is excluded from the regulation of the statute; and consequently no license to defendant is required or provided for. Where general words follow an enumeration of persons or things of a particular and specific meaning, the general words must not be construed in their widest extent, but are to be held as applying only to those persons or things of the same general kind or class as those specifically mentioned. This, in short, is the rule of ejusdem generis as applied in statutory construction. Black on Interpretation of Laws, 141, Lewis' Sutherland Stat. Con. Vol. 2 (2nd ed.) section 437.

LAST ANNOUNCEMENT FOR REGISTRATION

On the Interstate Post-Graduate Assembly Clinic Tour of American Physicians to Canada, British Isles and France.

The medical profession of America who are in good standing in their state medical societies and members of their families are cordially invited to participate in the Inter-State Post-Graduate Assembly Clinic Tour of Canada, British Isles and France, leaving Chicago May 17, and sailing from Montreal May 23. There is nc restriction to territory. Dr. Charles H. Mayo of Rochester, Minnesota, will be the presiding officer of the tour, and Dr. William B. Peck of Freeport, Illinois, managing director.

The following distinguished members of the profession and citizens of the foreign countries are in charge of the arrangements in the clinic cities:

Toronto: Dr. Alexander Primrose, dean of the University of Toronto. Clinics will be conducted in the different branches of medical

science at the Toronto General Hospital, the Medical Building of the University of Toronto, and other institutions of the city.

Montreal: Dr. Charles F. Martin, dean and Dr. Jonathan C. Meakins, director of the Department of Medicine of McGill University.

London, Eng.: Mr. Philip Franklin, F.R.C.S., director of the American Hospital and honorary organizer; Sir Humphrey Rolleston, Bt., president, Royal College of Physicians; Sir St. Clair Thomas, president of the Royal Society of Medicine; Sir William Hale White, retiring president, Royal Society of Medicine; Sir. William Arbuthnot Lane; Sir Holburt J. Waring, chairman of the medical program committee; Mr. W. Girling Ball, F.R.C.S.; Mr. H. W. Carson, F. R.C.S., and the honorary secretaries of the different specialties.

Special social features of the London program will include the conferring of the honorary membership of the association upon H.R.H. Duke of York, the Rt. Hon. Austen Chamberlain, Minister of Foreign Affairs; Rt. Hon. Neville Chamberlain, Minister of Health; Sir Alfred Bower, Lord Mayor of London; Lord Desborough, chairman of the Pilgrims Society; Sir Humphrey Rolleston, Bt., President Royal College of Physicians; Sir John Bland Sutton, President Royal College of Surgeons; Sir. St. Clair Thomson, President Royal Society of Medicine; Sir Holburt J. Waring, chairman of medical program committee; Sir John Y. W. MacAlister, Secretary Royal Society of Medicine.

Receptions and luncheons will be given by the Lord Mayor of London, the presidents of the Royal Societies of Medicine and Surgery, the English Speaking Union, the Pilgrims Society, American Chamber of Commerce and members of the British government.

Liverpool: Sir Robert Jones, Mr. R. E. Kelly, F.R.C.S. and members of the staffs of the following hospitals: Royal Infirmary, Royal Southern Hospital, Northern Hospital, Liverpool Stanley Hospital, Royal L'pool Children's Infirmary, Hospital for Women, Liverpool Maternity Hospital.

Manchester: Sir William Milligan and members of the staff of the Royal Infirmary.

Leeds: Sir Berkeley Moynihan and members of the staff of the University of Leeds.

Dublin: Sir William DeCouroy Wheeler, past president of the Royal College of Surgeons of Ireland, honorary organizer; Sir William Taylor; Sir Arthur Ball; Sir Robert Woods and their colleagues. The clinic work will be distributed among nine hospitals. The governor-general of the Irish Free State has invited the assembly to a garden party at the government house. A reception committee has been formed consisting of the Provost of Trinity College; president of University College; president Royal College of Physicians; president Royal College Surgeons; president Royal Academy Medicine, and president of Association of Surgeons. These gentlemen, separately or collectively will entertain the Assembly on the night of its arrival. The Hon. Lady DeCouroy Wheeler is organizing a ladies' committee to take care of the visiting doctors' wives while the doctors are at work.

Belfast: Prof. Andrew Fullerton, C.B., C.M.G., head of the Department of Surgery, Queen's University, chairman; Sir Thomas Sinclair, emeritus professor of surgery and a member of the House of Parliament; Prof. W. W. D. Thomson, head of the

Department of Medicine; Prof. R. J. Johnstone, head of the Department of Gynecology; Prof. C. G. Lowry, head of the Department of Obstetrics; Prof. J. E. MacIlwaine, head of the Department of Therapeutics and Pharmacology; Dr. A. J. Craig and Dr. H. Hanna, Department of Ophthalmology and Otology; Prof. Symmers, head of the Department of Pathology and Dr. Thomas Houston (haematologist). In presenting the clinics and demonstrations the teaching staff of Queen's University will be associated with that of the Royal Victoria Hospital.

The social features will include a garden party given by Sir James and Lady Craig, Prime Minister of Northern Ireland at Stormont Castle.

Glasgow: Sir Donald MacAllister, K.C.B., principal of the University of Glasgow, chairman; Dr. James Carslaw, secretary and member of the staff of the medical department of the University of Glasgow.

Edinburgh: Sir Harold J. Stiles, head of the Department of Surgery, University of Edinburgh, chairman; Dr. John D. Comrie, secretary; Sir Norman Walker; Sir David Wallace; Sir E. A. Schafer and associates at the University of Edinburgh, and the Royal Infirmary.

Newcastle-upon-Tyne: Mr. George Grey Turner, F.R.C.S., and associates on the staff of the Royal Infirmary of Newcastle and the University of Durham.

Paris: Prof. Theodore Tuffier of the surgical department Faculty of Medicine, Paris, chairman; Dr. T. deMartel, secretary. Practically all the hospitals of Paris are contributing programs for the benefit of the American physicians.

Among the numerous social functions of Paris are the following: A reception given on June 22 by the Academy of Medicine; a large reception given in honor of the American physicians by the municipal council of Paris at the Hotel de Ville (city hall) ; an evening reception and banquet by the Inter-Allied Assembly and a reception by Prof. Tuffier at his country home, which is located near Versailles. Honorary memberships will be conferred upon distinguished statesmen, soldiers and citizens of France.

The tour is being conducted as the result of an invitation extended to the American physicians through this association by the leading universities and medical institutions of Canada, British Isles and France.

Clinic space in all the clinic cities has been arranged so as to accommodate five hundred physicians. The clinics will cover every branch and specialty of medical science. The price of the tour, including traveling expenses under $1,000.00.

Two ships have been chartered to take the physicians abroad, the "Ausonia" of the Cunard line and the "Doric" of the White Star line. They are fine new one-cabin ships with excellent appointments. Trans-Atlantic professional programs will take place on board both ships eastbound and will be participated in by the physicians of the tour.

Reservations can be made by sending the reservation fee of $65.00 per person to Dr. William B. Peck, managing director, Freeport, Illinois. There are plenty of first class accommodations available.

The registration March 17 was 375 physicians and total number, including members of the physicians' families 625. Forty-one states are represented, and quite a number of provinces of Canada.

THE WEST VIRGINIA MEDICAL JOURNAL

JAS. R. BLOSS - - - - - - - - - - - - - - *Editor*

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All original articles for The Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all parts of the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

Advertising forms will go to press not later than the tenth of each month.

All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

Should be made by check. draft, money order, express order or registered letter to Sterrett O. Neale, Executive Secretary, 211 Smallridge Bldg., Charleston, W. Va.

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The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

LOYALTY TO OUR STATE ASSOCIATION

Last night on the radio we heard a man talking on the existence of a future life, and he said, (and the reason we can remember it is because with a certain vanity we liked it because it has always been one of our own favorite arguments), "One has just as much right to say there is one as that there is not. No one has ever returned to verify either one." Not exactly on the same grounds, yet with equal reasonableness one has a right to say the West Virginia Medical Society has a splendid life ahead

of it. It is true we have those among us who feel we should (or at least we shall) go on exactly as we have all these many years. That is "Let well enough alone." It has passed into a platitude that we only grow by being criticised and opposed. Sure we know that teeth are doomed because they have so little that is hard to chew upon. But progress is often tagged novelty, and visions called the dreams of selfish fools, with not enough work to do. So the men who have gone along for years must bear the necessary friction of those appointed by God to criticise them, that in the end all may be well. It is not always easy to see the socalled "hand of God" in this obstructive role, yet, we hope it is there.

To us it is inevitable that some would not like the new secretary idea. If we do not make a success out of this the conclusion to be drawn will be simply that we do not know how. Other states, it seems, have made it show great promise, and it certainly has the appearance of logic about it. This writer resorts necessarily to simple comparisons, but it looks to us like a doctor hiring a stenographer for his office and its business. She certainly does not have to be a graduate in medicine or nursing.

And there's the dues. Why is it doctors feel called upon to be niggardly in the payment of dues to a medical association. You might think it was an inborn trait, but you know better. We know of a society who were asked to pay in $25 apiece to an entertainment feature. Almost a hundred per cent did, for the most part not only quickly but willingly. They received a rebate of over half, as it did not cost as estimated. They were asked to return part of this rebate back as dues. They were going to have to pay the dues anyway, and they did not expect to get the rebate. We should hate of discuss the celerity with which the rebate came back to pay the dues. This is simply a medical psychology; it illustrates the doctor's traditional dislike to pay money as dues and it very fortunately is never used as a general basis of the individuals generosity, for he feels it only towards "medical dues."

We are a Rotarian. In fact we had the honor of once being a president. We believe it is a wonderful idea simply because it is a present day method of making men congregate over a luncheon to contemplate (without strictly thinking of it as a way of conduct) the golden rule's application. We repeat it is a great thing, but to a doctor it could not, or we should think, it ought not be as close to his heart as his medical society, for the simple reason, if there were not others, he would not be fit to be a member of the Rotary if he wasn't a frequenter of his society. He would be too far behind. We pay $35 a year dues, and 75c per week for a luncheon and either in service or money a lot of other contributions. Have you ever heard of a doctor dropping out of a Rotary club or objecting to their operation because of these dues? We hear it is the same in the other clubs. Can you explain it? We cannot. We try hard to think of it as not absurd.

At the risk of being severely criticised we would say, holding that there is something small and picayune about a lot of us when we come to backing up our state association, as well as our local societies. We are no oracle and we have grave doubts on dark gloomy days about our ability to diagnose anything from a coryza up, but with what limitations we possess we would hazard a guess it was

due to a lack of plain common every-day sentiment. Maybe it is because we have no sign or symbol, no flag. Because what we would like to see would be an affection for the association like we have for our country's flag. We notice these clubs like the Rotary, Kiwanis and Lions clubs, as well as the Masonic and Knights of Columbus Societies are smart enough to have an emblem. Perhaps we count up our profession too high. We are foolish enough to sit and wait for something to come along that will make every doctor in the state make his allegiance to his association something of a religion. And if he did it would certainly do him good; do his fellows good; and result in something grand and noble in the way of a society. Doctors are certainly in need of something to fashion into grandeur and worship. They are as a rule pretty low on religious enthusiasm. They are not any too enthusiastic about poetry and romance. They come pretty close to iconoclasm. But if everyone of them tomorrow grew almost religiously enthusiastic about his society what would happen? They would have something to feed their own innermost fires upon; they would establish a comradery among their fellows; help humanity and furnish an example of living to a weary, doubting, half discouraged world that would be worth ten times the effort that inspired it. —H.M.H.

WORK TO BE DONE

Just now the members of the association are so much interested in the doings of the legislature that it seems other things are being overlooked.

So far as the legislature is concerned it suffices to say that exactly the things are taking place that your editor has been predicting since the last session. We have begged and pleaded for work in advance of the meeting. As usual nothing was done until the last minute and now we are up in the air and pulling our hair, so to speak.

Our sense of security and apathy, toward this matter for the past two years is bearing the usual fruit.

Had we had our executive secretary a year ago we should probably have had a definite plan of action worked out. It was the same lack of preparedness as that of America in the world war. Let us hope the outcome will be a victory.

In the midst of all of this excitement, let us not forget about the Bluefield meeting. It is not only going to be a wonderful meeting from a standpoint of entertainment, but will be a treat scientifically. We are assured, In addition it is expected that several very important matters will be up for consideration having to do with the future welfare of the profession in this state. Among them this matter of ethical advertising in the way of educational methods of reaching the people.

West Virginia is far more closely observed than we probably realize. This is true of the activities of the medical profession, too. The fact of the matter is that we are being watched to see if we can make a success of our new plan and can make a comparatively small state association an organization worth while and one that can accomplish big things.

This can only be done by the whole hearted support and earnest efforts of all of our membership.

The citizens of our state do not have the reputation of being quitters or slackers. At times we have feared that in this respect the physicians of

the state were falling short of being true West Virginians.

Let us go to Bluefield with a determination to advance the activities of the West Virginia Medical Association.

ETHICS

The British Medical Association has up once more the question of medical advertising. With us, the medical profession contends that the only answer is that they won't advertise, and nobody else shall.

Meantime, while all other advertising grows better, largely by the action of the advertisers themselves, medical advertising, for the most part, is merely less bad, and that largely by the refusal of publishers to accept the worst. The natural tendency of other advertising is upward; it takes pressure to keep medical advertising from going downward.

Is not one remedy in the hands of the legitimate profession itself?

Not that individual physicians should proclaim competitively their alleged personal merits. But the profession collectively has something to advertise in which it has no rival—scientific knowledge and professional standards.

There are legitimate ways of saying so. Is it not possible to combat misleading advertising, not by an indiscriminate ban, but by offering something better?

The above is a clipping of an editorial in *The Telegraph* (Wheeling), dated March 7, 1925.

People read this and we give them some credit for getting an impression from it. It appears ever so often, and sometimes we suspicion it is propaganda. However, a great many doctors in Wheeling are to a certain degree sympathetic with the idea herein contained.

We trust the matter will be squarely met at Bluefield.

COUNTY SOCIETY REPORTS

The Barbour - Randolph - Tucker County Medical Society met in Elkins on February 17, 8:30 p. m., in Hotel Tygart, the following members and visitors being present:

Drs. Butt, Groomes, Williams, Hall, Perry, McIntosh, W. S. Michael, Guy H. Michael, B. I. Golden, Hamilton, Gray, Fredlock, S. G. Moore, Owens and Irons. Visitors: Dr. W. A. Campbell, W. A. Mcgill, Dr. Parmesano and Groome, D. D. S.

Dr. Golden presided. After action on new and unfinished business, reading communications, etc., Dr. C. B. Williams was elected delegate to the State Medical Association; Dr. E. R. McIntosh, alternate, each to serve two years. The secretary was instructed to write the society's sympathy to friends of Dr. John T. Huff, who recently died in Parsons in his ninety-second year. He was the oldest physician in this section, and possibly in the state.

Dr. Golden, the new president, then made his "presidential address." Dr. Golden earnestly appeals to the members for a warm spirit of co-operation in the work of the society, and in helping to advance medical science, and for aid and sympathy of members in meeting local conditions. He also strongly favors securing the co-operation of allied professions in ad-

vancing science, and having closer affiliations in allied work; such as exists between the dentist and physician.

L. J. Parmesano, D.D.S., read a well prepared and practical paper entitled, "Focal Infection of the Mouth with Special Reference to Vincent's Angina." Dr. J. Fred Groome opened discussion, followed by W. A. Magill.

Dr. C. H. Hall gave a report on "Use of Intravenous Chemo-Therapy," giving his observations in use of mercurichrome in treating pneumonia, *gentian-violet* in cases of septicemia. The satisfactory results in the use of these means of treating most serious diseases are very encouraging.

Dr. Magill complimented Dr. Hall on his energy and success in his pioneer work in this line.

Dr. C. B. Williams reported he had use gen-violet in a septic case. This was a multipara, and Dr. Williams was called about eight days after confinement. The medical measures did not prove effective, and the patient was taken to the hospital at Grafton, it being nearest. Gen-violet was used and it seems to arrest the disease; and Dr. Williams was confident that had it been used in earlier stages it would have been sufficient; but such inflammatory conditions had been set up that an operation was deemed necessary, when the ovaries and tubes were removed, patient was progressing very favorably; later reported as recovering.

Dr. Guy H. Michael read a carefully prepared paper on "Clinical Symptoms and Wassermann" in which he cited cases he had treated for indefined symptoms, with unsatisfactory results, till resorted to Wassermann tests, and found he had latent venereal disease, which responded promptly to the proper medication. Dr. Michael strongly favors the Wassermann tests, even the history may be negative.

The society then repaired to the dining room for lunch for which the society is indebted to Dr. Ben Golden.

While at lunch the matter of distinguishing physicians by auto signs was discussed. Drs. Guy H. Michael and A. M. Fredlock were appointed a committee to ascertain what could be done, and report to the society.

A vote of thanks was given Hotel Tygart for use of room. The society extended an invitation to the dentists to meet with the society as an affiliated society.

Resolved to meet in one month. Dr. C. B. Williams invited the society to meet next time in Philippi. Accepted, and Dr. Williams appointed chairman of program committee.

Society adjourned.

J. C. IRONS.

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The Barbour - Randolph - Tucker Medical Society met at Philippi on March 18, 1925, at 8:30 p. m., and this report is made from minutes taken by Dr. C. B. Williams, the secretary being unavoidably absent. The following physicians and dentists were present: Drs. B. I. Golden, Hall, Perry, McIntosh, Gray and Magill, from Elkins; Dr. Harper of Beverly; Dr. Holsberry of Parsons; Drs. Peck and Mosley of Grafton; Dr. Simpson of Morgantown; Drs. Hamilton and Rohrbaugh of Belington; Dr. Michael of Norton; Drs. Bosworth, Smith and Williams of Philippi, and Dr. Grimm, Philippi, D. D. S., and Dr. Parmesano of Elkins. The visitors were Dr. Carl Myers, Dr. J. H. Bailey, and Mr. Phillips, a medical student of Philippi.

The meeting was held in the Geneva Hotel, Dr. Golden presiding. In

absence of Secretary Dr. Golden gave a short resume of the preceding meeting held in Elkins. Dr. Williams acting as secretary.

On motion of Dr. Magill it was ordered that minutes be taken of discussions of papers. The president appointed Dr. Myers and Dr. Grimm to act for this meeting.

Dr. Magill, first dean of West Virginia School of Medicine, yielded the floor to Dr. Simpson, who decided to wait to see if Dr. Butt, who was on the program, could be present. Dr. J. W. Bosworth, probably the oldest physician in the state, was called on for a speech.

Dr. D. C. Peck of Grafton, presented a most interesting report of a puerperal case, which was given gen-violet intravenously one month after beginning of the septic process. He thinks the case was benefited, but too late to repair damages already sustained. Dr. Peck has kindly promised his paper for the *Journal.* Dr. Mosley suggested the wisdom of making cultures at time of operations, of the pus, to ascertain as to the sterilization of the case. Dr. Magill stated that pus walled off is sterilized and eliminated as to infection, and that gen-violet is used with more success in septic infection than other, and that the case reported by Dr. Peck was not a fair test of its potency.

Dr. Golden suggested that the use of gen-violet in acute pus tubes will usually obviate operation. Dr. Mosley of the B. & O. Railway, Grafton, was introduced and talked of the safety first movement of the B. & O. Railroad.

Safety first is a matter of education and publicity. He urged that all advertise safety first, so that its need may be realized by the public. He also spoke of the psychology of industrial surgery. He emphasized the fact that the doctors present held the key to the situation. Get all information you can at first examination. X-ray if necessary, and asked that in all cases be fair to the railroad, as well as the patient.

Dr. Golden discussed suggestions of Dr. Mosley, and made these suggestions: That, since there is a death preventable every thirty minutes by autos, a safety first committee be appointed by the medical society to go to the principal towns and give *"safety first"* lectures to school children.

On motion of Dr. Hamilton, the society so ordered.

Dr. W. Scott Smith read his paper, "Contributions to the Intravenous Therapy of Mercurochrome."

Case 1: Tubercular Pyelitis. Apparent recovery.

Case 2: Infection following extraction of diseased teeth. Result, death.

In case number one left kidney had been removed, and the remaining kidney was sterilized in three days.

In case number two M. C. seemed to control the meningeal symptoms, but the diseased condition was too far advanced to be of material benefit.

Dr. Hall discussed the papers of Drs. Peck and Smith. He believes that small doses of 15 c.c. of 1% sol. of M. C. best repeated often, till get results.

He read a very interesting paper of diagnosed streptococcic pericarditis treated with mercurochrome in which the man though having anemia made rapid improvement, and at this date is promising cure.

Dr. Magill suggested that all papers be submitted to secretary, and published together in the *Medical Journal.*

Dr. J. N. Simpson of Morgantown, read his paper advocating a four-year medical course at the state university.

Dr. Magill opened discussion of Dr. Simpson's paper. Dr. Perry opened discussion on Bill No. 260, known as the Chiropractic Bill.

Dr. Golden told of the Palmer School at Davenport, Ia.

Dr. Hall presented a resolution which was adopted and signed by all those present, and telegraphed to Charleston. Copies of said resolutions were sent to senators and representatives from this territory.

Meeting then adjourned to meet in April at Elkins. Drs. Perry and Gray were appointed a committee on program.

J. C. IRONS, *Secy.*

OHIO COUNTY

On February 13, 1925, the Ohio County Medical Society held their regular meeting, having as the speaker of the evening Dr. H. H. Hoppe, of Cincinnati, O., whose subject was "Neurasthenia," with lantern slides.

If we were permitted a little joke we would say we will bet the doctor is glad when it comes to writing his initials that his family name, as well as the others began with an "H" instead of a "K."

The doctor is a pleasing talker, and although he had what most of us call a difficult subject there are men who are very free to say they enjoyed his lecture and his manner of giving it, as well as any they have heard this year, which is saying quite a little.

The doctor belongs to the class of men who believe neurasthenia should be treated more in the so-called common sense way. He gave a series of plates of swallows brain cells before flight in the morning, and then after arrival home in the evening showed considerable alteration due to fatigue. He believes a lot of neurasthenia is quite the same, actually tired out cells in contra-distinction to new irritable functions. That is you can have exhaustibility as well as irritability. Focal infections frequently cause, but you must guard against promising a cure on their removal. Thorough physical examination. If patient has a phobia he will probably not commit a rash act. If he has a delusion he will. Does not believe in psychoanalysis to a great extent. Does believe in psycho-therapy. Diet very important, with carbohydrates greatly reduced. Hot sponge in morning followed by cold shower. Exercise of pleasant kind. Little medicine, if any mostly quinine or digitalis. In other words he swings back to the older view of this disease as the better one.

Dr. Wingerter in discussion argued that a great deal of the doctors psychotherapy was really psycho-analysis. Dr. Osborne had a case, a man afraid of water for fear he would kill himself. Dr. Hupp said this was fear only, and he would send such a man over the ocean. If he had had a delusion he would be afraid to do it.

When the nervous specialists have their little arguments most of the other men sit back with a little smile of amusement. There are callings like steeplejacks, deep sea divers, automobile racers, and dry agents that look hazardous, a nervous disease specialist is another.

Be that as it may we must remember nervous diseases seem to be ever on the increase. Sanitariums here and there seem to be filled to capacity. Luminal, veronal and the bromides comprise a big percentage of our pre-

scriptions, so when Dr. Hoppe comes along and tells the general practitioner how he has succeeded with as common an ailment as neurasthenia it is a big help.

The doctor closed by saying that these patients ought not to be sent away. In the first place it is expensive, in the second they are going to have to live in their environment; so cure them where they are going to have to live their everyday lives. Hot house plants do not do well out in the open air.

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Friday night, February 20, the Ohio County Medical Society presented Dr. Geo. W. Crile, of Cleveland, O., whose subject was "Certain Points in Abdominal Surgery," with motion pictures.

He was greeted by a large representative audience from the surrounding localities, as well as of the city. It was probably the largest of the year, estimated at over one hundred.

What distinguishes one man from another when it is brought down to definite terms will probably always be a mystery, and with all our boasted scientific advancement and progressive civilization, the chances are that one hundred years from now they will still vaguely refer to the elusive quality as *personality* or *magnetism*, the same as we do now.

The writer can well recall assisting Dr. Crile at an operation in 1898 and 1899, when he was operating at St. Vincent's now and then, but then he did most of his work at St. Alexis where a sister superior probably proved to be the biggest boss he will ever have.

It was a common remark that he had a dynamic personality, was always looking up the wherefor and the why, and was as well as a fast and competent operator, destined for big things. He was then associated with Dr. Bunts who was our immediate head, and Dr. Lower, just a plain assistant. It is worthy of more than ordinary comment to recollect that these three unusual men, all with temperaments, and as much unlike as men can be, have nevertheless held together in a Damon and Pythias like combination through all the intervening years. We knew them all and have come in contact with them ever since, and we believe the secret of their cohesion is that they delight in seeing each other get along. Perhaps they have severally been jealous or envious of each other, if they have we have never heard of it. Like the Laird, and Taffy and Little Billie in Trilby, they have been a great trio. Somehow we look around for some happy triumvirates, in which all have been great, in other walks of life and they are rare. We mention these facts because our irregular adversaries are always harping on the fact we are an envious crowd, ever ready to fall at each others throats, and not content to see the good in each others lives. It is not so, Crile, and he has reached the point in his career when, like Emerson or Edison, that's all you say. Just Crile came tonight, and in his quick decisive way gave us a typical talk. So many medical lecturers are like Wilson or Hughes, but Crile is more like Roosevelt, going along, digressing, but never very far, staccato at times, frequently saying *so much for that*, yet always moving, appealing, persuasive, conclusive.

In his light business suit, which we have seen him so much affect, he is the typical American surgeon. He first took up Myomata of the Pregnant Uterus, said you were wont to

do a Caesarean section, or even remove whole uterus for these, but that recently he had tried another plan. Give patient good sized hypodermic of morphine, gas or anesthetic in room, take her to operating room, employ the old anoci association anesthesia, blocking off the impulses traveling up. Block the broad ligaments as well. Sharp incision into tumor. Shell out. Interrupted sutures. Close up. Back to bed. Keep under morphine absolutely for two days. No miscarriage. Good results. One woman, 44, cut down almost to placenta; full recovery, normal delivery.

Next, poor operative risks with obstructive jaundice. Very little anesthesia, if any, gas. States the bile in jaundice is acting as your anesthesia. Small incision over gall bladder, quickly insert tube drain. Double row of sutures to act as purse string. Pack around with gauze. No sutures. Leave it go and then regulate your out flow of bile, that is allow it to flow for an hour or so, then hold it off for a period. This is the all-important matter. Related how he once had case, enormously extended bladder. He was just then starting to practice. He passed in catheter, drained it all out. He aimed to give relief. He facetiously remarked he gave the universal relief for all things. The kidneys refused to function due to mechanical alterations of pressure. This he said was what happened to liver if you allowed bile to continuously drain off.

He said that a great deal of after distress in upper abdominal operations was due to the locality being a veritable switchboard of nerves which we cut through. We should be most careful and as far as possible block off and preserve their function.

Came up to removal and drainage of gall bladder. In going back over 1500 cases (Drs. Crile and Bunts) found end results about the same. If you had fat person, or one with liver high up, or difficult to get at, or adhesions making it complex, then drainage. He still did it, we understood him to say, in 15% at least of cases. You could have disastrous hemorrhage as well as flow of bile, even though you had securely fixed the stump of gall bladder, by the oozing through of one or more of the other avenues of discharge of bile which you cut through in gall bladder removal. Said Morrisons idea of a pouch posteriorly into which secretions drained was correct, so that to properly drain a gall bladder removal it was best to make an incision over toward the axiliary line with a knife, run a pair of forceps through and catch three small cigarette drains filled with iodoform gauze (this to prevent staphylococcus infection from skin) coming through from the wound. Into this Morrison pouch all secretions gravitate wherever you put your drain. Now when your patient lies down, or reclines in bed, these drains will easily carry it all out by gravity as well. No uphill flow.

Next, ulcer of stomach. Ulcer of duodenum he felt was easily relieved by posterior gastrojejunostomy. Much better than Finney or other operations. Mortality about 1%. In checking these up had found that most of cases had recovered.

The ulcer of lesser curvature was different, although he said it was rather hard to do he would say that he had to admit much of his work in other days was not satisfactory to him. Two years ago he had gone to a number of clinics in England, Sweden, France and elsewhere, and found

they had had similar difficulties, but he said they were to a certain extent solving it. He then went into older operations, removing a segment, posterior anastomosis, removal of middle portion (which he said renewed your nerve function and often gave you *another ulcer in an hour glass*). He said they were for hyperacidity what the older operations were for hyperthyroidism. First they did ligation (segment), next removal of small part (middle portion only), but now you took enough of thyroid to make secretion balance needs of patient. The same was to be done with stomach. Remove all of the portion from above ulcer down to pylorus, uniting the unequal portions with cobbler stitch with fine results. This left only a small portion secreting just enough acid to supply the needs of just such a person who had like the "hyperthyroid," much more than they needed.

He illustrated all this with a new kind of movie, animate drawings after the fashion of Felix the Black Cat in the movies. These are very effectual. It draws the diagrams. Shows needles flying in and out like a shuttle and is a very graphic production. The cobbler stitch is done with two needles with unbasorbable ligature, no leakage possible.

Ackerman discussed lecture, relating a case apropos. Fulton agreed on all matters and was particularly impressed with interrupted flow of bile. Noome gave substance of a paper of Reyfuss. Drinkhard asked how to sew up wound in upper abdomen. Crile appreciated this question. He said he used a ligature taught him by Smead of Toledo. Sew through as usual, skin to pepitoneum, over to other side up through, then over to fascia on other side, making a figure eight. One thing about Drinkhard is, he always asks good questions.

Dr. Crile then closed discussion. It was certainly a very satisfactory evening. One remarkable thing about it was the very great respect shown by the speaker for the medical men. He said a great many ulcers formerly operated by surgeons were now easily and permanently cured by clinicians with Sippy and other diets. Said he knew two young surgeons in Cleveland with ulcers who were being treated medically, he also knew several medical men being treated surgically. It was all a question of judgment.

We have heard Crile many times, and this can always be said of him, he is uniformly interesting; never fails to give you something to think about; and if, like all pioneers, he sometimes is carried away with an idea, it is but the common fault of all who have led the way.

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On Friday night, February 27, 1925, at 8:30 p. m., the Ohio County Medical Society held their regular meeting, and had for the speaker of the evening, Dr. Charles Bagley, Jr., of Baltimore, Md., his subject being "Brain Abscess."

"Brain Abscess" is just about the kind of subject the name implies. We have heard a number of men discourse upon it, some of them said the mortality was high, others not so high. The exhibition of photographs showing the physiognomy of the patients indicate they are some of them able again to compete in an Edison intelligence contest.

Speakers on brain abscess all do very well until someone asks for the exact symptoms to differentiate brain tumor from brain abscess; then the progress is slowed up a bit. We be-

lieve men making this field their specialty have complexities of a very trying sort, and that they get anywhere is more or less remarkable.

Dr. Bagley talks rapidly, clearly, without notes, and is quite willing to go into detail, always with due modesty towards his own work. He gave a number of slides and showed the cases not only from a clinical, but also X-ray, operative, pathological, and microscopical side. He goes in with a small opening, and makes sure he has the abscess well entered and then he puts in three small drains; rubber tissue we so understand. He is not so much in favor of larger openings, fearing hernia. However, he does believe certain traumatic cases will die unless a large opening is made and perhaps Dakin's solution used. Thinks Cushing almost revolutionized brain surgery.

The discussion was general. Dr. Schwinn wanted to know the diagnosis of brain abscess. Answer: Same as tumor except history in addition has an injury or an infection somewhere ahead of it and onset sudden. Peculiar headache also plays a rather constant part, although this is not necessary. His final reliance is on a juncture under local and a syringe used. He says you simply have to rely as you do elsewhere on an acute judgment, taking into consideration all things, and that a neurological examination is as necessary with a puncture as a physical examination of the chest is with X-ray. He said he would be willing to have several punctures made on himself if he thought the case required it. To use this is the acid test of anything.

Schwinn asked should you go after a sliver of bone. Answer: Just try to wash wound out. Large splinters are usually at top. Small ones will wash out. If you go down and try to turn large ones out you are liable to get great destruction, Schwinn. Where puncture in diagnosis use needle low for you may want to drain out and the drain must always be at lowest point as elsewhere in body. How long abscess remain virulent? Not long although he could not say definitely. He allows his cases to drain over six to twelve months. He withdraws them very slowly. Healing follows from bottom. Withdrawing too much leaves a space, bacteria develops from sides and you have a new abscess. If drains come out let them remain out, you can scarcely replace them where they were as abscess wall has collapsed together.

Staats: How manage hernia? Did not have many. Usually came after large openings which he does not make except in a certain percentage of cases. Usual methods.

Hupp remarked that the Dicks claimed that they could do away with fifty per cent of those caused by scarlet fever with their immunization. Answer: They do doubt could, although the speaker thought there would be plenty left from other causes. Hupp asked about telescoping canula mentioned at White Sulphur Springs. Alright except that it was a refinement used by one man.

Kelly spoke about three cases of his which had died because diagnosis was obscure and permission to enter skull was difficult to secure. Answer: Speaker agreed, but restated the puncture test as fairly reliable if you failed and tried again and again. The speaker closed with a talk on spinal puncture. This writer has heard several speakers assail lumbar puncture lately, and it begins to look as if those men who did not use it too indiscriminately as a harmless method

were right. No puncture in brain abscess. Withdrawing ever so little may crowd more of the medulla, and bring sudden death. Dandy said the same thing. Meningitis may simulate abscess. Be very careful, and be as sure as possible you have a meningitis before you do a spinal puncture, because if it is abscess you have not done the right thing.

It was a very good evening, the speaker had a good crowd and was much appreciated.

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On Friday night, March 7, at 8:30 p. m., Dr. John W. Gilmore addressed the Ohio County Medical Society, taking for his subject "Treatment of Loba Pneumonia."

This was "our John's" opportunity to give us his annual contribution to the good of the cause. He had "Tuberculosis" as a subject last year, and its twin in the mortality statistics this year. Which were the better would be difficult to say. Last night's paper was probably the more finished. He is always reliably and uniformly good. He reads quietly, yet distinctly, is quite calm and collected about it, and throws out the impression that he has seen enough of the kind of cases he is talking about to justify him in drawing his conclusions. While it was rather a long paper (it covered in every detail all the possible angles of treatment) it was respectfully listened to by a good sized audience with as far as we saw, no departures. "No departures" is probably the best diagnostic sign of a good paper.

The doctor began by going back into the earlier treatment of the disease, and it is surprising how many of their procedures at that time, perhaps much modified, are still in use. He gave the symptoms, running over them rapidly. Then he gave a graphic detailed account of the treatment, beginning with the arrangement of the bed and room, running through the kind of purgatives, venesection, digitalis, quinine, mercurochrome, 220 soluble, and ending with the serums and vaccines.

The paper covers the ground too thoroughly to be given here, and we hope it is published in *The Journal.*

Dr. Noome opened the discussion. He agreed with all the doctor said. He inclined to the belief that rest would do all that digitalis would, and that he suspicioned that digitalis was really a poison. He also adhered to the idea alcohol was a "food without ashes."

Dr. Drinkhard also approved heartily of the paper. He stated that he had had pneumonia himself and a pitcher of ice water was his main curative agent. He had his doubts about any treatment amounting to much, and this included quinine. He knew you of necessity had to give something, and we all had our pet projects, but whether the patient came out any different through one door or another, he was rather inclined to disbelieve.

H. M. Hall also discussed the paper. He developed into one of these fellows who has great faith in drugs and remedies applied with "discretion and judgment." Discoursed considerably against drug nihilism, and rather took the view that by saying we had no treatment we help the laity to lack confidence in us. This view did not seem to meet with the approval of many present. The discussion would probably have been a good oldtime battle of various views such as this reporter likes to see at times, but General Dawes Marschner, vice-president, acting in Dr. Bippus'

absence, ended the affair by calling on the speaker, who took each point discussed, and gave a fine talk in conclusion. In the language of someone or other, "a good time was had by all."

We said a good sized audience heard this, but not as many as should have heard it. The crowd was larger than it usually is when one gets up to talk on a "medical subject." There is not a member in this society who could have handled this better than Gilmore. They all knew that in advance, but there are a certain percentage in every society who will not attend talks on medical subjects. Say they, "It will all be a rehash," "old stuff."

When we were president we had a man come from Columbus we think, who talked on pneumonia. All he did was to reassure us the "old stuff" was still in style.

It is true Gilmore gave a lot everybody perhaps already knows. But what we want to impress is the fact that so do the celebrated surgeons. Here and there they have their little new tricks or stitches or maneuvers, but so do the clinicians; but in addition these celebrated surgeons have a lot of matter that we personally have heard over and over for twenty-five years, and like the average vaudeville performance you go to, for one new bright original act there are a whole lot of acrobats and bell ringers that you saw and heard when you were a boy. But all the same, being human we forget and become rusty, and it is a fine thing to hear treatments over and over again in medical lectures if for no other reason than to know which one of the old things are no longer good in the eyes of most men and which ones are as good and active and efficacious as they ever were.

STATE AND GENERAL NEWS

Dr. W. S. Fulton is now enjoying his annual bath in the Florida sunshine.

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The Ohio Valley General Hospital held their February clinical conference of the medical staff on Tuesday evening, March 10, 1925, at 8:30 o'clock. The program consisted of X-ray pictures of fractures, by Dr. Clovis. History of medicine by Dr. Goodwin, and newer laboratory procedures by Dr. Sheppe.

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Dr. C. L. Holland, Fairmont, attended the meeting of the American Congress on Internal Medicine and the American College of Physicians in Washington in March. After the close of this meeting he attended the Pediatric Clinics of Philadelphia.

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R. C. Newman, physician and surgeon, announces the opening of offices at 304, First Huntington National Bank building, Huntington, W. Va.

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Dr. L. T. Vinson of Huntington, was in New Orleans, attending clinics in March. From there he was called to Los Angeles, Cal., on account of the illness of his nephew.

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Drs. W. E. Vest and F. C. Hodges of Huntington, attended the meeting of the American Congress on Internal Medicine, and the American College of Physicians in Washington, D. C.

Married: Dr. R. Hardwick of Huntington, and Mrs. Jennie Duncan of Kenova.

—

Dr. J. A. Guthrie of Huntington, has returned from a visit to Arizona, where his wife and children have been since last fall.

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Dr. and Mrs. L. V. Guthrie, Huntington, have returned from their annual vacation in Florida.

—

Dr. C. T. Taylor of Huntington, has returned from a vacation in Florida.

—

Dr. W. O. Thomas of Huntington, has returned from a six weeks vacation spent in Beckley and in the east.

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Dr. W. E. Neal has announced his candidacy for mayor of Huntington on the republican ticket.

—

Dr. V. T. Churchman of Charleston, entertained a party of friends at dinner St. Patricks Day at the Huntington Hotel.

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Dr. H. A. Brandebury and wife of Huntington, have returned from a two months vacation spent in Arizona and California.

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Logan, W. Va., March 7. Plans for the combining of the Logan and Guyan Valley hospitals have been consummated.

Under the new plan, Drs. L. E. Steele and H. H. Farley of the Logan Hospital, and Dr. Lawrence Lawson of the Guyan Valley Hospital, will have complete control and the recently erected Guyan Valley Hospital will be utilized for the business of the new corporation.

The Guyan Valley building will be completely renovated and many improvements added at an expense of from $30,000 to $40,000, and when completed will present one of the most complete and convenient hospital units in this section.

While the purchase price has not been made public, it is understood to have reached or exceeded $100,000. Patients now at the Guyan Valley Hospital will be removed to the Logan Hospital and this building will be used until the improvements and renovations have been completed, when the Logan Hospital will be abandoned, and offered for sale, it is understood.

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Permanent allocation to Huntington of United States Army General Hospital No. 101, authorized recently by the war department under mobilization plans being carried out following the disruption of the national defense system in the world war, was announced Saturday by Col. William H. Waldron, in charge of the 100th division, organized reserve corps headquarters here.

Organization of the hospital, which will function only in time of war, epidemic or other emergency, already is under way, Col. Waldron said.

The hospital corps, when fully organized, will consist of forty officers, 312 enlisted men and 120 nurses. Sixteen of the forty officers already have been named by Col. Waldron and their commissions approved by the war department, it was made known.

The personnel of officers already named follows:

Lieutenant Colonel Walter E. Vest, Huntington, medical organized reserve corps, chief of medical service.

Lieutenant Colonel Abraham H. Dunn, Chillicothe, O., medical organized reserve corps, chief of surgical service.

Major Chas. A. Wingerter, Wheeling, medical organized reserve corps, assistant chief of medical service.

Major Oscar B. Beer, Buckhannon, medical organized reserve corps, assistant chief of surgical service.

Major Howard E. Summers, Huntington, dental organized reserve corps, chief of dental service.

First Lieutenant Leo E. Price, Benham, Ky., medical organized reserve corps, laboratory officer.

Captain Ritchie A. Ireland, Charleston, medical organized reserve corps, medical ward officer.

Captain Arthur J. St. Lawrence, Fairmont, W. Va., medical organized reserve corps, medical ward officer.

Captain Dorsey M. Ryan, Hinton, W. Va., medical organized reserve corps, medical ward officer.

Captain Geo. G. Wimmer, Huntington, medical organized reserve corps, medical ward officer.

First Lieutenant Roscoe C. Stotts, Kenova, W. Va., medical organized reserve corps, surgical ward officer.

First Lieutenant James T. Nelson, Bluefield, W. Va., dental organized reserve corps, dental surgeon.

Captain Oscar Thompson, Pikeville, Ky., dental organized reserve corps, dental surgeon.

Second Lieutenant Shelby B. Hood, Corbin, Ky., medical administration organized reserve corps, detachment commander and registrar.

Second Lieutenant Rudolph Allen, Warnock, Ky., medical administration organized reserve corps, assistant quartermaster.

Although according to Col. Waldron full quota of officers strength will be maintained at all times, only approximately ten per cent of the enlisted strength of the hospital corps, including nurses, will be maintained during peace times.

NEW AND NON-OFFICIAL REMEDIES

Holocaine ointment: M. E. S. Co. —Composed of holocaine (see New and Nonofficial Remedies, 1924, p. 35) 1 per cent, water 1 per cent, wool fat and petrolatum 98 per cent. Put up in collapsible tubes for application to the eye. Manhattan Eye Salve Co., Louisville, Ky. Jour. A. M. A., Aug. 2, 1924, p. 357.)

Silver-salvarsan, 0.6 Gm. Ampules—Each ampule contains silver-salvarsan (see New and Nonofficial Remedies, 1924, p. 54) 0.6 Gm. H. A. Metz Laboratories, New York.

Diphtheria toxin-antitoxin Mixture 0.1 L+—A diphtheria toxin-antitoxin mixture (see New and Nonofficial Remedies, 1924, p. 299), each Cc. representing 0.1 L+ dose, of diphtheria toxin, neutralized with the required amount of antitoxin. It is marketed in packages of three bulbs, each containing 1 Cc.; also in vials containing 20 Cc. Parke, Davis and Co., Detroit. (Jour. A. M. A., Aug. 16, 1924, p. 508.)

MEDICINE AND SURGERY

PRESENT-DAY CHEMOTHERAPY

Chemotherapy has been defined as the specific treatment of infections by artificial remedies; it aims to cure or arrest diseases due to infections, not by alleviating the symptoms or invigorating the patient, but by directly and specifically suppressing the infection. The modern development of chemotherapy in this sense has been due, in largest measure, to the genius of Paul Ehrlich, a scientist who combined in unusual degree the accomplishments and ideals of the microbiologist, the synthetic chemist and the pathologist. The large problem from Ehrlich's standpoint, was to produce, by synthesis, substances exhibiting a powerful specific affinity for and a consequent toxic action on the protoplasm of the infecting parasites, while the host should be spared. In the more technical sense, the development of chemotherapy involved the search for compounds that should be maximally parasitotropic and minimally organotropic. The long known action of quinine in malaria and of the ipecacuanha alkaloids served as prototypes, so to speak, of the desired results.

How much has been achieved in a practical way in the newer fields of endeavor during the last few years is summarized by Dale[1] in his presidential address before the section of physiology of the British Association for the Advancement of Science, recently convened at Toronto. He notes the treatment of spirochetal infections, syphilis, yaws and relapsing fever, revolutionized; leishmania infections, kala-azar, and Bagdad boil and bilharzia infections that crippled the health of whole populations in countries such as Egypt, now made definitely curable; trypanosome infections, such as the deadly trypanosomiasis, after years of alternating promise and disappointments brought at last within the range of effective treatment. These have not been the labors of one person or the achievements of a single country. Many minds in various parts of the world have contributed something to secure such a record of progress.

From the theoretical standpoint, it must be confessed that the expectations of the pioneers in chemotherapeutic research have been largely upset. The hope that some of the newer compounds would prove to be directly toxic to the parasite — in other words, that they would directly kill the protoplasm of the latter while the tissues of the host were left unaffected—has not been realized in the outcome of even the therapeutically successful endeavors. There is growing evidence that it is not the parasite alone that is profoundly affected by the drugs of the type here under consideration. Few, if any, of these substances are toxic to the parasites in vitro in any concentration approaching the small dosage that suffices for profound effects in the infected organism as a whole. This is true of the various potent dyes and analogous compounds, of the derivatives of arsenic, and of those of bismuth. Trypanocidal action, for instance, is not merely an interaction between the drug and the microparasite. Evidently the host's tissues enter into the formation of a new trypanocidal substance. The parasites, too, may react in unexpected ways and develop increased resistance rather than enhanced sensitiveness. With unusual insight, Dale has pre-

sented the status of chemotherapeutic study in the light of the newer discoveries. The conception, he states, of a remedy not killing the parasites immediately, but modifying their virulence, or lowering their resistance to the body's natural defenses; of a remedy not acting as such, but in virtue of the formation from it in the body of some directly toxic product, either by a modification of its structure or by its union with some tissue component; of an affinity of the remedy for certain cells of the host's body, leading to the formation of a depot from which, in long persistent, never dangerous concentration, the curative substances is slowly released; all these conceptions present themselves, again and again, as necessary for our present rationalization of the effects observed. It is truly remarkable that, amid the repeated revamping of hypotheses, so much of practical importance has nevertheless been brought forth. In any event, it has become clear that narrow points of view will no longer suffice to promote the scientific aspects of chemotherapy. Progress henceforth calls for a large vision, promoted, it may be, by the help of scientific imagination, but never dimmed by the persistence of unverified beliefs.—*Jour. A. M. A.*, Oct. 18, 1924.

1. Dale, H. H.: Progress and Prospects in Chemotherapy, Science 60:185 (Aug. 29) 1924.

SEVERE REACTIONS AND FATALITY WITH KOLMER'S TECHNIC.

The year the Kolmer technic was brought out, Charles E. Kiely, Cincinnati (*J. A. M. A.*, July 12, 1924), employed it on a patient who had received, without unusual reaction, several intraspinal injections by the Swift-Ellis method. A few hours after the intraspinal injection, this patient complained of excruciating pain all through the body, became delirious for about one-half hour, and showed a temperature as high as 103F. When seen the following morning, he had made a complete recovery from this episode. Subsequent intraspinal injections by the Swift-Ellis method were uneventful. April 30, 1923, four male patients were admitted to the Cincinnati General Hospital for intraspinal treatment. Because we were pressed for time, the Kolmer technic was adopted. The intravenous injection was entrusted to an intern. Neo-arsphenamine was used, but the serum was not fortified. The serum of one patient was lost by breakage of a certrifuge tube, so no spinal injection was made. The patient had no reaction of any kind. While finishing the last of three injections, a nurse reported that the first patient, who had been sent back to bed not more than twenty minutes previously, was in collapse. On reaching his room, which was close by, he was found moribund. Respiration was gasping, skin very cyanotic, perspiration profuse, pulse thready and almost imperceptible. The second patient meanwhile was found in a similar condition, cyanotic, with thready pulse and profuse perspiration, but he was semi-conscious and in an active mumbling delirium. The third patient, who had been given an injection only five minutes before was now brought from the treatment room wildly delirious, shouting and resisting, but without the physical signs of collapse. All were stimulated with repeated injections of epinephrin and caffein sodiobenzoate. The first patient died within five minutes

of the time of his collapse was reported. The second recovered in about four hours, and went off to sleep. Six days later, he was noted to have a temperature of 100F., moist rales and tubular breathing over the base of each lung. On the ninth day, against the advice of the physician in charge, his wife removed him from the hospital, and he died in the ambulance. A retention of urine which persisted after the lumbar puncture cannot be positively ascribed to the treatment, as he spoke so little English that no history could be obtained. The third patient, who showed only delirium, recovered in two hours and was discharged on the seventeenth day in good condition. Clinically, the first case was diagnosed as general paralysis, the second and third as cerebrospinal syphilis, and the last two showed albuminuria in specimens received after the treatment. No specimen had been received before treatment because of the short period elapsing after admission. Immediately after the accident, an investigation of its cause was begun. The technic had been faithfully followed by the intern, as outlined by Kolmer with the exception of fortifying the plasma as noted above. The actual citrate solution employed was exhausted in the preparation, but a sample of the crystals from the same package was obtained in the drug room. About one week previously there had been a sudden death when this citrate was used for transfusion in another service. The intern had unfortunately failed to report this accident at the time. Samples of the sodium citrate and of blood, spinal fluid and ventricular fluid obtained at necropsy were examined. The citrate sample showed only sodium bicarbonate as an impurity, but its degree of alkalinity was far in excess of the U. S. pharmacopeia requirements.

A COMPARISON OF TRYPARSAMIDE AND OTHER DRUGS IN TREATMENT OF NEUROSYPHILIS.

With this brief review as a background, the results obtained in the treatment of more than 100 cases of neurosyphilis with tryparsamide, are presented by Harry C. Solomon and Henry R. Viets, Boston (*J. A. M. A.*, Sept. 20, 1924). Their experience has not proved as satisfactory, from the clinical standpoint, as that reported by others, nor have the serologic findings been quite as gratifying. They have had no single case of parenchymatous neurosyphilis which has given an entirely negative spinal fluid finding as the result of treatment with tryparsamide, although two cases of tabes dorsalis approximate a perfect serologic result. Some serologic improvement was obtained in almost all cases. Almost invariably in all forms of neurosyphilis, after from six to eight injections, the cells become less than 10 per cubic millimeter. In a group of eleven cases of tabes dorsalis with cell counts varying between 17 and 108, all were reduced below 10 in a few weeks. This reduction in the cell count in the spinal fluid was particularly striking in some cases which had received long periods, often several years, of treatment by other methods, without having obtained a negative cell count. Globulin has been reduced in amount in a large number of cases, but the test has very rarely become negative. The same was true of the Wassermann reaction in the spinal fluid. Of seventy-one cases of various types

treated with tryparsamide, the spinal fluid Wassermann reaction was changed from positive to negative in twelve, was reduced in strength in six, and was unchanged in fifty-three. Practically all the changes from positive to negative were in patients with tabes dorsalis. The colloidal gold curve has been slightly reduced in a number of cases, and, in a few, made negative. On the whole, however, it has not responded very markedly to treatment with tryparsamide. Summing up the serologic findings obtained, Solomon and Viets conclude that there is a prompt, definite and striking effect on the cell count; that the effect on the globulin is rather satisfactory, but not particularly so; that the effect on the spinal fluid Wassermann reaction, with the exception of a few cases, is not remarkable; and that the effect on the colloidal gold curve has been on the whole of little consequence, although a few striking results have been observed. From their own experience, and not considering that of the other workers, the authors draw the following conclusions in regard to the effect on serologic reactions of the use of tryparsamide as compared with other drugs: Tryparsamide is more effective in the reduction of the cell count than either arsphenamin or subarachnoid injections, although the same effect has been obtained by subarachnoid injections over perhaps, a longer period of time. It has been their experience that tryparsamide is not more effective in general, in reducing spinal fluid findings other than cell count, than are those other methods of treatment, except in certain cases of tabes dorsalis. In most cases, the amount of protein has been somewhat reduced; the colloidal gold curve has rarely been changed, and the Wassermann reaction only occasionally either changed to negative or reduced in strength. The clinical results were not of such a striking nature that they can at once speak of the superiority of tryparsamide to methods of treatment. As regards the milder meningovascular type of syphilis, their general impression is that the patient does not respond clinically any more satisfactorily to tryparsamide than he does to subarachnoid and intravenous injections given in the conventional manner. Of the unpleasant results of the use of tryparsamide the most important is the production of an amblyopia. Three patients have had an apparently permanent impairment of vision. Immediate reactions of a nitritoid type were rarely seen.

THE RESULTS OF TRYPARSAMIDE IN SYPHILIS.

Joseph Earle Moore, Harry M. Robinson and Richard S. Lyman, Baltimore (*J. A. M. A.*, Sept. 20, 1924), assert that in primary and secondary syphilis, or in tertiary syphilis without nervous system involvement, the therapeutic effect of tryparsamide is so slight as to preclude its further general use in these types of infection. In neurosyphilis, on the contrary, tryparsamide therapy produces favorable clinical and serological results, which we believe cannot be equaled by other forms of treatment. Tryparsamide is of particular value in early general paralysis, in meningovascular neurosyphilis, and in the majority of cases of tabes. Advanced general paralysis is benefited little, if at all. In early neurosyphilis, the comparatively feeble spirocheticidal value of tryparsamide precludes its

use unless in combination with an arsphenamine. The best method of use of tryparsamide has not yet been developed. Visual disturbances following tryparsamide have occurred in 17.8 per cent of a series of 241 cases; but in only 2.8 per cent has noteworthy permanent visual injury resulted. This untoward effect may largely be obviated by appropriate ophthalmologic control of treatment.

ACCIDENTAL MALARIAL INFECTION IN SYPHILIS OF THE BRAIN.

A case of syphilis of the brain, with death from an accidental infection with estivo-autumnal malaria is reported by Laurence E. Hines, Chicago (*J. A. M. A.*, Oct. 11, 1924), because it is a natural human experiment of interest in connection with the problem of treatment. A man with chronic meningeal syphilis, acquired estivo-autumnal malaria and died ten days after the onset. The lesions produced in the brain by the malaria, marked edema and hyperemia and engorgement of small blood vessels with malaria parasites, are the usual findings in the uncomplicated, acute, comatose types of malaria. There was a striking absence of cellular reaction in the brain, even around the parasite filled capillaries. The disseminated syphilitic, focal lesions of the arachnoid showed a slight cellular reaction, but this may be present, ordinarily in pure syphilitic lesions. The Wassermann reaction of the spinal fluid was strongly positive. The anatomic findings are those which might be produced by syphilis and malaria together, and there is no anatomic evidence that the syphilitic lesions have been changed by the malarial infection.

THE USE OF TRYPARSAMIDE IN THE TREATMENT OF GENERAL PARALYSIS.

The results of one year's experience with tryparsamide in the treatment of general paralysis are presented by Franklin G. Ebaugh and Roger W. Dickson, Philadelphia (*J. A. M. A.*, Sept. 13, 1924). In the main, they were encouraging. The fact that out of the fifty-two patients treated, fifteen are now working, is most gratifying, especially as eleven of the fifty-two cases were deteriorated. In comparison with the arsphenamines, tryparamide has impressed the authors favorably, particularly in the comparative absence of reactions following administration. The arsphenamines, frequently either alone or with spinal drainage, may give negative serologic results without clinical improvement; whereas, tryparsamide frequently gives good clinical results, although the serologic changes are meager and transitory. Increased resistance or increased immunity of patients treated with tryparsamide is well shown in the improvement in general physical status and increased hematopoiesis. The main contraindication for tryparsamide is brought up in the question of eyeground changes. One patient definitely developed optic atrophy following the first course of tryparsamide. The question of neurorelapse is a very important one. However, as in arsphenamine therapy, the two patients in whom these upsets occurred responded to further treatment. The authors state definitely that one should not speak of a cure in neurosyphilis, and therapy is directed to arrest this disease before mental deterioration has developed. Definite conclusions concerning the

cases that have improved can only be given after a five-year interval. In the meantime, clinical, therapeutic, and psychiatric studies must be made as well as critical control data obtained concerning the use of other drugs and methods. At present, it can definitely be concluded that tryparamide gives evidence of being the best drug so far advanced in the treatment of general paralysis. The authors do not feel that a general release of this drug should be made now, since physicians would begin to use it in primary and secondary types of syphilis, in which it would prove to be valueless.

THE MECHANISM OF TOXIC ACTION OF ARSPHENAMINE ON THE HEART.

The action of arsphenamine was studied by William D. Reid, Boston (*J. A. M. A.*, March 21, 1925) by means of electrocardiograms taken before and one hour after the injection of the drug. Eleven patients were so examined; seven received 0.3 gm. and the remaining four 0.4 gm.; the results differed but little in the two groups. A comparison of the electrocardiograms disclosed the following changes after arsphenamine: There was a drop in the heart rate averaging 5.8 beats per minute. The P wave was slightly blunter in five cases. The P-R interval in two was decreased 0.01 second and was lengthened 0.01 second in two and 0.4 second in one case, respectively. The duration of the Q-R-S complex was lengthened by 0.01 second in four patients. The maximum excursion of the Q-R-S complex, above and below the base line in lead 2, was increased by 0.2 millivolt in five patients, by 3 in one case, by 3.5 in another, and by 4 in still another; it was decreased by 0.5 millivolt in a single patient, and unchanged in the remaining two cases. The T wave in lead 2 was sharper or increased in size in nine of the eleven patients. The heighth of the T wave was usually increased. Thus, in eight cases the T wave measured from 0.25 to 2.25 millivolt higher, making an average increase of 1.3 of a millivolt. In two cases there was no change and in one other there was a minimum of 0.3 millivolt. The spread of the T wave was greater in all; in five by 0.01, in three by 0.02, and in three by 0.03 second, respectively. In seven cases the contour of the string shadow between the S and the T waves was slightly changed after the arsphenamine. Thus, it would appear that when arsphenamine is given to patients with heart disease there are present the three conditions, stated by De Boer, which predispose to ectopic ventricular tachycardia and fibrillation of the ventricles. The heart damaged by syphilis or some other pathologic agent may be said to be in a bad metabolic condition, and the effect of arsphenamine is that of decreasing the rate of conduction and of shortening the refractory period of the muscle, the latter action indirectly by way of stimulation of the vagal nerve endings. If the dose of arsphenamine is small and the heart is not much damaged (and therefore its metabolic condition is less unfavorable), there should be less danger of a cardiac upset. Reid suggests that bismuth subnitrate should be considered as a substitute for arsphenamine in the treatment of syphilitic patients with heart disease.

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FIFTY-EIGHTH ANNUAL SESSION
Bluefield, West Va.

West Virginia State Medical Association, June 9-10-11-12, 1925.

ANNOUNCEMENTS

You will find the information and registration desk on the mezzanine floor of the West Virginian Hotel.

Please register as soon as you arrive. Get your tickets for the banquet and dance.

Visiting ladies are urgently requested to register also, in order that plans for their entertainment may be completed.

All meetings will be held in the assembly room of the West Virginian Hotel and the Auditorium of the Municipal Building.

The Medical Section will meet in the assembly room of the West Virginian Hotel.

The Surgical Section will meet in the auditorium of the Municipal Building.

The Ear, Nose and Throat Section will meet in room No. 1 on the mezzanine floor of the West Virginian Hotel.

Clinics at Bluefield Sanitarium and St. Lukes Hospital Wednesday, Thursday and Friday mornings, at 8:30.

The Council and House of Delegates will meet in room No. 1 on the mezzanine floor of the West Virginian Hotel.

The exhibits and demonstrations will be found on the mezzanine floor of the West Virginian Hotel.

All papers by members of our society will be limited to twenty minutes, and discussions to five minutes. This rule will be strictly enforced by the chairman as the number of papers scheduled requires a rigid adherence to the program as outlined.

All papers read before the association will be its property. Each paper shall be deposited with the secretary at the close of its reading.

Hotel reservations may be made through Dr. F. T. Ridley, Bluefield, West Virginia.

COUNCIL AND HOUSE OF DELEGATES

The Council will convene in room No. 1 on the Mezzanine floor of the West Virginia Hotel, Monday evening, June 8th, at 9:30 o'clock, and thereafter at the call of the Chairman.

The House of Delegates will convene in room No. 1 on the Mezzanine floor of the West Virginian Hotel Monday evening, June 8, at 10 o'clock, and Friday morning, June 12, at 9 o'clock.

ORDER OF BUSINESS

Call to order by the president.
Receiving credentials.
Report of Committee on Scientific Work.
Report of Committee on Publication.
Report of Committee on Public Policy and Legislation.
Report of secretary.
Report of treasurer.
Report of council.
Report of Auditing Committee.
New business.
Election of officers, Friday morning at 9 o'clock.
Next place of meeting.
Unfinished business.

PROGRAM

Tuesday, June 9, 1925.

9 a.m. Call to order, Dr. G. D. Jeffers, President, Parkersburg, W. Va.

9:05 a.m. Invocation, Rev. Samuel W. Moore, Bluefield, W. Va.

9:10 a.m. Presentation of the Keys of the city, Hon. Clarence Ridley, City Manager, Bluefield, W. Va.

9:20 a.m. Address of Welcome, on behalf of the McDowell County Medical Society, Dr. W. L. Peck, President, Bluefield, W. Va.

9:30 a.m. Address of Welcome, on behalf of the Mercer County Medical Society, Dr. R. O. Rogers, President, Bluefield, W. Va.

9:40 a.m. Response on Behalf of the State Medical Association, Dr. Chester R. Ogden, Clarksburg, W. Va.

9:50 a.m. Indications for Operation in Acute Injuries of the Spinal Cord (lantern slides), Dr. C. C. Cole, man, Richmond, Va.

10:30 a.m. Intra-Cranial Hemorrhage of the New-born (lantern slides), Dr. Philip F. Barbour, Louisville, Ky.

11 a.m. Cervical Rib, Dr. Wm. Goff, Parkersburg, W. Va.

Discussion: Dr. Harry L. Robertson, Charleston, W. Va.; Dr. Wade H. St. Clair, Bluefield, W. Va.

11:30 a.m. Ethical Silence vs. Rational Publicity—as a Commonsense Medical Policy, Dr. J. R. Shultz, Charleston, W. Va.

Tuesday Afternoon, June 9

1:30 p.m. Extra-Abdominal Conditions Simulating Acute Diseases of the Abdomen, Dr. David Riesman, Philadelphia, Pa.

2 p.m. A Comparison of Nitrous Oxide and Ethylene Anesthesia, Dr. L. D. Norris, Fairmont, W. Va. Discussion: Dr. John E. Cannaday, Charleston, W. Va.; Dr. E. Bennett Henson, Charleston, W. Va.

2:30 p.m. Hysteria, Dr. C. H. Maxwell, Morgantown, W. Va. Discussion: Dr. J. Howard Anderson, Marytown, W. Va.; Dr. Chas. S. Hoffman, Keyser, W. Va.

3 p.m. Six Cases of Xeroderma Pigmentosum (lantern slides), Dr. Chesney N. Ramage, Fairmont, W. Va. Discussion: Dr. Harry L. Robertson, Charleston, W. Va.; Dr. Rudolph Reudeman, Huntington, W. Va.

3:30 p.m. The Pathology and Treatment of Chronic Arthritis (lan-

tern slides), Dr. Ralph Pemberton, Philadelphia, Pa.

Tuesday Evening, June 9

Assembly Room, West Virginian Hotel.

8 p.m. General Session, public invited.

Entertainment.

Presidential Address, Dr. G. D. Jeffers, Parkersburg, W. Va.

Oration on Surgery, Dr. Roy Ben Miller, Parkersburg, W. Va.

Oration on Medicine, Dr. Curran Pope, Louisville, Ky.

Entertainment.

MEDICAL SECTION

Wednesday, June 10

8:30 a.m. to 9:30 a.m. Medical and Surgical Clinics at the St. Lukes Hospital and the Bluefield Sanitarium. See announcement posted daily at hotel headquarters.

Colonial Theatre, Princeton Avenue

9 a.m. Gastric Motor Phenomena, moving picture film, presented by Dr. Ralph Homer Boice, Parkersburg, W. Va.

9:40 a.m. Complement Fixation, moving picture film, presented by Dr. C. E. Roderick, Battle Creek Sanitarium, Battle Creek, Mich.

Assembly Room, West Virginian Hotel

11 a.m. Undervalued Facts in Syphilis, Dr. Chas. W. Waddell, Fairmont, W. Va. Discussion: Dr. W. S. Robertson, Charleston, W. Va.; Dr. T. Jud McBee, Morgantown, W. Va.

11:30 a.m. Syphilis — Its Treatment from the General Practitioners Standpoint, Dr. W. C. Slusher, Bluefield, W. Va. Discussion: Dr. O. S. Hare, Bluefield, W. Va.; Dr. E. W. Horton, Bluefield, W. Va.

Wednesday, June 10.

1:30 p.m. Hypertension, with Special Reference to Treatment, Dr. G. H. Barksdale, Charleston, W. Va. Discussion: Dr. A. H. Grigg, Beckley, W. Va.; Dr. Walter E. Vest, Huntington, W. Va.

2 p.m. Rational Procedure Leading Towards Diagnosis, Dr. Ray Kessel, Charleston, W. Va. Discussion: Dr. Thos. G. Tickle, Bluefield, W. Va.

2:30 p.m. Some Observations Upon the Use of Pituitrin in Obstetric Practice, Dr. Jas. R. Bloss, Huntington, W. Va. Discussion: Dr. J. H. Steenbergen, Huntington, W. Va.; Dr. Walter W. Point, Charleston, W. Va.

3 p.m. Ether — Intra-Muscularly in Treatment of Pertussis, Dr. Geo. M. Lyon, Huntington, W. Va. Discussion: Dr. Robert M. Hood, Clarksburg, W. Va.; Dr. Raymond Sloan, Huntington, W. Va.

3:30 p.m. Chlorine Treatment of Respiratory Infections, Dr. C. R. Kessel, Director of University Health Service, Morgantown, W. Va. Discussion: Dr. John Nathan Simpson, Morgantown, W. Va.; Dr. Doff D. Daniel, Eccles, W. Va.

4 p.m. The Dietary Treatment of Non-Diabetic Acidosis, Dr. A. H. Hoge, Bluefield, W. Va. Discussion: Dr. J. D. Willis, Roanoke, Va.; Dr. T. G. Tickle, Bluefield, W. Va.; Dr. Walter E. Vest, Huntington, W. Va.

Wednesday, June 10.

8 p.m. General Session. Public invited.

Reception and entertainment in the Auditorium of the Municipal Building, Ramsey Street.

Public Health and Preventive Medicine, Dr. Ernest C. Levy, University of Virginia, Richmond, Va.

SURGICAL SECTION

Will meet in the Auditorium of the Municipal Building on Ramsey Street.

Dr. B. H. Swint, chairman; Dr. A. P. Butt, secretary.

Wednesday, June 10, 9 a.m.

1. Symposium on Fractures.

Fractures from the Department's Viewpoint, Lee Ott, State Compensation Commissioner, Charleston.

Delayed Union, W. W. Golden, Elkins.

Methods of Extension in Fractures of Femoral Shaft, Chas. F. Hicks, Welch.

Compound Fractures, R. J. Wilkinson, Huntington.

Personal Recollections of Functional Results Following Fracture of the Femoral Neck, Chas. Hoffman, Keyser.

Discussion of a, b, c, d, e, of Fractures in General.

2. Ureteral Stricture, Wm. S. Robertson, Charleston.

3. The Necessity of Urological Study Preliminary to Surgical Procedure, C. J. Reynolds, Bluefield.

4. New Viewpoints in the Treatment of Urinary Calculus (lantern demonstration), Guy L. Hunner, Baltimore.

Discussion of Paper No. 2, to be opened by R. M. Bobbitt, Huntington.

Discussion of Paper No. 3, to be opened by F. E. Roberts, Wheeling.

Discussion of Paper No. 4, to be opened by O. D. Barker, Parkersburg.

General discussion of Papers Nos. 2, 3 and 4.

Afternoon Session, 1:30 P. M.

Infection in the Mouth As a Cause of Gastric Ulcer, time 5 minutes, J. S. Klumpp, Huntington.

Left Lateral Incomplete Dislocation of Axis, with Report of the case, time 5 minutes, C. A. Latham, Huntington.

Gall Bladder Disease, John E. Cannada, Charleston. Discussion opened by Wade H. St. Clair, A. G. Rutherford and H. K. Buford.

Gunshot Wounds of the Abdomen, G. D. Johnson, Huntington. Discussion opened by R. J. Wilkinson and Hugh J. Carr.

An Illustrated Talk by J. W. Kennedy of the Jos. Price Hospital, Philadelphia.

Some Views Held by Dr. Kennedy Concerning Appendicitis.

Extra-Uterine Pregnancy and Malignancy of the Uterus.

EYE, EAR, NOSE AND THROAT SECTION

Will meet in Room No. 1 mezzanine floor of West Virginian Hotel, Wednesday, June 10. Dr. H. R. Johnson, chairman, Fairmont, W. Va.; Dr. A. K. Hoge, secretary, Wheeling, W. Va.

A Place for Dionin in Beginning Cataract, J. A. Arbuckle, M. D., Charleston, W. Va.

Sarcoma of Choroid, Raymond A. Tomassene, M. D., Wheeling, W. Va.

A Case of Traumatic Mastoiditis, Thomas E. Peery, M. D., Bluefield, W. Va.

A Simple Lachrymal Sac Operation, John McGuire, M. D., Bluefield, W. Va.

A Plea for the Tonsil, W. Thurston Booher, M. D., Huntington, W. Va.

Chronic Sinusitis, F. O. Marple, M. D., Huntington, W. Va.

Pathology and Treatment of Nasal Accessory Sinus Disease, M. M. Cullon, M. D., Nashville, Tenn.

Some Observations of Eye, Ear, Nose and Throat Practice, T. W. Moore, M. D., Huntington, W. Va.

Subject to be announced later, Dr. Tucker Jackson Clinic.

GENERAL SESSION

Assembly room West Virginian Hotel, Thursday morning, June 11.

9 a.m. Brain Tumors, Dr. Walter E. Dandy, Johns Hopkins Hospital, Baltimore, Md.

9:30 a.m. Low or Cervical Caesarean Section (laparotrachelotomy), report of cases (lantern slides), Dr. C. S. Fleming, F.A.C.S. Discussion: Dr. P. Brook Bland, Philadelphia, Pa.; Dr. Jas. R. Bloss, Huntington, W. Va.

10 a.m. Treatment of Fractures of the Neck of the Femur; Report of cases (lantern slides), Dr. S. S. Gale, Lewis-Gale Hospital, Roanoke, Va.

10:30 a.m. Management of Fractures of the Femoral Shaft, Dr. A. G. Rutherford, Welch, W. Va. Discussion: Dr. S. S. Gale, Roanoke, Va.; Dr. Jacob Livingston, Welch, W. Va.

11 a.m. The Real Significance of the Term Biliousness, Dr. Douglas Vanderhoof, Richmond, Va.

11:30 a.m. The Conservative Trend in Gynecology, Dr. P. Brook Bland, Philadelphia, Pa.

12:15 p.m. Luncheon at Bluefield Sanitarium, Ramsey Street.

HOLIDAY SESSION

Thursday Afternoon, June 11.

2 p.m. Automobile trip for the doctors and visiting ladies. Will start from the ladies entrance of the West Virginian Hotel (Scott Street side.)

2 p.m. Golfers go to Bluefield Country Club or Mercer Country Club.

2 to 5 p.m. Alumni meetings in room No. 1 on the mezzanine floor of the West Virginian Hotel lobby.

5:30 p.m. Informal entertainment in the West Virginian Hotel lobby.

Thursday Evening, June 11.

6:30 p.m. Banquet to visiting ladies and doctors in ball room of West Virginian Hotel. Principal speaker: Gov. Howard M. Gore, Charleston, W. Va.

9:30 p.m. Dance to 2 a.m., ball room West Virginian Hotel. Waltz, one step, two step, fox trot and old time square dance.

HOUSE OF DELEGATES

Will meet in room No. 1, mezzanine floor West Virginian Hotel, Friday morning, June 12.

8:30 to 9:30 a.m. Medical and Surgical Clinics at St. Lukes Hospital and Bluefield Sanitarium.

9:30 to 10:30 a.m. Session of the House of Delegates. Election of officers and business meeting.

GENERAL SESSION IN ASSEMBLY ROOM

10:30 a.m. Abnormalities of the Kidneys, Dr. F. E. Roberts, Wheeling Clinic, Wheeling, W. Va.

11 a.m. The Report of a Case of Double Kidney on Both Sides, Dr. W. H. Wallingford, Princeton, W. Va.

Discussion of Drs. Wallingford's and Roberts' papers: Dr. Oliver D. Barker, Parkersburg, W. Va.; Dr. C. J. Reynolds, Bluefield, W. Va.

11:30 a.m. The Value of Prostatectomy under Spinal Anesthesia, Dr. A. G. Rytina, Baltimore, Md.

1:30 p.m. Inguinal Hernia Complicated by Hernia of the Overies and Tubes—Report of a case, Dr. Walter N. Rowley, Huntington, W. Va.

2:00 p.m. The Diagnosis and Treatment of Intra-Thoracic Tumors—(Lantern Slides) Dr. Geo. Heurer, Cincinnati, Ohio.

2:30 p.m. Enterostomy in Emergency Abdominal Surgery, Dr. C. M. Scott, Bluefield, W. Va.

Discussion: Dr. Chas. F. Hicks, Welch, W. Va., Dr. T. E. Vass, Bluefield, W. Va.

3:00 p.m. Malposition and Dilatation of the Cecum and Ascending Colon—(Lantern Slides) Dr. E. Bennett Henson, Charleston, W. Va.

Discussion: Dr. Geo. H. Barksdale, Charleston, W. Va., Dr. John E. Cannaday, Charleston, W. Va., Dr. Wm. Goff, Parkersburg, W. Va.

3:30 p.m. Some Observations upon Common Disorders of the Digestive Tract, Dr. J. W. Preston, Roanoke, Va.

Discussion: Dr. Geo. H. Barksdale, Charleston, W. Va., Dr. Geo. Lyons, Huntington, W. Va., Dr. A. H. Hoge, Bluefield, W. Va.

4:00 p.m. So-Called Idiopathic Uterine Bleeding—(Lantern Slides) Dr. Emil Novak, Baltimore, Md.

At the end of the afternoon program until the trains leave at 8:10 and 9:15 p. m., there will be an informal entertainment in the West Virginia Hotel Lobby.

LADIES PROGRAM

Tuesday, June 9th.

7:30 p.m. Public Meeting and entertainment at West Virginia Hotel.

Wednesday, June 10th

12:15 p.m. Reception and luncheon at West Virginia Hotel.

7:30 p.m. Meeting and entertainment at Municipal Building.

Thursday, June 11th

12:15 p.m. Reception and luncheon at Bluefield Country Club.

2:00 p.m. Automobile Ride.

6:30 p.m. Banquet at West Virginia Hotel.

9:30 p.m. Dance at West Virginia Hotel.

Cars will be provided for ladies at all times.

SEPTICEMIA

by B. I. GOLDEN, B. A.; M. D.
Davis Memorial Hospital, Elkins, W. Va.

Read at the meeting of the Barbour-Randolph-Tucker Medical Society November 15th, 1924.

In all the list of human maladies, none has had a more striking career, than that of Septicemia.

Prior to 1847, the parturient morality from puerperal fever alone ranged from eleven to thirty-two percent, and during epidemics as high as seventy-eight percent. While many theories were advanced as to the probable cause of this dreaded disease, not only the medical profession but the world at large is indebted to Ignataz Semmelweiss for the first and greatest step towards relief. He did not discover actually the organisms producing the disease, but he did find a way to prevent it and like many other great scientists went to the grave as the result of the infection he spent his life trying to prevent.

Although Semmelweiss and others felt that this transmissible disease was not alone due to putrefying material, it was left to others to discover that the etiological organisms actually circulated in the blood stream.

Pollender, in 1855, and Davaine in 1863 demonstrated that the anthrax bacilli could be found in the blood, but the fact that Septicemia is a germ

disease owes its proof to Bretonneau, Koch and Pasteur, and then the principles of Lister conclusively proved the possibility of its control.

In this country, Oliver Wendell Holmes was the first to lay down rules governing the obstetrician. Rules that were then laughed at, but today there is not a physician who does not heed them.

Bacteria, gaining entrance to the body may cause merely local inflammation, necrosis, or abcess, or may pass from the local lesion into tissue, lymphatics, or blood vessels. Entering the blood stream—if surviving —they create the condition of septicemia (Bacteremia). When carried either by lymph or blood and deposited, secondary lesions or pyemia is produced.

Some of the more important microbes producing this condition are Streptococci (hemolytic or non-hemolytic) Pyogenes, Viridans, etc. Staphylococcus Aureus and Albus; Bacillus Coli; Diplococcus Laceolatus; Pneumococcus; Gonococcus of Neisser; Bacillus Pneumoniae of Friedlander; Bacillus Diphtheriae, and many others. Of these probably the Staphylococcus Aureus and the Streptococcus Hemolyticus are of most common occurence.

Their modes of entrance into the body are numerous, more commonly by the tonsils, apical abcesses, otitis media, urethra, and post-partum lacerations; the latter the greatest source of worry to the general practitioner.

When we see the condition under which some deliveries are carried out we know that the human body carries a tremendous army for its defense against bacterial invasion. If today, a physician has a case of septicemia of puerperal origin he is immediately censored by the community, and often by his fellow practitioners. True it is that many of these infections can be traced to the physician in charge, it is also true that a certain number are beyond the physician's control: for example, the bath before active labor, which washes particles from the body into the vagina; or coitus just before delivery. Recently we have seen such a case due to a tonsillitis which developed during abortion. In this case the infection was overwhelming with a blood count and condition of patient incapable of any reaction and quickly succumbing to the infection.

See also the case reported in this issue by Dr. Hall.

In midwifery more particularly, and all other surgical procedures it is not enough that actual manipulation be done under aseptic conditions; but also that asepsis be practiced throughout the convalesence, here emphasizing the nursing and attendance.

In the present combat of sepsis, we are turning more and more to chemotherapy, not a new method; but giving us a new series of drugs. Our knowledge of pharmacology and bacteriology has so advanced that we need not base our work on hit or miss effort of experimentation as heretofore. It has long been known that certain drugs or dyes showed a special affinity for certain organisms. The best example of which is quinine in malaria. Repeated experiments have been carried out in an attempt to find a dye that would attack the tubercular bacillus. We have long used methylene blue as a urinary antiseptic—possibly placing too great confidence in its ability and thereby aiding the patent medicine man to make millions.

Now we have the promise of another advance in our fight against this disease that may equal that of Semmelweiss, and emulate the work of Pasteur and Koch in its final victory. So gratifying are the reports of the present work that we already feel like a conquering hero.

As in all other phases of medication, a correct diagnosis is essential before proper treatment can be instituted. It is possible that some of the failures now reported are not due to the drug; but to incorrect diagnosis, and therefore improper medication.

Diagnosis is not always the easy thing, and many a case that goes *in extremis* could be otherwise handled if we knew better the causative factors. However, in this particular disease we have a definite advantage over many others; it is the product of an organism, which can be isolated from the blood stream, or the primary focus of infection. True, the foci cannot always be located; and often are found only after exhaustive study, but for the majority of acute cases we can find a satisfactory method of isolating and identifying the bacteria; and then can proceed as this indication demands. This of course, requires the use of a competent laboratory; but this should be now no drawback since there are now few physicians that cannot secure such requisite laboratory service within 12 to 24 hours, and there are few cases so fulminant in character that one does not have this time at his disposal if he will but recognize the condition as the signs and symptoms present themselves.

Of the drugs used today for these cases, three have received more attention than others: Acriflavine, Mercurochrome-220 soluble, and Gentian Violet. The first has not given the hoped-for results and is not now used to the extent of the other two. Mercurochrome has probably had the greatest test and there is more evidence in its favor than for the others.

While we are interested more especially in this paper in bacteremias, these remedies have proven very efficient in pyemias, and even for isolated foci of infection. Abraham reports excellent results in the treatment of nose and throat infections, especially of Vincent's angina.

If you will permit me a moment's digression I wish to emphasize this latter. Locally we have a real epidemic of Vincent's angina; and frankly I do not think we have given the public the warning they should have for a condition so highly contagious, difficult of treatment and with its grave possibilities.

Saurman reports good results of the use of Gentian Violet in clearing up the throats of diphtheria carriers. Here again is a situation far greater in this locality than we like to believe, and is possibly one of the reasons of repeated epidemics.

Many men are reporting brilliant results in the use of Mercurochrome-220 soluble, in acute and chronic gonorrhea, reducing the time of treatment to that of days instead of months. The time during which this method has been thus employed is too short to permit its permanent evaluation; but its outlook is good.

Both drugs show definite bactericidal power. The blood, after injection, is free from bacteria for about an hour (viz: Young & Hill) and the urine is bactericidal for several hours, inhibiting growth for as long as seven hours after injection. The above contributors feel that mercurochrome is applicable to more conditions than is

gentian violet; but in their report of cases they show brilliant results with both. They suggest that Gential Violet is probably indicated in infections produced by staphylococci, and mercurochrome for those of the streptococci. It is our belief that Gentian Violet will prove more effective against gram - positive organisms than for the gram-negative groups; and there is some scientific evidence of this.

Like all intravenous medications, they are not without some danger, so that we feel that as yet, it is not safe to attempt such medication other than in the hospital.

Mercurochrome causes a rather severe reaction, sometimes, high temperature to as high as 105 F., nausea, vomiting, diarrhea, and when used to saturation, marked salivation, with its attendant pain and discomfort, but lasting but a few days. All these symptoms clear up promptly, and as far as we know without any fatality or permanent ill effect.

Gentian Violet produces a marked discoloration, developing in the patient a pseudo-cyanosis from two to three minutes after its injection; the pulse may become slow and weak; or rapid and weak; patient complaining of feeling faint. Sometimes with repeated doses mild shock develops which may last for several hours.

From the above it may seem a rather stringent medication, but it is to be remembered that we are dealing with an extremely serious (otherwise hopeless) situation and must resort to drastic methods. Usually we have nothing to lose and everything to gain.

I wish to report a case treated with Gentian Violet:

Diagnosis, puerperal sepsis. Prognosis, fatal. Patient *in extremis*. Blood culture, streptococcus hemolyticus. Treatment, intravenous injections of Gentian Violet. Result, cure.

Case: Mrs. E. J., age 32, white, married, multipara. Delivered five days ago without instruments. First 24 hours normal. The evening of the second day complained that muscles and joints hurt her. The following day a temperature of 104 F. On admission, three days after onset of symptoms patient was *in extremis* (moribund) delirious, facies of peritonitis, tympanites, myocardium very weak, second mitral sound markedly accentuated. Pulse rapid, 140, and weak. Respiration 36, temperature 104. Uterus large and soggy. Urine turbid, reddish brown color of specific gravity of 1.018, shows albumen. Blood count, hemoglobin 65%, red cells 4,200,000, white cells 22,300, with 63% of polynuclears. Blood culture showed the streptococcus hemolyticus.

Three hours after admission, patient was given 25 c.c. of a 1% solution of Gentian Violet. The pseudocyanosis appeared in two minutes to disappear in about an hour. There was no perceptible change in the pulse or respiration. Temperature rose about 0.2 of a degree F.

Twelve hours after the first injection the temperature had dropped to 99 F. and a second injection was given exactly like the first, the patient now rational, of good general appearance, the tympanites having disappeared. The pseudocyanosis of the second injection appeared in from two to three minutes and lasted about two hours. Patient felt nauseated, with general depression for about thirty minutes. Six hours after the second injection the temperature was 101 F. but two hours more, eight hours after the second injection, was 99.4 F.

Twenty-four hours after the second injection, a third exactly similar was given; at which time the patient was feeling well, complained of a little soreness in some of her muscles, but otherwise presented a very favorable appearance. Her temperature now 101 F. The pseudocyanosis came on in from two to three minutes, an immediate appearance of shock, and condition not at all good. The cyanosis did not clear up for eight hours and patient did not recover her previous condition for twelve hours. Six hours after the third injection her temperature was 98.3 F. The following day the patient still had some nausea and complained of pain about the heart. For some days she ran an hectic temperature; but was soon discharged cured.

The blood count twelve hours after the first injection showed a decrease of the white cells to 4,300; with 48 hours later than the last injection, a count of the white cells of 6,300 and then gradually increasing to 8,800 at the time of her discharge.

During the third injection, an interesting thing happened. The veins of this patient were poor and for this last injection a vein of the dorsal surface of the left hand was used and because of its small caliber, some of the fluid infiltrated into the surrounding tissue and caused a slough not unlike the sloughing of salvarsan infiltrated tissue. This wound was slow to heal, but whether this sluggishness was due to the action of the dye or to the impoverished tissue I cannot say. At the time of the discharge of the patient there was still some stain at this point which was gradually being absorbed.

I am satisfied that this treatment of Gential Violet saved this patient's life, for I have never seen one, at such extremity, get well, nor even last very long.

SUMMARY

Since the days of Semmelweiss, little has been actually accomplished for definite elimination of an established septicemia.

The laboratory is not only a valuable aid, but a necessity for the development of this work and assurance of a successful termination.

While such medication is not free from unpleasant reactions, these are not of sufficient gravity to render the physician timid in dealing with so serious a condition.

In view of the work already done and its demonstrated results, every patient, a victim of this condition, has a right to this treatment.

CONTRIBUTION TO THE CLINICAL THERAPY OF GENTIAN VIOLET AND MERCURO-CHROME-220 SOLUBLE USED INTRAVENOUSLY.

By C. H. HALL, M. D., of the Staff of the Davis Memorial Hospital, Elkins, W. Va.

Read by invitation at the meeting of the Barbour-Randolph-Tucker Medical Society, Jan. 10, 1925.

Shortly after the last meeting of this society, November 15, at which my already aroused interest was greatly increased by the paper there presented by Dr. B. I. Golden, recounting his experiences with the intravenous therapy of Gentian Violet, in extreme cases of septicemia, I was confronted with the following case of extremely violent general organic infection of unusually virulent streptococci.

Case 1. Mrs. X., multipara, and now pregnant four months, age 38 years, of usual good health. About November 21 the patient taken with ear ache was seen and treated by a chiropractor therefor. Details of the ensuing symptoms and treatment are unobtainable. On November 25 the patient was seen by me for the first time. Her temperature was then 103½ F. Pulse 124. Her parotid gland was greatly enlarged and in the corresponding right ear existed a few blisters, apparently caused by heat. I was then informed of her pregnant condition, and prescribed aspirin and codein internally, with external use of icthyol and glycerine for the ear and parotid region. A considerable sweating resulted rapidly and with it a reduction of the temperature to 101 F.

Miscarriage however took place the following morning. The swelling of the parotid region seemed lessened, but there was here developing now a very manifest erysipelas. The general condition varied little, but the erysipelas spread very rapidly in spite of all efforts for its limitation, having involved more than the right side of the face in 48 hours. Temperature remaining at same high level.

November 28, about 2 p.m. appeared violent pain in the abdominal region and marked tympanitis. There was a striking abdominal facies. There was little doubt that the patient was passing beyond any possible recovery point.

A consultation with a member of the staff of the Davis Memorial Hospital at 6 p.m. decided that there was no real hope of recovery, and the patient was considered already in extremis. As a last resort, it was decided to transport her to the hospital, which was done at once, and there 10 c.c. of a ¼% solution of Gentian Violet was injected into the basilic vein of the left arm. In about twenty minutes the pulse was decidedly slower and fuller. Temperature 103½ F. Pulse 124. Before the intravenous injection. One hour after the injection the temperature fell to 99 F. Pulse 124. Respiration 24. On November 29, until 6 a.m. her condition seemed to be improving.

On admission there was severe headache, general aching of entire body, vaginal discharge, bloody and of offensive odor; marked oedema of entire right side of face involving the eyelids; marked red rash over buttocks, with complaints of burning there when lying on the back. After medication (7 p.m.) the patient became quiet, and slept well from 9 p.m. to midnight, when she became slightly delirious and wished to get up. A hypodermic of ⅛ grain of sulphate of morphine was given at 2:30 a.m. and the patient slept at intervals during the night until 6 a.m. Voided urine at 2 a.m. (see laboratory analysis). Pulse rate throughout the night 124 to 128, and she was permitted to sip small amounts of water.

When seen by the physician, about 9 a.m., it was apparent that her previous apparent improvement had ceased and that a turn for the worse had appeared. The patient again complained of headache, the oedema of the face was spreading and more angry. Patient was restless and slightly delirious, wanting to get out of bed. The temperature at 8 a.m. was 98.8 F. Pulse 130. Respiration 26, and at this time the patient again voided her urine. At 9 a.m. the pulse was weakening and the breathing becoming difficult. One-half grain of caffeine was given hypodermically at 9:30 a.m. There was a slight cough

which brought up a greenish tinged mucous. A slightly perceptible subicteric condition was detected, the conjunctiva scarcely tinged yellowish. One-thirtieth of a grain of sulphate of strychnine was given at 10:10 a.m., after that a small amount of hot coffee had been given to drink at 10 a.m. Decease at 10:17 a.m. On arrival at the Davis Memorial Hospital the enumeration of the white blood cells gave a number of 29,300. The urine passed at 6 a.m. of November 29, 1924, was analyzed as follows: Cloudy, color mahogany, reaction acid, specific gravity 1,042, albumen 4½% (four and a half per cent), sugar none, sediment centrifuged, many epithelial cells and cylinders. No pus cells, no blood.

Laboratory diagnosis, acute toxic nephritis.

Case 2. Mrs. W., multipara, age 40 years. Five weeks after a normal delivery, nursing her healthy child; all in apparent good order. Soon after Christmas, 1924, complained of pain, persisting about the inferior angle of the left shoulder blade. For this pain she sent a messenger to her physician to ask for medicine to relieve it, December 29, 1924, and was sent a few tablets of sulph, strychnine 1-30th grain, codeine ½ grain, aspirin 7½ grains.

On January 1, 1924, the patient again sent for a further supply of this medicine, for the same pain and was first seen by her physician on January 2. In addition to the pain of the posterior left shoulder blade region, she now complained of marked, vaguely fixed, but precardiac pains irradiating to the left shoulder and also downwards to the left lumbar region. All of these pains were relieved by a hypodermic injection of ¼ grain of sulphate of morphine. There were no auscultatory symptoms of either heart or lungs to be found. Temperature normal. Pulse normal. This patient is a chronic asthmatic with the consequent respiratory sounds normal to her.

January 5 the former symptoms still persisted in the morning but had not increased, but the temperature of that evening was 101.F. Ausculation of the posterior lower left lung revealed possibly roughened respiration, but nothing could be found there for diagnostic purpose. A further hypodermic of sulphate of morphine was given and a mild medication of citrate of potassium was instituted.

January 6 the morning condition was about the same, but profuse sweating came on during the afternoon, with evening temperature of 103.2-5ths.F.

January 7 the patient seemed to be worse and still so that evening with temperature of 104.3-5 F. Urine, color, yellow; reaction, acid; specific gravity, 1020, cloudy albumen, 1%; sugar none, sediment centrifuged microscope; showed red blood cells, no epithelial cell, no casts, no pus. One half grain of Codeine was given every four hours, until patient was quiet.

January 8 the patient was seen in consultation with Dr. W. W. Golden and a diagnosis of left inferior lobar pneumonia was made. To this point, there had been no expectoraton, but a small amount of dark, very sticky matter obtained during the day and examined at the laboratory of the Davis Memorial Hospital was at once reported as a pure culture of Streptococcus Hemolyticus and carrying a most discouraging prognosis. The expectoration that evening was limited but of decidedly prune juice appearance. Temperature 103.4-5ths.F. pa-

tient's condition alarming with a manifest cyanosis. Pulse often not discernible, apparently "in extremis." It was my conviction that the patient was moribund and might not live an hour.

Prepared for this extremity, extreme measures were resorted to at once. With great difficulty—in their collapsed state, the patient apparently pulseless—the basilic vein of the left arm was entered and an intervenous injection of 6 c.c. of a 1% solution of Mercuro-chrome (220 Soluble) was made slowly. Some hours later, it was manifest that the patient was no longer in danger of immediate collapse. The temperature fell to 102.1-5th.F. at this time.

January 11 the condition of the patient was manifestly improving, and

January 12 the pulse returning to normal, with a temperature of 99.3 F. removed immediate anxiety for her state. A specimen of urine voided this morning was examined at the laboratory of the Davis Memorial Hospital and found as follows:

Urine—color, amber; reaction, acid Sp. gravity, 1.022; albumen, ¼th of 1%; sugar, none; sediment, small amount; round and caudate epithelial cell. No pus, no blood, no casts, no cylinders.

January 13 improvement continues, but at 11 p. m., while straining at stool, the patient had an attack of angina pectoris, for which a half grain of Codeine gave prompt relief when followed by an immediate hypodermic of sulphate of morphine one-fourth grain dose.

January 14 in the early morning a further attack of angina was promptly relieved by successive doses of tablets of Codeine left for the purpose and given by the nurse. This morning a small sputa—the first obtainable since January 10—was examined at the above laboratory and found to consist almost entirely of fibrous matter, with *no demonstrable microbe therein.* The urine was analysed as follows:

Urine—color, yellow, clear; reaction, acid; Sp. gravity, 1.024; albumen, none; sugar, none; sediment, none.

January 15 the patient complained, in the morning of a little tenderness of the bunched varicose masses of both politeal veins and a slight tenderness at the femoral left vein in the triangle of Scapa, but these symptoms soon lessened and disappeared Examined in consultation with one of the staff of the Davis Memorial Hospital—the heart was found normal and relatively strong. Throughout the affected lobe of the left lung, rough bullous rales could be heard. The evening preceeding this examination, the patient had expectorated about a teaspoonfull of red blood—as described by the nurse, but this never reappeared, nor any other expectorated matter. The patient made an unusually rapid and complete recovery.

CASE III

Mr. L. R.—— 29 years old, married, was taken suddenly with chills, and temperature running to 105.F. after eating his evening meal and has grown worse deciding his entrance to the Davis Memorial Hospital on January 21 at 5:30 p. m. Temperature 103.6F., Pulse 104, Respiration 22.

The patient had a severe attack of influenza in 1920 and for sometime thereafter, was told by his physician that he had a bad heart. On entrance to the hospital, his skin was hot and dry, face flushed. Pupillary reflexes normal. Auscultation of the chest

shows numerous moist rales throughout both lungs. Over the base of right lung the percussion note is dull and its auscultation shows muffled respiratory sounds, and very few rales at this base. For the left lung the percussion note is dulled at the base. Respiration is shallow and its sounds harsh. The heart myocardium seems strong, beats rapid, with a slight presystolic aortic murmur radiating to the left and not heard in the axilla.

The abdomen is slightly distended with no area of tenderness nor rigidity. No abnormalities are found for the extremities other than the marked cyanosis of the finger nails. General reflexes not tested. The body is well nourished and formed.

On entrance the patient was placed on soft diet, with 1-30th of a grain of strychnine sulphate every four hours and creo-terpine. He complained of aching all over his body, slept very little and expectorated very little, but that was streaked with blood, which the laboratory examination reported pure cocci and diplococci — type pneumococci — no chains and no staphylococci found by culture. There was occasional sweating but in general the skin was dry. Enema brought out hard, dark-brown fecal matter at 8:00 p. m., and at 8:30 p. m., he voided urine. On the 22nd of January the patient was given Tincture of Digitalis 20 drops per os, placed on back rest with a pneumonia jacket permanently established. Exclusive milk diet and the digitalis increased to 25 drops three times daily. Cascara (Z2) twice daily to keep bowels open and turpentine stupes for the distension of the abdomen. Use of Codeine every four hours as needed to calm pain. Small amount of orange juice to drink. The urine examined on the 22nd was reported as follows:

Urine, clear; color, amber; reaction, acid; Sp. gravity, 1.020; albumen, none; sugar, none; sediment, none; and the urine of the 23rd showed the same analysis figures. There was very little coughing and limited expectoration, but on January 22 at 8:00 p. m., the temperature of the patient which had continued to rise since entrance was reaching within 1-10th of 106.F. and after consultation with two members of the hospital staff I decided that the patient was in such dangerous condition that emergency measures must be resorted to without delay, and *at once* 10 c.c. of a 1% solution of Mercurochrome (220 Soluble) were given intravenously in the left basilic vein. The pulse then was 122 and respiration 30. Within an hour after this injection the pulse was improving and the temperature was falling steadily, to 105.F. at 11:00 p. m. and 104.F. at 12:30 a. m. to reach 97.8F. with a pulse of 80 and respirations 20 at 8:00 a. m. of January 23. But this improvement was of short duration and at 1:45 p. m. *that same afternoon,* the temperature reached 103.8F. pulse 118 respiration 28. Therefore 16 hours after the first injection, a second intravenous injection of 15 c.c. of 1% of Mercurochrome (220 Soluble) was made, causing a prompt fall of temperature to 100.4 F. in two hours time—at 4:00 p. m.—but the pulse remaining at 120, respirations 20. By 8:00 p. m. of that evening the temperature again reached 104.8, pulse 130, respirations 24 and at 10:30 that same evening (January 23) the temperature was 105.F. pulse 126, respirations 24. Efforts to determine the pulse now and at 11:45 p. m., were

unsatisfactory and gave variable counts. In face of the very threatening state of this patient it was again decided by my former consultant and myself to give another immediate intravenous injection of Mercurochrome and this was done at midnight —10 c.c. of the 1% Solution—administered very slowly. The temperature began falling promptly, pulse 112 at 2:00 a. m., and at 6:00 a. m., of January 24, the temperature was 101.4F. pulse 104, respirations 22. The sputum of this day examined at the laboratory was reported to show a very sticky blood streaked fibrous matter containing very limited and rare diplococci (pneumococci). The feces passed thin brownish, at 5:00 a. m., and the urine drawn by catherter at 7:00 a. m., were examined at the laboratory and both showed unmistakingly the coloration of mercurochrome and its characteristics irridesence as eliminated unaltered in both the stool and urine. This coloration of stool and urine was found for 24 hours still. The patient showed subsequently a slight tenderness and beginning of salvation which however passed off quickly scarcely attracting his notice.

From the time of this third injection, the condition of the patient showed quick and unusual improvement. Other than an unaccoustomed slight delirium and mental cloud persisting longer than usual there was no further anxiety about this case. The temperature again rose from 101.4 Fahrenheit, slowly and reached 103 Fahrenheit at 4:00 p. m., to 103.6 F. at 8:00 p. m., of that evening, but immediately dropping to 100.8 F. at 11:00 p. m. with a pulse of 106. to mount again at 4:00 p. m. of the next day, January 25, to 103.F. and a pulse of 120 and then falling at 7:00 a. m., of the 26th of January, to 98.F. it has since that time remained quite normal. The pulse—taken at 8:00 a. m.—noon, 4:00 p. m.—8:00 p. m. daily since January 26, for 8:00 a. m., is 66, 72, 72, 80, 66, 80, 62, 74, 72, 76, 66, 56, 64, 74, 72, 62, 66, 72, 72, 78, 62, 66, 64, 56, 62, 62, 56, 62, 62, 64, 56, 72. Since the sputum reported of January 24, there has been practically no further sputum for examination. Nutrition was pushed and well taken from January 25, and from this day a very remarkable and rapid recovery is shown. The slight delirium came from time to time until January 28, since which time the patient has slept and eaten very well: on back rest for long hours; in wheel chair February 3, with his exeat on February 4, 1925: both lungs well cleared, with full respiratory sounds to the base of each lung.

CASE IV.

Mrs. M.—— primipare, 22 years old. Parturient of two weeks standing; nursing her healthy child. Delivery normal. On January 28, 1925, there was a slight rise of temperature, which yielded at once to hot douching; again appeared on January 30,disappearing with hot douches on January 31, but coming on again on February 1, to go down on February 2, with further hot douching. On February 4, the temperature rose again, this time accompanied by complaint of pain and distinct tenderness in the lower abdomen. Uterus moderately contracted, with a slight bloody discharge, but without offensive odor. In spite of hot douching, the condition did not improve and the temperature continued to rise, on February 5, reaching 104. F., at 6:00 p. m., and a pulse of 130. Her

immediate transfer to the Davis Memorial Hospital was effected, and in consultation with two members of the staff, I decided to resort to an immediate intravenous injection of Gentian Violet, made at once into the right basilic vein—15 c.c. of a ¼ of 1% of Gentian Violet—At 8:00 p. m. (one hour after completion of the injection) the temperature was falling, at that time 103.6 F. pulse 98, and respirations 26. At 8:00 a. m., next day, (February 6), 12 hours after the injection, the temperature was 99.F. pulse 100, at—same day—4:00 p. m., temperature was 97.8.F., pulse 88, at—same day—8:00 p. m., temperature 98.4.F., pulse 84.

On entrance the patient was placed on milk diet, but the following day was placed on soft diet and she eats with good appetite and remains in excellent condition, proceeding to rapid recovery and exeat from the hospital.

RESUME:

In these four cases, there has never appeared any undue reaction, nor anything to cause anxiety from the treatment itself.

Invariably the immediate effect of the intravenous injection has promptly been shown beneficial.

The only case which did not recover was evidently of such extreme gravity and length of infection and exhaustion as to preclude any rational hope of recovery or even prolongation of life. In this case of massive septicemia the treatment showed good and prompt effect however.

All three of the other cases showed most remarkable and unhoped for effect of this treatment and rapid recovery.

Bacteriological evidence as well as our observation and reading would indicate that the Gentian Violet is most effective for infections of Gram positive bacteria and less liable to provoke extreme reactions. We therefore prefer it for such cases where we are sure that the etiology involves only primitive infections of single Gram positive organisms types such as Streptococcus hemolyticus, etc. Where a secondary or mixed infection involving Gram negative organisms as causative agents, it would seem that the Mercurochrome —a better general bactericide, irrespective of type—is preferable. For such reason we have used it in our two cases of pulmonary infection.

Our observation inclines us to recommend the use of relatively dilute and small total doses of these drugs, injectng them very slowly to avoid all possible violence of reaction, free to resort to a further injection as soon as indicated by the recurrence of symptoms.

In no case has the intravenous injection been difficult where the veins were not collapsed, and no after irritation, infiltration or other annoyance has occurred at the site of these injections.

Apparently, no harm results from even subintrant intravenous administration of the mercurochrome solution, as far as the evidence of our Case III, permits deductions, as in that case the third injection followed the second so closely that we had the excretion of the unaltered drug manifest for 24 hours after in both urine and stool, but with no apparent detriment to the patient and in this case this subintrant administration of the mercurochrome, I am sure turned the tide that saved his life.

Case one two and three were all seen by at least two consultants besides myself and their opinion is unanimous that all of these cases were

of such gravity that there was little if any hope of recovery without resort to this intravenous treatment.

Case four, while not yet at the point of extreme danger was approaching thereto, and was made immediately safe by the one intravenous injection. To this procedure I invite particularly the attention of the family obstetrician. Where the after care of such case is not beyond criticism of thoroughness and technic, where any danger points even a possibility, this intravenous injection seems a possible insurance against further dangerous developments.

THREE COMMON INFECTIONS OF THE MOUTH

By DR. L. J. PARMESANO, Dentist
Elkins, W. Va.

Read Before B. R. T., Society at Elkins, February 13, 1925.

I have taken as my subject, three common infections of the mouth, and their effect on systemic disease, with special attention to the treatment of Vincent's Infection, or trench mouth.

First consideration is that of focal infection in the form of chronic apical abscess. These abscesses occur only on pulpless teeth and pathologically may be divided into three classes. One class tending toward encapsulation associated with bone condensation—2—A second class tending toward bone resorption with a minimum amount of capsule. 3—A third type with an excess of toxic materials, produces necrosis, with an absence of either bone absorption or calcification, but there is absorption of bacteria and their toxines. Low-grade infection stimulates bone growth, as in the first class just mentioned, while middle-grade irritation associated with cell proliferation of soft tissue, results in bone absorption, as in the second class. Of these the encapsulated type seems to be the greatest menace, because they are small, and the spread of infection to surrounding tissue is limited to a minimum by the resistance of the dense bony wall surrounding it, and distribution, if it occurs at all, can take place only through the blood and lymph channels. When distribution does occur, the resistance of the encapsulated bony wall to expansion, practically forces the products of infection into the circulation. In these abscesses the principal bacterium, for our consideration is the strepto-coccus viridans.

In the case of pyorrhea, whether the cause be systemic or local mechanical or bacterial irritation, since there is so much difference of opinion I will not attempt to discuss. But there is one fact granted, that in the secondary stage there are present active bacteria of the streptococcal and Staphylococcal type, along with other forms of mouth flora. Here, while there is an abundant discharge of the products of infection, into the mouth and from there travelling to the stomach and intestines, where it may produce gastric ulcers, or be absorbed through the intestines into the blood, there is also, at the area of infection, some absorption through the gingiva into the blood stream direct.

Since then, pyorrhea and the chronic absess, are two sources of entrance of the products of infection into the blood stream, they are capable of causing, and will cause, any of the systemic diseases that may result from a focal infection any place in

the body, whether it be tonsils, sinuses, gall bladder, appendix or dozens of other areas.

To mention only a few of the more common systemic infections or impairments resulting from absorption of these products of infection, are neuritis, arthritis, myocarditis, nephritis, gall bladder infection and gastric ulcers. While in cases of iritis and antrum infection, I would call special attention to apical chronic abcess.

These infections, either pyorreal or apical abcess, may be heavy and present for years, containing highly virulent organisms causing toxemia, but due to the normal resistance of the body, they do not manifest themselves as symptoms. When this normal resistance of the tissues is lowered by injury or disease, the system can no longer keep up the fight and symptoms develop. Then in a great many of the cases repair can not take place until the infection is removed. Some cases clear up remarkably on removal of the infected areas, while other cases do not respond at all to the same treatment. Where there is no response, there must be multiple foci, or a secondary metastatic focus in some other part of the body.

In removing these areas of infection, careful judgment must be exercised. In extraction of several badly infected teeth, large quantities of bacteria and their toxines are liberated, and they are absorbed in proportionally large quantities. The vitality is already low, organs of elimination are functioning poorly and now they must carry this additional strain. Temperature rises, in vascular disturbances the blood pressure goes up, and even septicemia may result. While in these infections I believe in curretment of the necrosed bone, I also think that it should not be carried on too extensively. Surface infection, as in most cases of pyorrhea unless it be an extreme case, will take care of itself after removal of the infected teeth and under a good mouth wash, before the gingiva heals across. In deep seated or apical cases, where there is extensive necrosis, this should be curreted of course, but with care, for in breaking down the wall of granulation we again throw the blood stream directly open to absorption of bacteria and their toxines, and it is only through the good work of the increased number of phagocytes already present, that we do not have more cases of osteo-myelitis or septicemia. In the region of the bicuspids and molars the thin plate of bone between the apices and floor of the antrum is usually resistive to infection, and very often in an effort to curret some small area, which would have otherwise been digested after removal of the center of infection, being the tooth, this bony wall is punctured and an antrum infection results.

VINCENT'S INFECTION

The third subject, or Vincent's infection in the mouth, is an acute infectious condition of the gingiva about the necks of the teeth, which has become rather widespread in our own community.

It is caused by the Bacillus fusiformis and its accompanying spirochette in symbiotic relationship to one another. Although it is believed by some that the two are really various stages of the same organism. They may occur in both the pure and mixed forms, usually in company with the Streptococcus type of infection. They are anaerobic, nonmotile.

Vincent's bacteria are found in normal mouths, and the infection seems to start or develop in individuals whose general resistance has been lowered by operation, disease or exposure, or who are existing on improper or insufficient foods. The infection will first attack any area that has been weakened by mechanical, chemical, or bacterial trauma. It is most common in youth, ages sixteen to thirty-five, is both contagious and infectious, and occurs more frequently in the male than in the female. In all probability this latter fact because men are inclined to be more negligent about their teeth, and there is more irritation from smoking.

The most characteristic symptoms are local pain, sore spots, fetid breath, ulceration and sloughing of the marginal tissue and ready hemorrhage, general nausea, metallic taste, increased salvation, exhausted feeling, swelling of the lymphatic glands, rise in temperature, and mental depression. Chronic cases are sometimes hard to diagnose, because there is very little fetid breath and practically no sloughing or hemorrhage and no general physical disturbance. Proof of the infection is in verification by the microscope.

Vincent's infection should not be confused with pyorrhea, which is found in both sexes almost universally. Pyorrhea is seldom painful and seldom hemmorhagic. Mastication is practically unhampered, and there are no psychic disturbances. The onset of pyorrhea is slow and of long duration, with no slough, while I recall two cases of Vincent's where the infection and slough spread from two or three pockets through the entire mouth in the course of thirty-six hours.

Because of the fact that Vincent's infection is of short duration it is not associated with neuritis, arthritis, nephritis, or any of the other systemic conditions attributable to chronic focal infection. Yet I see no reason why it would not under favorable conditions produce gastric or intestional lesions.

There are so many treatments urged for the cure of Vincent's that a whole volume could be written on that phase alone. In my personal experience, I have finally come to the following course of treatment:

Removal of all necrotic material, dry the pockets, and swab once a day with cotton saturated with a one per cent solution Gentian Violet. A mouth wash of from one to two per cent Dakin solution, used before each meal and at bed time. Then at frequent intervals between these periods, a mouth wash of sodium perborate, about one teaspoonful to a glass of warm water. Smoking is forbidden, or at least cut to a minimum. Bowels are kept free by a cathartic. Scaling and thorough removal of all tartar after infection has been reduced to a safe point or subsided. In some of my cases I have used applications of 10% chromic acid instead of G. V. with good results, up to a certain point and then, its effectiveness seems to stop, and those cases have been long drawn out, while with Gentian Violet and the mouth washes perscribed, I have cleaned up some fairly bad cases in from ten days to two weeks.

When a case reports in a mild but chronic condition, or in those cases which under local treatment, have a tendency to become long drawn out or stubborn, and also in those cases which report with the infection in its advanced stages, with sloughing wide-

spread through the mouth, I resort to intravenous injections of 0.6 grams of Neo-arsphenamin by a competent physician. In the first two cases mentioned the infection usually clears up with one injection, while in the advanced stage of the infection, two or three injections at intervals of about ten days may be necessary.

Local application of about a 10% solution of neo-arsphenamin is very effective, but because of the instability of the solution, and the fact that a new mixture is required for each treatment, has in the past made its use rather unhandy. However, the Metz Laboratories are now putting up 3 c.c. ampules of 5% Neo-arsphenamin in glucose which I think will prove more satisfactory.

Because of the recent widespread use of mercurochrome, as well as its being advocated in treatment for Vincent's infection, I feel that I should make mention of it here. My experience with mercurochrome has been limited to one case which is at present still under treatment, and in that case was very unsatisfactory. The case reported with a very extensive slough and tenderness in about six or eight pockets between the upper anterior teeth, and one pocket between the lower right molars. I immediately put the patient on Gentina Violet applications, and mouth washes of Dakin solution and of sodium perborate. In twenty-four hours the tenderness and slough were considerably reduced. Patient complained of nauseating effect of sodium perborate, so I allowed him to discontinue it. Treatment continued for seven days with gradual improvement, then patient received 0.6 grams of neo-arsphenamin intravenously, and continued to improve. Treatment was carried on two days longer with Gentian Violet. Then I dropped this treatment entirely, and gave local applications of 5% mercurchome, with mouth wash of one teaspoonfull of 2% solution of mercurochrome in a glass of warm water every three hours. In twenty-four hours slough and tenderness had increased, and by the third day, pockets had developed between the teeth of the entire upper jaw, and four or five pockets below. Fetor, tenderness, and pain increased to an extent to cause loss of sleep. I discontinued the mercurochrome and returned to Gentian Violet and Dakin solution, in twenty-four hours pain had subsided entirely with little soreness and little slough remaining. By the third day pain and soreness and fetor had subsided entirely and slough was greatly reduced. Patient was given the second injection of Neo-arsphenamin which was a week tomorrow and the case seems almost entirely healed. I hope in a short time to show a negative microscopic examination. I never dismiss a patient without negative microscopic examination, and instructions to continue two to three weeks with 1% Dakin solution and then to report for examination after that time.

To sum up the treatment, these points must be kept in mind:

1. Removal of all irritations; trauma, mechanical, chemical, or bacterial.

2. No operation of any kind. This to avoid spreading of infection.

3. Removal of all necrotic tissue.

4. Removal of all harboring elements.

5. Absolute dental asepsis.

SEPTIC PERICARDITIS—ACUTE IN A CASE OF SEVERE SECONDARY ANEMIA OF STREPTOCOCCIC HEMOLYTICUS ORGIN

A CONTRIBUTION TO THE INTRAVENOUS THERAPY OF MERCUROCHROME

By DR. C. H. HALL, of the Medical Staff of the Davis Memorial Hospital, Elkins, W. Va.

Presented at the Meeting of the Barbour-Randolph-Tucker Medical Society, at Philippi, W. Va., March 18, 1925.

CASE I.

Mr. McA.—— was first seen by me early in March of 1924 in consultation with a colleague on the Staff of the Davis Memorial Hospital.

My colleague — Dr. Moore — had made a diagnosis of extreme anemia, with his patient moribund, and had brought him to the hospital for consultation and careful examination to determine (if there were time) the cause of this extreme anemia. At entrance to the hospital, March 22, 1924, this patient was also seen in consultation with Dr. Moore by three other members of the staff.

On admission, the patient relates that his father died of Pulmonary Tuberculosis and his mother from typhoid fever, he has no brothers nor sisters; has a wife—actually in good health — He complains and shows severe evidences of coughing, emaciation, and actual extreme prostration. Headaches at times. Frequent chills followed by fever. He states that he has been feeling weak for about two months, but early in February had a definite attack of influenza for which he took home remedies for a week before calling upon his physician. When seen by his physician he had a distinct bronchitis—quite generalized—and was expectorating thick yellow muco-purulent matter. He was without appetite and slept little. This bronchitis yielded to creosote-carbonate medication and at entrance to hospital he did not cough much. This patient relates that he had a light attack of influenza in 1918 and suffered from two attacks since then. At six years of age he had typhoid fever but had little illness since that time.

The skin of the patient is extremely pale with a yellowish tinge, at places almost watery in hue. Exceedingly bad teeth, foul mouth, numerous broken purulent abcessed roots, predominant and extensive pyorrhea.

There is a marked dullness of the right apex of that lung which extends downwards to about the fourth rib. There is also some dullness of the left lung's apex. In the dull areas the breathing is roughened. Tongue pale, moist and thick. Spleen and liver of normal position, size and dullness. Abdomen at times distended. The patient lies recumbent in extreme lassitude with eyes closed most of the time. Reflexes slow and there is slight puffing beneath the eye lids.

The laboratory reported on entrance as follows:

Laboratory No. 559; Mr. McA.—— Dr. Moore, March 23, 1924.

Urine: clear, color amber, reaction alkaline, specific Gr., 1.018, albumen none, sugar none, sediment none.

Blood:Culture shows small Streptococci—idem Hemolyt. Hemoglobin less than 20%, Red Cells 1,208,000. White Cells 3,900. Differential Count: Mononuclears—small—60% Mononu-

clears—large — 10%, Polynuclears 30%. Widal reaction is negative. Sputum: shows the presence of Tuberculosis Bacilli, also streptococci, and many Gram negative.

An immediate extraction of roots of teeth and buccal asepsis was instituted, and arsenic medication was resorted to in intensive form beginning with the cacodylate and continuing with Fowler's solution, to which the patient responded with remarkable rapidity. He left the hospital on March 29, and continued to improve rapidly so that he was soon at work.

About February 25, 1925 this same patient had all of his lower teeth extracted by his dentist, and on February 27, the present writer was called to see him, and found him in bed, extremely pale and prostrated, complaining of his lower jaw, where the gums were not receeding nor healing very well, although great cleanliness of the mouth had been instituted and was being carried out. The patient had then no temperature, and except for the extreme pallor and prostration did not seem otherwise ill. There was then a clear mentality, but a slightly noticed quickened breathing. His condition grew worse so that on Monday, March 2, 1925, he was transferred to the Davis Memorial Hospital and seen in consultation with one of the staff. For three days previous to his entrance he had been given Digitalis—X drops three times a day of the extract: also small doses of strychnine twice a day and Fowler's solution V drops three times a day. On the morning of March 2, previous to his transfer to the hospital, he had headache, an extremely bad pallor showing yellowish. Temperature 103.F. pulse, rapid and weak. He was delirious, and ausculation revealed the characteristic "frou-frou" of an acute pericarditis, although he complained of no pain in this region and no pain was provoked by its palpation.

On entrance to the hospital the pale and drawn face of the patient, extreme prostration, dyspnoea, delirium and the characteristic lethargy and extreme weakness proclaimed him moribund.

With only the time to confirm the diagnosis of an acute pericarditis in full knowledge of this patients previous history and dangerous anterior anemia of streptococcic focal origin, in view of the recent dental lesions, a tentative diagnosis of streptococcic pericarditis was made and an immediate intravenous injecton of 15 c.c. of a 1% solution of mercurochrome—220 soluble—was given to the patient in the bascilic vein of the right arm at 6:00 p. m., the patients temperature running to 103.F., with a pulse of 126 and respiration of 40 and in a complete quiet delirium. Two hours later the temperature began to drop, reaching 101.F. at 6:00 a. m., (twelve hours after injection) and 98.8 F. at noon of that day, (March 3) by ausculation did not show pericaditis, the pulse was at 116 and the respiration 28. Twenty-four hours after this injection the temperature had passed to 97.F. Digitalis was increased to m XXV t.i.d. and strychnine, alcohol and hot coffee was commenced and continued to March 5, when the condition of the patient permitting he was given strong doses of cacodylate of sodium. Since reaching the normal the temperature of this patient has not since varied far therefrom. The pulse reached 100 with respiration of 24 at 1:00 a. m., of March 6, reaching and remaining normal on March 8.

The laboratory reports on this case are as follows: Lab. No. 2524, G. McA., care Dr. Hall, February 27, 1925.

Laboratory shows tuberculosis bacilli—3 smears—Urine: clear, color yellow, reaction neutral, Sp. Gr. 1.028, albumen none, sugar none, sediment none. No.s 2549,2550.

Urine: March 2, 9:30 p. m., slightly cloudy, color irridescent yellow; and March 3, 9:00 a. m., clear, irridescent yellow. Both showing mercurchrome, reaction alkaline, Sp. Gr. 1.018, 1020; sediment none (excess urates) albumen none, sugar none.

DR: Straighten out and return copy.

Throughout the day of March 3, the patient was still delirious, and extremely pale and drawn with very difficult breathing. He remained long periods in stupor and was not conscious of bowel movements or urinary emissions. The ausculation of the heart showed the persistence of the pericarditis but evidently with no measurable liquid in the pericardium.

On the mornng of the 4th of March ausculation failed to find any sign whatever of a pericarditis, as was ascertained quite independently by myself and the consulting member of the staff and no abnormality of the pericardium has since been detected. From this moment the general condition of the patient improved with astonishing rapidity and he was able to walk out of the hospital the morning of March 9, quite improved in strength with remarkable improvement in the facies and its color. At this time of exit his blood is reported by the laboratory as Hemoglobin plus 50%, red cells 1,760,000, white cells 4,600. The man today, (March 18), is feeling quite well and is working about the house.

CONTRIBUTION TO THE INTRAVENOUS THERAPY OF MERCUROCHROME

By DR. W. SCOTT SMITH, of the staff of the Davis Memorial Hospital.

Read at the Meeting of the Barbour-Randolph-Tucker Medical Society. at Philipi, W. Va., March 18, 1925.

The two cases which I beg to submit to you this evening are very different from each other, but this very difference impress me with the wide field to which this therapeutic agent and method seems to be destined.

CASE I.

Mrs. H.—— 25 years old, primipara of a year ago, child healthy and until this pregnancy, this patient was of constant good health.

During gestation, she reports that there was some swelling of both of her feet and ankles and that her physician stated that her urine contained albumen. In other respects the pregnant period was normal as well as her delivery about a year ago.

The urine however did not improve, but continually showed the presence of albumen, and for this condition the patient entered a hospital in Cincinnati, Ohio, last July. A renal efficiency test was there made and a diagnosis of left tubercular kidney determined, and this left kidney was there removed.

She made a good recovery, and was well until January of this year (1925) when she was examined by her physician at Welch, W. Va., where she then lived. A report of her urine then examined was shown me, stating that her urine showed the presence of albumen, and its microscopy showed epithelial cells and casts

also blood cells and pus cells. Her physician told her then that he feared that her remaining kidney was as badly affected as her left kidney had been and he advised her reentrance to the hospital at Cincinnati.

At this point the patient first consulted me.

A young woman, emaciated and of sallow complexion, she complained almost solely of frequent urination of which the emission was always followed by a burning sensation, the quantity of each emission was small, but the frequency persisted day and night and interferred with her sleep. A sample of her urine examined at the laboratory of the Davis Memorial Hospital and reported to me is as follows:

Laboratory No. 2353. From Dr. W. S. Smith, February 1, 1925. Urine, turbid, color yellow, reaction alkaline, specific gravity 1.022, albumen 3½%, sugar, trace (pus-mucine-reaction), sediment white and purulent. Microscopic examination, centrifuged residue shows many pus cells and multiple gram-negative bacilli, epithelial and blood cells not found.

On receipt of this report, the patient having no other medication, was given an immediate intravenous injection of 10 c.c. of a 1% solution of mercurochrome-220 soluble, and this was repeated in a volume of 15 c.c. three days later and again after three days a third injection using 20 c.c. of the same 1% solution completed her serial treatment.

In all, a total of three injections comprising 45 c.c. of a 1% solution was administered in this case; and the patient has remained without further treatment up to this day.

Five days after her last injection, the patient's urine was examined at the same laboratory, and reported to me as follows:

Laboratory No. 2439.

Urine from Dr. W. S. Smith, Feb. 13, 1925, clear, color pale yellow, reaction acid, sp. gr. 1.012, albumen none, sugar none, sediment none.

Microscopic examination, centrifuged residue minute—shows no organized cells, no microbes, no pathology.

With this report the patient was discharged by me as cured.

To control her condition to her satisfaction, about ten days later the patient went to the Cincinnati Hospital where she had been operated, and her examination there confirmed the perfectly normal excretion and condition of her present urine.

Her condition has remained perfectly satisfactory since that time, as verified by me last examination of the patient on March 14, last.

Case 2. Mr. A., 38 years old, suffering with extremely infected general pyorrhea, had 24 teeth removed by his dentist on February 15 last. The mouth continued very foul and purulent open discharging gums. The usual healing was delayed, and I was called in to improve this condition. Attempts were made to gain a buccal cleanliness with antiseptics, locally applied and mouth washes, but with little apparent progress.

February 25 the patient complained of a sudden onset of pain that morning within the left ear which continued unabated for 24 hours, yielding little to several hypodermic injections of morphine.

At 4 a. m. of February 26th a rupture of the left ear drum permitted the escape of considerable quantities of blood and pus; and the patient became comfortable for a few hours. However the pain re-appeared in a

few hours and has continued ever since.

During the night of February 26, the patient was restless with beginning delirium and temperature rising rapidly to reach 103.4 F. on the morning of the 27th, and determined his transport to the Davis Memorial Hospital that evening, where immediately upon arrival at 8 p. m. the left antrum of Highmore was opened and widely drained. The laboratory reported the blood count on his admission as follows:

Laboratory No. 2528. Mr. A., care Dr. W. S. Smith, February 27, 1925.

Blood: Hemoglobin 90%, red cells 4,860,000, white cells 28,200, differential mononuclears, small 38, large 9, polynuclears 53.

A large sequestrum was removed from the antrum and then while the patient was still under the influence of ether the irregular roots and pieces of periosteum, etc., were removed from his lower aw and the whole of the gums lightly curetted and cleaned with antiseptics.

On entrance to hospital the patient was semi-comatose, with deep labored and difficult breathing (almost sterterous). Pulse 96. Respiration 26 and temperature 101 F. at 8 a. m. of February 28. His pulse was 120, respiration 24 and temperature still 101 F., but this rose at noon to 102.6 reaching 103 at 8 p. m. and remaining at about this elevation until reaching 104 at 4 p. m. of March 2, and an axillary temperature of 105 at 7 p. m., his death occurring at 7:45 of the following morning (March 3).

Catheterized at 5 a. m. of March 1, the urine thus obtained was reported by the laboratory as follows:

Laboratory No. 2533. Mr. A., care Dr. W. S. Smith, March 1, 1925.

Urine: Not clear, color reddish yellow, reaction alkaline, sp. gr. 1.036, albumen 1¾%, sugar present, sediment heavy.

Microscopical examination shows blood and pus cells round and flat celled epithelium. No casts.

The patient had no control of his bowels nor bladder, the latter requiring repeated catheterization for its evacuation.

Symptoms of meningitis were marked at his entrance to hospital, with a marked predominance of motor affection of the right side.

The morning of the 28th of February, the symptoms of spinal pressure were so marked that a lumbar puncture was made at 10:30 a.m., extracting a turbid spinal fluid under marked pressure. The laboratory report of its examination of this fluid follows:

Laboratory No. 2533. Mr. A., spinal fluid withdrawn under pressure. Liquid is white and turbulent.

Red cells none, lymphocytes, pus, etc., 10,000 per cubic millimeter, microscopic examination of this fluid: smear shows many grouped cocci which are gram positive. Cultures: active in 18 hours showed pure small streptococci albus.

At 5 p. m. after withdrawal of about 15 c.c. of the purulent spinal fluid; by the same needle, 10 c.c. of 1% solution of mercurochrome-220 soluble, were introduced while the foot of the bed was raised and thus caused a slow diffusion of this agent throughout the spinal fluid. There was no apparent reaction caused by this medication and its quieting effect on the patient was quickly shown. His breathing became more regular and less labored, and from a previous condition of agitation that required morphine to control the patient now slept or rested quietly most of the

day. Pulse from 96 to 100, etc., until March 2, at 4 p. m. the pulse was becoming more rapid, going to 110 and at 6:10 p. m. to 124.

It was markedly evident that the mercurochrome medication had quite controlled the meningeal symptoms of this patient; but during the day of March 2 an acute mastoiditis of the left side was diagnosed and evidently was the cause of the now appearing serious condition. Immediate opening of the mastoid was resorted to at 6:10 p. m. of March 2. The entire mastoid cells were found purulent and all were evacuated and drained. Examination at this time revealed the full suppuration of the entire middle ear and the presence of a corresponding cerebral infection was diagnosed. This later infection caused the death of the patient the following morning at 7:45.

In addition to these two completed cases of the intravenous use of mercurochrome, I have also used it in a long drawn out case of chronic gonorrhea, injecting 5 c.c. of the 1% solution every other day since about February 20.

After the second injection what was a persistent slight discharge shrunk to a drop and since that time the patient has seen no drop even until the 16th of March, and the smear of this drop examined at the laboratory of the Davis Memorial Hospital is today reported to me as negative.

Further laboratory control of this case is requisite before completing its report, but both the patient and myself are convinced that great improvement, if not already absolute cure, of this case has been accomplished by this intravenous medication.

RESUME

To one unaccustomed to the remarkably quick results of intravenous mercurochrome therapy, it is difficult to explain the surprise one feels at its rapid successes.

There is no possible doubt that the complete and rapid eradication of all infection of the only remaining kidney of our first case is little short of marvelous. Please note that the sterilization in this case was a mere matter of about three days, and was without systemic reaction and thoroughly accomplished, re-establishing a rapid, complete and persisting normal kidney and urinary efficiency.

I beg to insist that the prognosis of the family physician in this case, as mine would have been without this therapy, was most alarming.

In case 2 we have a perfectly hopeless condition of septic meningitis visibly and rapidly controlled by the direct intraspinal treatment with mercurochrome. We have here established the safety with which this treatment can be undertaken and its real efficiency.

This case was seen in consultation by three other members of the staff of the Davis Memorial Hospital and I think they were all convinced of the hopeless prognosis of this meningitis except for the treatment resorted to and they are all equally convinced that this treatment successfully controlled the meningitis; the result coming from the latter developed infection of the brain through the mastoid, and at a point beyond the reach of our present mercurochrome technic. I would invite your consideration as to the advantage in a further case of direct injections of this solution into any such manifestly regional infection of the brain.

In these several intravenous injections of the 1% solution of mercurochrome-220 soluble, I have never seen any marked reaction nor trace of shock. There is no apparent detrimental symptom in its use, the solutions are easily obtained and the technic is exceedingly simple.

BLOOD PRESSURE IN RELATION TO ANESTHESIA

By W. WAYNE BABCOCK, M. D.,
Philadelphia

The influence of general anesthetics upon blood pressure has been the subject of much experimental study. The progressive fall of blood pressure under chloroform, the early moderate rise followed by a gradual fall from ether, the moderate fairly sustained pressure from ethylene, the marked rise with delayed fall from nitrous oxide, are generally appreciated in the laboratory, if not in the clinic.

The importance of frequent blood pressure observations during operations was probably first recognized by the modern school specializing in the surgery of the brain. These operations upon the brain often last for hours, and by the fall in blood pressure, the surgeon is warned as to the onset and degree of shock in advance of the other evidences of the impending danger.

The desirability of frequent blood pressure observations during the proceeding of general surgery is receiving increasing recognition, and in our opinion such observations should be made during all prolonged and serious operations.

In spinal anesthesia there is a fall of blood pressure greater than that found in any other form of anesthesia, and the evidence given by repeated blood pressure readings often enables the surgeon to anticipate, and prevent collapse and death from the intradural injection. There are few, if any, recorded deaths under spinal anesthesia, where the anesthetist or surgeon has followed the guide of frequent blood pressure readings and has adopted proper restoration treatment.

If you will study the reports of death under spinal anesthesia, and there have been many — I have had twelve — one or all of three great factors stand out: (1) The patient was not a proper subject for spinal anesthesia; (2) The patient, and particularly the blood pressure, was not properly watched during the anesthesia; (3) Proper resuscitation measures were not used. I have, and know of, no death under spinal anesthesia where these three points were observed. It is my belief that if we cannot observe these three points for safety, then we should not employ intradural anesthesia.

How does spinal anesthesia so profoundly affect the blood pressure? This is readily explained by the anatomy and physiology of the vaso-constrictor system. From the vaso motor centre in the medulla axons descend in the dorso-lateral portions of the anterior columns to communicate with nerve cells in the lateral horns of gray matter in the thoracic and upper lumbar segments. From these cells vaso-constriction fibers leave the cord with the anterior nerve roots from the second thoracic to the third lumbar, and by the white ramii communicants reach sympathetic ganglia through which the vaso-constrictor impulses are transmitted to every part of the body. Within the dura, the motor fibers for the heart pass out with the fourth and fifth

thoracic roots; for the head and neck with the second to fifth thoracic roots for the arm with the seventh to the tenth roots; for the abdomen, including the great splanchnic pool, with the sixth thoracic to first lumbar roots; for the legs, from the twelfth thoracic to the third lumbar roots.

With this as a basis, the tremendous depression of the blood pressure under spinal anesthesia is easily explained. Spinal anesthesia is essentially a root anesthesia, the cord proper not being markedly affected. The local anesthetic entering the cavity of the spinal arachnoid comes in contact with the nerve roots and interrupts all nesvous impulses through them,—sensory motor, vaso motor. If the fourth and fifth thoracic roots are blocked, the sympathetic influence that makes the heart beat faster and stronger is cut off, and the depressor influence of the vagus making the heart beat slower and weaker, is unopposed. With interruption of the lower dorsal roots, the greater vessels of the abdomen relax and the peripheral vessels are drained of much blood.

If the lower eleven dorsal and first three lumbar roots are completely blocked by the anesthetic, every blood vessel in the body, from the vertex to the toes is completely relaxed, the heart rate falls to 60, 50 or 40, no pulse may be felt at the wrist, and while there may be a faint soft pulse in the carotid with the completely relaxed vascular system and partially relaxed muscular system, and the blood lies in the dependent portion of the body as in a cadaver. The skin is pale and the incisions through nondependent portions of the body are dry, and bloodless.

In such a case, I have found no bleeding on dividing the anterior abdominal wall, the appendicular artery and the meso appendix. In such a case, if the upper part of the body is sharply lowered, a pulse return to the wrist with a blood pressure, largely from gravity, of 20, 30, 40 m.g. of mercury. It is not surprising, therefore, that in ordinary spinal anesthesia a fall of pressure of 50 to 70 points is quite common. Personally, we are not alarmed when the systolic blood pressure under spinal anesthesia falls to 70. Should it fall to 40, we become attentive and prepared, and if it falls below 30 instantly adopt measures to raise the pressure.

From this brief resume of the physiology of vaso-constriction, one can understand the great variations in blood pressure seen under spinal anesthesia. Restrict the action of the drug to the lower lumbar and sacral roots, and the blood pressure is not influenced. It is then possible to do operations, especially upon the anus, perineum and external genitals, under the root anesthesia with little or no fall in blood pressure.

Anesthesia for the lower abdomen may be produced with only a moderate fall of pressure, but for the upper abdomen, it is necessary to block the lower six dorsal roots with resulting relaxation in the great splanchic vessels and a marked fall in pressure.

The higher roots of the cord are reached by (1) selecting a high point for the injection; (2) by using a definitely light or heavy solution, and localizing the action through gravity by the position of the patient; or (3) by obtaining wider diffusion by forcible injection, or the injection of a large bulk of solution.

The intensity of action on the vaso motor system varies also with the drug, the dose and dilution. Butyn has an especially intense and pro-

longed action on the sympathetic fibers. In some cases I have found it necessary to raise the foot of the bed for two hours after Butyn was given to maintain a pulse at the wrist.

Cocain and Stovain, while very powerful drugs, have a less intense action than Butyn, while the action of Procain on the sympathetic fibers is relatively weak.

Dilution and dose also greatly modify the effect produced. From small quantities of the anesthetic in dilute solution a brief and partial root block is obtained, from large doses a prolonged and complete block. For example, 3 centigrams of stovain gives an incomplete root interruption, lasting about fifteen minutes. Six centigrams of stovain will give a nearly complete block lasting over an hour. It is apparent why Jonnesco only used but 3 centigrams of stovain for his upper thoracic injections, and a much larger dose for his lower injections. A complete block of the upper thoracic roots is very dangerous; for not only is the hypotension extreme, but if the block spreads to the fifth, fourth and third cervical roots, the diaphragm and all other important respiratory muscles are paralyzed. Then only by artificial respiration may the patient continue to live. An upper thoracic block is quite possible under spinal anesthesia, with little action on the lower thoracic and lumbar nerve roots. Sensation and motion are then retained in the legs and pelvis with paralysis, analgesia and vaso dilation in the chest and upper abdomen. With the dose of the anesthetic drug, must be considered the dilution. We believe the root effect to be incomplete when Stovain is injected in dilution less than 4%; Procain less than 8%; Troprocain less than 5%; Butyn less than 2%. When injecting in dangerous fields, we withdraw cerebro spinal fluid into the syringe before making the injection, so that through dilution a less intense effect will be produced upon the motor and vaso constrictor fibers. Fortunately, the sensory fibers of the nerve roots are more susceptible to most local anesthetics than the anterior motor or the vaso motor fibers.

To avoid an undesirable wide diffusion, we employ quite uniform quantities of the anesthetic solution and endeavor to make the injections with uniform pressure. For uniform results the technique should not vary. If the bulk of solution injected varies, if the percentage strength varies, if the injection is at one time made lightly and again forcibly, the anesthesia will not be uniform or reliable. A South American surgeon told me that he had once experimented by making the injection with great force produced. A little later when he examined the patient, the man was dead.

Gravity is also important in relation to injection. Light solutions rise, heavy solutions fall in the spinal canal. To antidote the hypotension, to maintain a supply of blood to the brain and heart, it is desirable to have the head and chest lower than the rest of the body. But in this position the anesthetic solutions which are heavier than cerebro-spinal fluid may gravitate to the upper nerve roots and produce dangerous symptoms. Therefore, for many years we have only used solutions made lighter than water, by the addition of 10% of alcohol. In this dilution, and especially as not more than one and one-half minims are required, the alcohol seems to be harmless within the dura.

Can the block produced by local anesthetics upon the vaso constrictor and motor fibers of the spinal roots be neutralized or prevented, locally? I doubt if this can be done without neutralizing the essential analgesia and desirable muscle relaxation. Of course it is possible that a local anesthetic acting only upon the posterior sensory root fiber may be discovered. The additions to the anesthetic solution thus far made—adrenalin, strychnine, caffein, have not proved antidotal in the dura, and have but added undesirable by-effects.

The best we can now do is to accept the condition of interruption in the spinal roots, realize that it is only of short duration, and neutralize the effect on the blood pressure when necessary, by agencies applied outside of the spine.

The blood pressure is maintained through the heart action, peripheral vascular tension, and the bulk and viscosity of the blood.

The heart action and peripheral vascular tension may be tremendously increased by the intravascular injection of adrenalin. While it is difficult to increase the bulk of the blood by the intravascular injection of saline solution, the transfer of whole blood, or the injection of blood serum, or 6% gum acacia (Bayless) or 7% gelatine will increase the bulk of circulatory fluid and tend to fill the relaxed blood vessels. Greater pressure is also required to move viscose than thin fluids through the vessels.

In the hypotension of spinal anesthesia we dare not greatly increase the bulk of circulatory fluid lest dilation of the right heart be produced. The action of drugs stimulating the centers or acting through the cord or vein roots is blocked. Any drug to be of value, must act upon the sympathetic ganglia the vaso constrictor fibers or directly upon the vascular system.

In our experience, caffein, strychnine, atropine, pituitrin, have proved valueless. The inhalation of ammonia or ether gives a transient, slight stimulating action. Adrenalin subcutaneously has a rather slow and not very intense action. Adrenalin in the circulation is tremendously powerful but the effect only lasts fifteen to twenty-five minutes. Fortunately, dangerous hypotension in spinal anesthesia rarely lasts over twenty-five minutes.

Practically if, during spinal anesthesia, the pressure fills to 30 mn. of Hg. a needle is introduced into a convenient vein of the arm and the injection of physiologic saline solution started. If the blood pressure continues to fall one to three minims of the 1:1000 adrenalin solution is added. The injection is continued as necessary, with only sufficient adrenalin to raise the pressure to 80 or 100.

By intermittent injection, a moderate vaso motor support may be continued for two or more hours without the serious reaction and fall that follows over stimulation by adrenalin. Of course, the respiration must be maintained, if there is respiratory paralysis.

CONCLUSIONS

1. The fall in blood pressure is greater in spinal anesthesia than any other known anesthetic.

2. The fall is especially serious in elderly, obese, asthenic, starved, or toxic patients, or those with serious myocardial degeneration.

3. With the fall in blood pressure, the heart loses the stimulation of the vaso-constrictors, and in upper dorsal anesthesia the stimulation of the

sympathetic, and under such circumstances may cease beating.

4. The fall in blood pressure is better born by the young and robust rather than the asthenic, debilitated or cachetic.

THE GOLDEN AGE OF MEDICINE

Delivered Before the Rotary Club by Dr. Oscar B. Beer, Buckhannon, W. Va.

The beginning of the healing art is lost in the dim and misty past. Methods of treating the sick have been used as long as man has been sick.

Skeletons of cave and cliff dwellers which have been found, show that crude surgery was practised at that remote period.

Ancient medicine was a conglomeration of superstition, empyricism and witchery. All kinds of charms and exceedingly disgusting remedies were used. All this was in keeping with the time and people of those ancient days.

Up until 460 B. C. there had been no books or treatises on medicine of any worth. At this date Hippocrates, who is called the father of medicine, appeared upon the stage. He was a Greek physician of note and was the author of seventy-two works on medicine. An English edition of these was published as late as 1859.

Hippocrates believed there were four fluids in the human body; blood, phlegm, yellow bile and black bile, and that a disturbance of these fluids caused all diseases affecting the human body.

He was the author of the Hippocratic oath which is the basis of modern medical ethics. This oath was taken by young men entering upon the practice of medicine and in part is as follows:

> I swear by Apollo the physician, by Hygiea, by Esculapius, by Panacea and by all the gods and goddesses, that according to my ability and judgment I will keep this oath and stipulation: To reckon him who teaches me this art as equal to my parent: to share my substance with him and to relieve his necessities if required: to look upon his offspring upon the same footing as my brothers: and to teach them this art if they wish to learn it without fee or stipulation: and that by precept, lecture or any mode of instruction I will impart a knowledge of this art to my own sons, to those of my teachers, to disciples bonded by stipulation and oath according to the law of medicine, but to no others. I will follow that system of regimen which in my judgment I consider best for my patients and abstain from whatever is injurious: I will give no deadly drug to any one if asked nor suggest any such council. With purity and holiness will I pass my life and practise my art. In whatever houses I enter I will go for the advantages of the sick. Whatever in connection with my practice or not in connection with it, I may see or hear, I will not divulge, holding that all such things should be kept secret. While I continue to keep this oath inviolate, may it be granted me to enjoy life and the practise of my art, respected by all men, but should I break through and violate this oath, may the reverse be my lot.

Since Hippocrates' time medicine has had its ups and downs, but always advancing, always investigating, always seeking the truth.

We briefly mention some of the shining stars in the medical firmament, men who have been instrumental in rescuing the art of healing from the dark chaos of medieval past.

Harvey, who discovered the circulation of the blood in the human body, but not until the sixteenth century.

Jenner, who robbed smallpox of its terror by the discovery of vaccination.

Simpson, who first used ether as an anesthetic, this perhaps the greatest boon inherited by the human race.

Pasteur and Koch, who worked out the germ theory of disease and revolutionized the practise of medicine and surgery.

Lister, who gave us antiseptics and made modern surgery possible.

Roentgen, the discoverer of the X-ray, that uncanny thing which has been such a blessing to mankind.

Today, made possible by these men and many others not mentioned, we are living in the golden age of medicine.

The triumphs of medical science in modern times read like a fascinating fairy tale. No magician in Aladdin's day ever hoped to work the miracles that the modern chemist and the serum therapist has so successfully achieved in his research laboratory. The twentieth century has made greater progress in medicine than the previous nineteen centuries combined. Among the notable achievements must be mentioned insulin, radium, the X-ray and many forms of successful serum therapy. Truly we are living in an age of wonders as a result of the discovery of the secret laws of mother nature. Every new victory or discovery is an achievement of research. It increases our knowledge of truth and adds to the longevity of mankind. It enables us to enjoy better health and greater power of industry and production.

No wonder that man hopes that the sting of death can be entirely removed by the great discoveries of natural law. A recent summary enables any person to realize the advancement in the triumphs of modern medicine over disease and death. Thirty years ago all cases of diphtheria showed a mortality of 29.8 per cent, while with the anti-toxin treatment today, the deaths have been reduced to only 9.3 per cent in 1922, in the civilized world.

Sir George Newman, chief medical officer of the British government, says that in 1871 enteric fever claimed 374 in each 1,000,000 of the population, while in 1922 only twelve persons in one million died from this disease. The British scientist adds: "We are living in the golden age of medicine. Unperceived it is rapidly changing the face of the world and the destinies of men. The extension of the frontiers of life is assisted by fresh air and sunlight in dwellings, sanitation of workshops, wholesome water and food supply, and the isolation of infectious persons. The result of this is seen in the fact that every child born today has an expectation of twelve years more life than had his grandfather."

The population of the earth has almost trebled in a century. Sentimentalists may talk of the golden age of the past, but we should have hearts filled with appreciation and gratitude

that we are living in the greatest of all centuries in human history.

Eulogies of medical men are scarce in literature, but what he has done and is doing for the welfare of humanity speaks for itself.

Heroes within our ranks are not unknown. In an obscure corner, in the field of the nation's dead at Arlington, Va., you will find a modest monument marking the lasting place of Walter Reed a major in the medical corps U. S. A. He forfeited his life by allowing himself to be bitten by mosquitos carrying the virus of yellow fever, thus proving the fact that these insects spread the disease. This discovery rid the continent of this plague and made the Panama Canal possible. Walter Reed was a greater man than Napoleon.

Thirty-three thousand physicians volunteered their services during the World War. Three thousand were killed or died of disease while in service, many of these dead were heroes.

Look upon this scene. It is in France in the front line trenches, a doctor is at the first aid dressing station looking after the wounded as they fall in action, the doctor is a non-combatant. He cannot fight back in self-defense. Some of our boys are down in no-man's land, wounded and with the stretcher bearers he goes to the rescue and falls mortally wounded, killed by a German sniper. This man was a West Virginian, Capt. Daniels of Elkins. A hero.

Medicine has its quacks and pretenders as well as the law and the ministry, but the great body of the fraternity goes steadily forward fighting disease and death, relieving suffering and prolonging the span of life.

BLUEFIELD

Bluefield, West Virginia, where the West Virginia State Medical Association will hold its annual meeting, June 9, 10, 11 and 12, 1925.

Bluefield is located in the Appalachian mountain range at an altitude of 2,570 feet, about 400 feet higher than Asheville, N. C., and the highest city of its size east of the Rockies.

Bluefield is located on the terminus of the divisions of the Norfolk and Western railroad. The city has trolley connections with the Virginian Railroad at Princeton, and electric road to Bluefield, Va.

It is the highest point on the main line of the Norfolk and Western, a natural gravity "hump" yard, with down grade in both directions—the first yard of this description in the country. Twenty-three passenger trains daily.

Bus lines form a net work in every direction, linking up with Beckley, Hinton, Oakvale, Northfork, Welch, Gary and Iaeger, W. Va., and Pocahontas, Tazewell, Richlands, Norton and Bristol, Va.

Population exceeding a third of a million within a radius of fifty miles. The city water supply comes from mountain springs.

Bluefield has four hospitals.

The city in 1924 spent in excess of one million dollars in permanent improvement. The summer weather is most delightful,—sleep under blan-

kets most every night. The scenery of the surrounding country unsurpassed for beauty. Bluefield has seventeen churches, many fine edifices. It has the Rotary, Kiwanis, Lion, Quota and two country clubs.

Bluefield College, largely financed by Bluefield support engaged in $5,000,000 building program. High school enrollment over 650. Nine public school buildings,—one a year added for the last six years.

The new West Virginia Hotel,—the meeting place of the West Virginia State Medical Association June 9, 10, 11, and 12, 1925, with 240 outside bedrooms and 240 baths, is the finest hotel in West Virginia, and one of the finest in the south. Practically its entire staff was taken intact from White Sulphur Springs.

The Matz Hotel has 270 rooms and 200 baths. The new Altamont has 80 rooms, and the Commercial 75.

The Hotel West Virginia can seat and serve 1500 people at one meal in its various dining rooms. Excellent dining room facilities are offered by other hotels.

Passenger train schedules are such that trains arrive and leave during the day or evening. Leaving on the night trains out of Bluefield you can have breakfast the following morning in Richmond, Washington, Norton, Cincinnati or Columbus.

Why the people of Bluefield believe in the future of their city; Population 1890, 1,775; 1910, 11,188; 1924, 22,000. Half million population within 50 mile radius of Blufield.

Area of city; six square miles. Assessed valuation; $25,000,000.00. Financial and industrial center of the great Pocahontas coal fields. Located in the great Appalachain Mountain range, on the Norfolk & Western Railroad's main line. Altitude; half a mile above the sea. The highest city of its size in all the eastern states. Climate; due to high altitude, the summers are cool and delightful, and the winters are mild and of short duration. Street Railway; six and one-half miles with good service. Interurban system extending both east and west to connect with Princeton, West Virginia, to the east, and Bluefield, Virginia to the west. City-manager form of government. Water supply; from mountain springs. Sanitary sewers; Thirty miles, and twelve more miles under construction. Storm sewers; Ten miles, with four more miles under construction. Municipal incenerator and free systematic garbage collection. Motorized fire department. Efficient police department. Paved streets; twenty-four miles. City in 1924 is investing in excess of one million dollars in public improvements. Value of all municipal property; estimated at $2,920,000.00. Bonded debt, $1,110,000.00. Building permits; last thirty-six months, ending July 1, 1924, 1,221. Value $5,393,013.00—Average $150,000.00 per month. Coal shipment; approximately thirty million tons annually. Four large banks with combined resources of $12,436,000.00. Wholesale center; sixteen large companies. Largest furniture store in the entire south. Roads; hard surface to Southwest Virginia and to all points in the Pocahontas and Tug River coal fields. Educational system; rated among the highest in the state. The seat of Bluefield College, an institution which is rendering a distinguished service to

this and adjoining states. Hospitals; four modern and well equipped hospitals. Post office receipts; 1921, $95,513.00; 1923, $121,213.00. Organizations—Religious, Commercial and Civic: progressive chamber of commerce with 600 members. Boys' Club with fully equipped building and a full time director. Seventeen churches. Railroad Young Men's Christian Association. Young Woman's Christian Association with membership of 500. The largest American Legion Post in the state. Rotary, Kiwanis, Lions and Quota Clubs with membership exceeding 300.

IT ISN'T YOUR TOWN— IT'S YOU

If you want to live the kind of a town
That's the kind of a town you like;
You needn't slip your clothes in a grip
And start on a long, long hike.
You'll find elsewhere what you left behind,
For there's nothing that's really new.
It's a knock at yourself when you knock your town;
It isn't your town—it's you.

Real towns are not made by men afraid
Lest somebody else gets ahead,
When everybody works and nobody shirks
You can raise a town from the dead.

And if while you're making your stake,
Your neighbor can make one, too,
Your town will be what you want to see,
It isn't your town—it's you.

—R. W. Glover.

THE WEST VIRGINIA MEDICAL JOURNAL

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All original articles for The Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all parts of the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

Advertising forms will go to press not later than the tenth of each month.

All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

Should be made by check, draft, money order, express order or registered letter to Sterrett O. Neale, Executive Secretary, 211 Smallridge Bldg., Charleston, W. Va.

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The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

BLUEFIELD MEETING

At this time indications are that the coming meeting of the State Association in Bluefield is going to be one of the most interesting and valuable ones in the history of the State Association.

The information reaches us that in virtually every society interest has increased and is increasing as the time for the meeting draws nearer. A large number of physicians have already made their hotel reservations —some of them as far back as February.

It is indicated that this session will

not only be one of the greatest in point of numbers and interest in the scientific portion of the session, but one of the most important in many other respects. A number of matters of the most intense importance to the physicians throughout the state will come up for discussion.

The situation arising during the recent session of the legislature showed the imperative necessity for physicians as an organized body taking a more active part in local affairs; then again the importance of "selling" the aims and ideals of the organized profession to the public in the way of education, will be brought up. You can readily see that a discussion of these and other important matters will make this an epoch making meeting. A report of the legislative committee is being prepared, we understand, and it is expected this report will reveal some startling information and facts of interest to the organization.

The situation so far as membership this year is concerned is very encouraging, despite the rather pessimistic view taken by some of the members at the beginning of the year. On April 20, the membership certificates numbered 802, with several secretaries having made only partial reports. Every effort is being made to get complete returns from all of the secretaries during the month of May, and it is hoped that we will have at least 1,000 paid-up members by the date of the meeting.

The developments of the past few weeks have convinced all of us, we think, that the welfare of the public health, and the high aims and standards of the medical profession in West Virginia have shown the absolute necessity for our organization to become an active and militant body.

The executive secretary is gathering information concerning the condition of roads reaching Bluefield, so that the members who expect to drive will not be caused unnecessary inconvenience. This information will be sent to the secretaries of the various local bodies as early in May as possible, in order that it may be conveyed to their various members who intend to travel to the meeting by auto.

All of the members who expect to attend this Bluefield session should notify their secretaries and also Dr. F. T. Ridley, Bluefield, W. Va., who is the chairman of the Committee on Hotel Accommodations. If you will do this promptly your reservations will be made and a great deal of inconvenience avoided after reaching Bluefield.

It is hoped that all of our members will read over the scientific program as sent in by Dr. D. A. MacGregor of Wheeling, chairman of the Program Committee. The program has never in our experience promised a greater fund of real scientific merit than does this one for 1925. It is going to be too good to miss.

Our Mercer County brethren insist that June is a most wonderful month in the "Flat Top Mountain" section of our state. So let us all arrange to be there June 9, 10, 11 and 12.

THE PASSAGE OF SENATE BILL No. 260.

Representative members of the medical profession from virtually every component society in West Virginia appeared April 20 before Gov. Gore, urging that he exercise his veto powers in connection with Senate Bill No. 260, the chiropractic bill.

There was a wholehearted response to the call for a conference, issued by President Jeffers, in fact, so many re-

sponded that the board of public works assembly room in the temporary capitol was crowded to its capacity.

Dr. J. N. Simpson, dean of the medical school at West Virginia University, was spokesman for the medical profession. Gov. Gore had granted an audience of twenty minutes and Dr. Simpson presented his argument against the bill within that time limit.

The governor, however, talked informally, calling attention of the medical profession to the civic and political situation in West Virginia, and in direct connection with the matter before him, suggested that the medical men present appoint a committee of four or five to confer with him at a later date. Dr. C. A. Ray was chosen by President Jeffers and those present to select the committee. The conference with the governor lasted more than one hour.

Also, while the bill passed the Senate with house amendments on April 16, it had not reached the governor's hands at the time the medical profession's view of the legislation was presented.

HOW THEY VOTED

Senate Bill No. 260 ran a stormy course in the Senate. Although the friends of the bill had a majority, and apparently knew it, the bill was ten or twelve days getting from first to third reading. Every effort to amend the bill met with failure, the usual argument being made by Senator Kee against these amendments being that they were intended to weaken the bill. Not once did he bring the necessity of protecting the public health into his discussion, his sole viewpoint being that the chiropractors, whose profession already had been declared illegal, should be protected.

The charge was made often by friends of the bill that this fight solely was a personal fight between members of the medical profession and the chiropractors, and the insinuation was made that the medical profession was jealous!

On April 1, the bill was passed by a vote of 18 to 9. It would seem that the Senate was to have its little joke!

The roll call showed:

For passage: Republicans, Devore, Hardman, Hogg, Hugus, Jackson, Reynolds, White, Wilkin, Woods, President Marsh, total 10.

Democrats, Cannon, Darnall, Helmick, Henshaw, Kee, Kidd, Nixon, Yoho, total 8.

Total for passage, 18.

Against passage: Republicans, Baker, Highland, Smith, Willis, total 4.

Democrats, Alderson, Ashworth, Boley, Johnson and Suddarth; total 5.

Total against passage, 9.

Senators Hugus, Jackson and Wilkin had voted with the opponents of the bill on amendments but when the final vote came up, they were found on the other side. On the other hand, Senator Smith had voted with the friends of the bill on the amendments, as did Senator Baker, but they voted against the bill finally. Senator Byrer was absent and Senator Herold was paired with him.

On the day the bill passed in the Senate, certain influential citizens of West Virginia suddenly awoke to the fact that it wasn't a personal fight at all between the doctors and chiropractors. They became interested in the bill and see what happened:

Two amendments were added to the bill in the House disqualifying chiropractors from giving competent

medical testimony in any court in West Virginia.

Chiropractors were barred from receiving any fees for treating injured workmen coming within the purview of the workmen's compensation act.

And yet, the same piece of legislation licenses chiropractors to treat any person from the youngest babe to the most aged and infirm person for any disease or complication of diseases, gives them the power to sign death certificates, which must be accepted by insurance companies, and places two of them on the state public health council with the same powers as the members of the medical profession thereon.

All efforts to amend the bill in the House to prevent chiropractors from treating contagious and infectious diseased were defeated.

A most peculiar legislative situation, in the opinion of observers.

While it was impossible for the opponents of the bill to restrict the field in which the chiropractors are to operate, yet the certain influential citizens possessed the power to obtain unanimous consent to amend the bill on its third reading in the House and insert the workmen's compensation fee ban clause.

"It is certainly self-government with the accent on the 'self' " one man remarked.

The bill was passed in the House by a vote of 51 to 33. The ayes were:

Messrs. Arnold, Austin, Ball, Bartlett, Beard, Beavers, Belknap, Brumage, Campbell, Cogar, Cotton, Cox, Cooke, Crawford, Davis, Dean, DeLawder, Duval, Dye, Embleton, Engle, Furbee, Hall (of Wetzel), Harper (of McDowell), Harper (of Pendleton), Hawkins, Hays, Jackson, Marcum, McColloch, McCullough, McPherson, Meadows, Morgan, Morrison, Moulds, Radabaugh, Roberts, Robinson, Solins, Slaughter, Smith (of Jackson), Stevens, Stiles, Street, Taylor, Trainer, Underwood, Van Sickle, Weiss and Speaker Keatley.

The noes were: Messrs. Andrews, Bayer, Bird, Bishop, Brammer, Brown, Coffield, Mrs. Davis, Messrs. Deuley, Edwards, Federer, Fox, Grove, Hall (of Mingo), Harvey, Haeberlin, Hill, Holroyd, Miss Jones, Messrs. King, Lockhart, McCrum, Morris, Pence, Pettry, Rine, Smith (of Beckley), Smith (of Putnam), Spradlin, Sydenstricker, Thompson, Turley and Tutwiler.

Absent and not voting were Messrs. Armstrong, Brewster, Cullen, Dorsey, Fry, Hundley, Matthews and Read.

COUNTY SOCIETY REPORTS

The Barbour - Randolph - Tucker Medical Society met in Elkins April 17, in Hotel Tygart, at 8:30 p.m., the following being present: Drs. Williams, Perry, Magill, S. G. Moore, Hall, Pierce, W. S. Michael, A. S. Bosworth, Butt, B. I. Golden, Groomes, Guy H. Michael and Irons. Visitors: Dr. Wm. H. Cameron of Pittsburgh, Pa. Dentists: Drs. Clinton, Baker, Parmasene, Grimm, Simon and Musser; also Mrs. O. Hertig, school nurse for Elkins, and Mrs. M. A. Kendall, president of Ladies Health Committee.

Minutes of previous meetings were read and approved, with slight corrections, of February meeting.

Communications were read from the following: Dr. Steele of the State Association Meeting at Bluefield in June. Dr. C. H. Maxwell concerning the Senate Bill No. 260, which was passed by both houses. S. O. Neale, urging full membership, that

we may retain full representation in National Society. One from H. H. Bolton of Pierce, regretting his inability to attend the society meetings, owing to time lost and distance, in which he suggested the organization of a separate society, to which this society will not oppose if it seems necessary.

Board of Censors recommended Dr. Deeds of Century for membership, and under suspension of rules, he was elected a member. Also recommended the names of Drs. Peck and Mosely of Grafton for associate members, and they too, were elected.

A bill for stenographic work which amounted to $5.40, in favor of Miss Amanda McQuain, was allowed.

On motion the society voted unanimously to seek to have the license of Dr. Newman revoked, on the grounds of lack of personal and professional ethical conduct, and Drs. Irons and Williams were appointed a committee to see Dr. Henshaw personally, when he visits Philippi about May 1.

Dr. Perry, health officer and physician for the Board of Health of Elkins, independent district, explained the nature and extent of the work being done in our public schools. He presented several children who had been found defective, most of whom had suffered from diseased tonsils, which had been removed, with some improvement in ability of those to study. One had defective vision corrected, one was found to have incipient tuberculosis, which had gained under more careful attention to food, ventilation and care. Dr. Perry especially thanked the hospitals for generous aid in operating upon children.

Mrs. O. Hertig, school nurse, gave a very detailed account of the character of the work she is doing this year. She is quite busy teaching, lecturing, visiting, weighing, etc.

Mrs. M. A. Kendall, president of the Ladies' Health Committee, which was most largely responsible for employing the school nurse, stated the means of financing was principally from sale of Red Cross seals. The Red Cross Society has co-operated in the work.

Dr. Butt expressed the sentiment of the society in commending the work as auspiciously begun, and so vigorously prosecuted.

Dr. Magill insisted that there should be some agency employed to follow up the work being done, when parents are informed of defects in their children, and who from ignorance or neglect fail to have proper aid given, there should be some agency to compel them to act.

Dr. Moore said he was connected with the children's home work, and was having similar conditions with which to contend. Dr. Moore stated his belief that many of these conditions were the result of the environment in which the children grew, and the change was helpful.

Dr. Golden emphasizing the importance of the work, both from the financial and humane standing. It was important on account of the humane possibilities of usefulness, and for the comfort and usefulness of the future citizen.

On motion the society commends the work, pledging its aid in all possible ways, and asks the co-operation of the society and state in general.

Dr. C. A. Groomes read a carefully prepared paper on "Progress in Thyroid Diseases," in which he gave much of the history of the research, the former erroneous ideas as to course, and the remedies used, etc. Instead of

being caused by location or kind of water used, it is now found to be due to lack of iodine in system, and the logical means of preventing is to supply this deficiency. When once the disease is well developed, Dr. Groomes finds that surgical intervention is the most satisfactory means of removing the trouble.

Dr. Moore had the discussion on this paper. He commended Dr. Groomes on the amount of care he had shown in preparing the paper. Dr. Moore thinks that the mode of life of children is a large factor in the disease, and should always be investigated. Blood tests should be made before using the Getz test. He prefers medication to surgery. Dr. Magill that the Cotman test in hyperthyroidism is to be preferred, but before using the test be sure as to previous medication, as certain medicines, especially bromides, vitiate the test.

The discussion was closed by Dr. Groomes, who insists that a careful examination of results obtained by the two methods, medication and surgery, the benefits are largely in favor of the latter.

Dr. Wm. H. Cameron of Pittsburg, Pa., was then introduced by Dr. Golden. His theme was "Radium, Its Clinical Application."

Though Dr. Cameron has been using this agency in the treatment of cancer for fourteen years, yet he feels we are just on the apex, looking beyond for what may be in the future. He has changed his views, and may change again. Radium in primary cancer is a curative agency of great potency, and is at least a palliative agency in many non-operative cases. It may be used to prepare for operation, cases which would be inoperable without its use. It often does prolong life, and affords years of comparative comfort. It is often to be preferred to the knife, because of the lack of scar, and the cicatrical condition left is much more difficult to treat in subsequent appearances. Dr. Cameron's talk was lengthy but interesting, and told in a pleasing manner, so that he held attention though at a late hour.

In discussion Dr. Golden insisted that physicians use more care in examining tumors and treating them, and to avoid the so-called massage treatments as there was always danger of diffusing malignant poisons. Dr. Cameron advises the careful examination of all tumors.

Society adjourned to meet in Elkins May 16, when it is expected an assistant of Dr. Bloodgood of Baltimore, will be with the society.

CABELL COUNTY SOCIETY

A regular meeting of the Cabell County Medical Society was held at the Hotel Frederick, Huntington, W. Va., April 9, 1925. Dr. W. D. Hereford, the president, in the chair.

The scientific program was as follows:

Dr. Chester R. Ogden, of Clarksburg, W. Va., read a paper on "Pre-Operative and Post-Operative Treatment of Cases in Abdominal and Pelvic Surgery." In a very scholarly fashion Dr. Ogden described the numerous pitfalls in diagnosis before operation and in treatment after operation. No one could have heard this paper without being thoroughly interested. He closed with several illustrative cases. The discussion was lead by Dr. Wilkinson, followed by Drs. Guthrie, Kessler, Bloss and McQueen and Hunter of Charleston. Dr. Ogden closing.

Dr. W. Byrd Hunter of Huntington, presented a case of acrodynia, in a little child, which showed all the typical markings of the disease.

Dr. C. A. Ray of Charleston, W. Va. whose subject was "Our Duty to the Public and the Mistakes We Can Make" was very invigorating and tending toward a higher ideal in our profession. He was very strong on a fuller attendance in the local societies.

Mr. Sterrett Neale, State Executive Secretary, was present and gave a talk on the various legislative measures now in progress in Charleston.

The meeting was well attended, several men from Charleston were present.

C. G. WILLIS, *Secy.*

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The Cabell County Medical Society met in regular session Thursday, April 23, at the Hotel Frederick, Huntington, W. Va. Dr. W. D. Hereford presided.

The application for membership of Dr. W. N. Kaiser of the Huntington State Hospital, was received and passed on to the board of censors.

There was no other business so the society turned to the scientific program. Dr. R. O. Rodgers of Bluefield, W. Va., presented the subject of "The Diagnosis of Gall Bladder Conditions."

Dr. Wade H. St. Clair, also of Bluefield, W. Va., took up "Surgery of the Gall Bladder."

Both papers were well presented. Rather a heated discussion followed between Dr. R. J. Wilkinson of Huntington, and Dr. St. Clair as to removal or non-removal of the gall bladder in diseased conditions, the argument ended in peace. Dr. Vest opened the discussion followed by Drs. Wilkinson, Hicks and Guthrie.

Dr. R. M. Bobbitt presented the treasurer's report, which showed a balance on hand of $862.88.

The attendance was 35.

C. G. WILLIS, *Secy.*

McDOWELL COUNTY SOCIETY

The regular meeting of the McDowell County Medical Society was held in the offices of Welch Hospital No. 1, on Wednesday evening, April 8, 1925, at 8 p.m.

Present: Drs. Peck, Lovely, Cox, Rutherford, Stevens, Vermillion, Straub, White, Camper, Killey, Kirkpatrick, Livingston.

The meeting was called to order by the President, Dr. Peck.

The minutes of March meeting were read and approved without correction.

Clinical cases: Dr. Camper reported a case of Osteo-Sarcoma of the metatarsal bone of the foot, which came under his observation as a compensation case.

Dr. Cox presented a paper on "Hypertension."

Dr. Cox took up the subject of hypertension in a very thorough and concise manner. He stressed the importance of the pulse pressure as the important factor in hypertension. He took up the question of essential hypertension in contrast to hypertension secondary to kidney lesions. He stressed the importance of rest, diet and digitalis as the important factor in treatment. The paper was very interesting and instructive to all who were fortunate enough to hear it.

Discussion. Drs. Camper and Stevens. Dr. Camper stressed the importance of treating the heart in cases of hypertension. He also emphasized the importance of pulse pres-

sure, and did not feel it was absolutely necessary to restrict meats in all cases of hypertension. He favored restriction of salts. Dr. Stevens stressed the importance of proper ratio between systolic, diastolic and pulse pressure. He spoke of this as the one, two, three ratio. Dr. Stevens did not believe in medication, and favored the use of castor oil in preference to salts.

Dr. Straub took up the question of the pathology of the blood vessels in relation to hypertension.

Dr. Rutherford favored restricting sodium chloride and meat and felt that medication played a big part in the treatment of hypertension.

Dr. Cox in closing thanked the different members for their discussion of and interest in his paper.

UNFINISHED BUSINESS

A motion was made and duly seconded that Dr. Rutherford secure the bills for traveling expenses and other incidental expenses incurred by Drs. Camper, Hall and Anderson on their trip to the legislature in Charleston, W. Va., in the interest of the Medical Society on the chiropractic bill.

An application from Dr. A. A. Wilson, with check for $12 was read and approved. On motion duly made and seconded the by-laws were set aside and Dr. A. A. Wilson, of Switchback, W. Va., was admitted as a member of the McDowell County Medical Society.

Dr. Killey reminded the members there were some that had not as yet paid their assessment, which was made to aid in defraying the expenses of bringing the State Society to Bluefield in June.

On motion duly seconded the meeting was adjourned to stay as such until their regular meeting in May.

MONONGALIA COUNTY

The Monongalia County Society entertained members of the Marion County Medical Society, their wives and sweethearts, on April 7, at Morgantown.

Dinner was served at the Community Club in Morgantown. After a most delicious repast the ladies withdrew to the Country Club for a program of music and readings.

The scientific program was given at the Community Club by members of the Marion County Society as follows:

1. "Caesarean Section"—Dr. E. T. Sheppard.

2. "The Use of Magnesium *Sulphate* in Obstetrics" by Dr. H. S. Keister.

3. "Practical Points in the Everyday Use of Radium" Dr. W. J. Leahy.

Dr. E. P. Smith was to have delivered a case report "Pseudo-Pancreatic Cysts." The doctor unfortunately was unable to attend on account of illness.

Following this program the men adjourned and joined the ladies at the Country Club, and the rest of the evening was given over to dancing and cards.

The Monongalia Society entertained us royally, and all of us had a most enjoyable evening.

We are planning on three meetings a year now, one in Clarksburg, one in Morgantown and one in Fairmont, —the two Societies being entertained to furnish the Scientific Program at each meeting.

The following Marion County doctors and ladies were present:

E. W. Howard, L. O. Norris, G. V. Morgan, P. F. Priolean, H. L. Horton, J. E. Offner, L. C. Davis, H. H. Carr, H. S. Keister, C. L. Holland, W. J. Leahy, W. W. Orr, Carl J. Carter, G.

H. Traugh, E. T. Sheppard, J. M. Trach, J. B. Clinton, C. W. Waddell, H. R. Johnson, C. O. Henry, Lee Boyers, Will Boyers, J. J. Jenkins, J. A. Reidy, J. C. Collins, C. M. Ramage, C. L. Park, J. R. Tuckwiller, G. R. Miller and Logan Carr.

G. H. TRAUGH, *Secy.*

On March 27, 1925, the Ohio County Medical Society held their regular meeting, having Dr. Grover Cleveland Weil, of Pittsburgh, Pa., as the speaker of the evening, his subject being "A Discussion of Fractures of the Pelvis," with Lantern slides.

Dr. Weil gave a very complete account of his subject, dwelling a good deal on the anatomy of the parts. He passes a sound up through the urethra, attaches one end of tube to that, passes other sound down through bladder and attaches other end of tube, he then is enabled to bring the tube all the way through urethra if mutilated. Does not believe sewing severed ends does very well.

Dr. Haning told of a case he had where sewing the ends together had done well. Dr. Reed could see no objection in going up through the perineum. The lecture proved to be a very profitable evening.

On Friday, April 3, 1925, the Ohio County Medical Society held their regular meeting, being addressed by Dr. Harold A. Miller, of Pittsburgh, Pa., who took for his subject "Toxemias of Pregnancy," with lantern slides.

The doctor has a very elaborate system of charts which this reporter started to copy, and over which he became lost in the shuffle.

He does not give corpus luteum unless patient is depressed, and then as much to stimulate them as anything else. He blames a good deal of the whole malady to focal infection, which reminds us that we have heard a whole lot of trouble blamed on focal infections this winter. If we were not so old we would become a "focal infectionist,"—licensed under a separate bureau as a new specialty by the Honorable Legislature or not. Maybe if we had enough money we could. Not that any legislature would receive money these days. But to get back to Dr. Weil. He starves them until actually promise to eat all they get and relies on rest in bed and "watchful symptomatic care" to get results. He does not believe the number of seizures is any indication of the prognosis in eclampsia. Produces abortion if necessary but finds it very often now that he does do it where he formerly thought necessary. Dr. Thornton discussed the paper.

Friday night, April 10, 1925, the Ohio County Medical Society held their regular meeting, having Dr. W. A. Quimby, who showed Moving Pictures of Pulmonary Tuberculosis (Cole), and were addressed by Dr. Geo. J. Heuer, of Cincinnati, Ohio, whose subject was "Empyema."

This is what movies would call a "Big Double Bill." It turned out to be a movie and a rattling good one. The kind that would be a big success at the State Meeting in this state or anywhere else. To see the changing procession in a tubercular lung from incipiency on into cavity formation and consolidation is to say the least very thrilling. It is done by means of block signals, keys, colors and charts super imposed upon X-ray plates. For instance in exhibiting chronic tuberculosis a chart springs up which is quite easy to interpret. Colors come into play like traffic signals. These explain the pathological changes in addition to subtitles. Next comes the X-ray plates changing or merging

into each other so quickly that what takes weeks to form in the lung, on the screen takes that many seconds. Finally the movie runs through without the explanations. To see an X-ray plate clear,—next slightly infiltrating,—next pronounced involvement,—next consolidation, next cavity,—next the *terminal* changes,—all flickering before you in a few minutes, is to this humble reporter the last word in such proceudres. It was greatly appreciated and won as much applause as Tom Mix does on a Saturday afternoon with the house full of kids.

Dr. Heuer read from a paper he published. We rather regret this for we don't believe he really needs to do it at all. However, with an experience of over 500 cases it is needless to add that he certainly does know what he is talking about. He believes in the X-ray,—said if he had but one thing he would take it for diagnostic purposes. Believes that if you adequately take care of acute empyema there will be no chronic. He believes in drainage with perfect exclusion of air,—irrigation by Dakin's solution. Main object to destroy cavity. Avoid pneumo-thorax. If necessary in chronic cases remove two ribs. Stitches walls of *pleura* to wound. Later remove them when lung comes out to meet it as it always does. X-ray cases right along. Outlook for T. B. C. empyema always bad. Spoke of tumors complicating empyema more often than we think. They appear of course after you cure your empyema.

E. M. Phillips thanked the speaker on behalf of our society.

Dr. Drinkhard asked about pneumothorax, and T. B. C. empyema.

Dr. Heuer replied rules were different here.

Heuer is a clean-cut straight-forward gentleman, and when he talks off-hand a most convincing speaker.

STATE AND GENERAL NEWS

Dr. M. W. Sinclair, class of 1916 Medical College of Virginia, has recently become associated with the Bluefield Sanitarium, Bluefield, W. Va., as pathologist. Dr. Sinclair, after graduation, was intern at the Polyclinic Hospital, Philadelphia, and later did special work in pathology at the Rockfeller Institute, New York, the Phipps' Institute, Philadelphia, and Department Surgical Pathology, Johns Hopkins Hospital. Dr. Sinclair served overseas in the World War doing bacteriology and serology in Base Hospital Center at Nantes. In becoming associated on the staff of the Bluefield Sanitarium, Dr. Sinclair's work is limited entirely to pathology.

At a recent meeting of the Kanawha Couny Medical Sociey, the matter of a post graduate extension course for physicians, from the University of West Virginia came up for discussion. The general feeling of those present was that the course conducted here last summer was most helpful and the wish was earnesly expressed that the courses be continued.

A motion was later made requesting that a statement of the above remarks be sent to the State Journal for publication.

During this session of the Legislature the usual "come on" advertisements of the Chiropractors have been conspicuously absent from the daily papers—There's a reason!

CHIROPRACTIC DELUSION

1. Acrobats and contortionists are bending and twisting their spines every day in their performances but they have no trouble with their spinal columns.

2. Chiropractors do not take X-ray pictures to show the vertebrae said to be displaced or the disease they claim to be curing. Legitimate physicions consider X-ray pictures indispensable as a means of diagnosis and successful results in treatment.

3. It is putting a premium on deception in endorsing Chiropractic methods to say nothing of the endangering of human life.

4. A hard blow to the spine is the only thing to displace a verterbrae; common sense is proving it in cases often seen by competent physicians and surgeons.

5. Being unfamiliar with Bacteriology or Chemistry, Chiropractors make no attempt to diagnose kidney disease by the only certain means namely: Examination of the urine.

6. The theory and practice of Chiropractic is so ridiculous it is almost unbelievable that any sane person can take stock in it.

OHIO COUNTY NEWS NOTES

HARRY M. HALL, Reporter

Dr. C.D. Wilkins, superintendent of Ohio Valley General Hospital died suddenly at his home recently. He had been feeling very well, comparatively speaking, and was reported very much improved. He had been seated at the window a short time before, but without warning the end came.

Dr. Wilkins was of a retiring, modest disposition, and had a great tendency to hide his sterling qualities rather than parade them.

He leaves Mrs. Wilkins to mourn his loss. They had no children. While it is the habit in writing notices of this kind to extol the devotion of the wife, it can truthfully be said it was a fact here. Mrs. Wlkins for many weeks succeeded in making a doctor who chafed at not being allowed to work, reasonably satisfied with his lot. A remarkable and noteworthy feat.

Dr. Henri P. Linsz has not appeared in these columns lately. It was not because he was not as active as always. In naming over the "old guard" recently we left out his name. To anyone familiar with the Association it scarcely needed to be printed. The doctor is about to reap a few more honors, and unless we are greatly mistaken he will appear soon in a higher role than ever. We are sorry the doctor don't take more to fighting irregulars than he does. Perhaps if he had things would have turned out different. For some time North Wheeling Hospital has not been on the accredited list of Class "A" Hospitals for the American Medical Association. This made it a little difficult in the matter of internes, and operated inconveniently in other ways. Linsz tells us that it was evidently in the failure of a survey made a year or two ago, to reach the proper source. Dr. Linsz has had all this corrected and has been the recipient of a happy letter from the hospital, through Sister Xavier, thanking him for his signal services in having the matter ironed out and having them placed where they desire.

Linsz is sort of a God-father for hospitals. He is now busy fixing up the graduating exercises for the Ohio Valley General Hospital at the Scottish Rite Cathedral. You who have not heard the doctor play some soft, sweet strains on the organ as the

blushing graduates come on the stage, come around about that time. Dr. Bloss heard him last year, ask him.

A great deal of the opposition to the medical profession's attitude in the Legislature came from Wheeling. Mr. Harry Weiss was very prominent in this leadership. Mr. Weiss was formerly a labor representative, but more recently has been in the employ of the Standard Oil Company. So far as we know Mr. Weiss has not been prominent as a patron of chiropractic and we assume from now on he will be found supporting its everyday use, when occasion demands someone to heal the sick.

Mr. Cotton we understand also supported the bill. We say we so understand, for as yet we only have what has been told us. Mr. Cotton, a lawyer, was always very courteous to the medical men who talked to him in Charleston. However, as a matter of fact his views were pretty well known to all of us. We hope some day a calling similar to chiropractic will bump into the law profession. Perhaps Mr. Cotton's views may then undergo a change.

How the others voted is still unknown to us. This will of course be known later.

Dr. Harriet B. Jones, of Marshall County was claimed by the chiropractors as having given them and their bill the o. k. In a talk to the representatives of Wheeling the doctor denied this.

We personally saw Senator Hugus and he laid all the blame on the medical profession. Stated we did not work at all except a little desultory effort by one or two men from Charleston. As to the rest of us he said we were simply too slow in the motion. We believe he is right. He said we ought to lose. This is quite debatable since we have established our services for years back. He is a lawyer too, and as we said before we hope he lives to see the day when some new cult will give the law profession a bump that will teach its self-satisfied members the shock of their lives.

There are some members in the West Virginia Senate who have worked so hard for years for the good as they seem to see it of "the people" that they are entitled to a long, long rest by their constituents. Senators Kidd, White and Kee would seem to be candidates for this little diastole,—so to speak.

Dr. Earl Glass was confined to his home seriously ill. He is now up and around doing his work again. The doctor is one of our outstanding individuals up here and is as original and unique for Wheeling as Churchman is for Charleston, or Butt for Elkins.

Dr. Cracraft was also laid up for a few days.

Mr. Thomas Howell, Jr., of New York, has been acting as temporary superintendent of the Ohio Valley General Hospital.

The season is coming to a close up here, as it is everywhere, and this reporter takes the opportunity to congratulate on behalf of all the men he has talked to, the officers of his local society.

To provide a program like we have had this year is a big undertaking,—costs quite a little bit of money, and a great deal of valuable time on the part of some busy men. As we give, —we get. To any society who is in doubts about good programs not being beneficial we would say that like the cruet of oil in the Bible, as fast as it was poured out, just as rapidly it filled.

We still have a good sum in the treasury, and the society is in excellent condition. So to the officers, —all of us extend our hearty, sincere thanks.

Doctors are somewhat like opera singers, not only temperamental, but their appearances on the platform are subject to change, with or without notice. So Wm. O'Neill Sherman, of Pittsburgh, did not appear on account of illness to give his talk on "Treatment of Puerperal Infections with Sodium Hypochlorite." Dr. Louis Frank of Louisville, Kentucky, whose subject was "Gall Bladder Disease, with a discussion of some points in diagnosis and treatment," with lantern slide demonstration, was also unable to come on March 20. Unless our memory fails us these were the only two failures to appear that we had this year, and that it seems to us is a pretty good record.

Having received information that the chiropractors had everything their own way down at Charleston, the Ohio County Medical Society met in session extraordinary and despatched three messengers post haste to the metropolis. They received their honorable commissions at 10 p. m., and left the following Tuesday morning in time to appear before the Senate committee meeting that night at 7 p.m. They were met at Charleston by Dr. Ray, who had provided everything for their comfort. Three men represented the county society, Dr. E. L. Armbrecht, seasoned politician and confidential adviser and director, Dr. Arthur K. Hoge, orator, and H. M. Hall as someone always willing to talk on such subjects at any place and any time.

That these three might just as well have stayed at home and saved the railroad fare is a deep seated conviction in the minds of many Wheeling doctors. Be that as it may (it is no doubt true) these men left some very pressing work, canceled operations and endured two long daylight rides to demonstrate the fact that there were some who still were going to do what they could. Dr. Armbrecht did not address the Senate because his political sense is too good and he is too shrewd at the game and knew the subject had probably received already too much talking. He was the valued counselor of the trio.

Dr. Arthur K. Hoge made one of the best talks we have ever heard a physician make. It was cold, collected and direct and Charles Hughes could not have tied up his adversaries any better than he did.

If the Senate had listened to Hoge and had been unbiased the talks of Hoge, Ray and several other men would have been signally successful. The very air, however, was prejudiced and the spectacle of a lot of irregular practitioners succeeding in the way they did was enough to last the writer the rest of his lifetime. Will Rogers was sitting at the Army-Yale game. He turned to a friend and is reputed to have said "I could have been a West Pointer." "Why didn't you?" someone said. "I was too proud to speak to a Congresssman," he replied. We don't know what he would have felt about some of the West Virginia State Senators.

The speech of H. M. Hall did a considerable amount of harm and it would appear as if he should never be sent again on a similar mission. We believe his speech was true. We believe it ought to have been said, but we do not believe it helped to stop the progress at all. He took it upon himself after he saw the trend of things

to warn the Senators they were going to do something they would some day be sorry for, and that they could not shirk the responsibility. He pictured a rather uncomfortable situation where the bars would be down to everybody. Said people who wanted chiropractors so badly ought to be good sports and have them for everything — confinements, sore throat, broken bones, accidents, typhoid fever,—said doctors would simply be compelled to find out who their friends were and act accordingly. Told the Senators they had no other choice but to pick between the two; they could not have both. Either chiropractors, they or we were correct; both could not be, nor could one be incorporated in the other. Several Senators proceeded to rag him with what they thought were very telling questions. He was considerably hard put by one concerning consultation. The speech was antagonistic, irritating, combative, challenging. It carried a veiled threat and was to the effect that someone was going to pay dearly for their lack of looking into the future. As we said before we do not believe it made a single vote.

When these heralds arrived home they were asked to tell their experiences on Friday, March 20, 1925, in the absence of Dr. Frank on the regular program. They were the objects of a good bit of good natured raillery, and have been ever since. Like the widow in the Bible, all that can be said of them is that they did what they could. It was pretty hard to have a "pleasure trip" hurled at you if you have had a daylight ride to Charleston thrust upon you, but like the failure to stem the tide of chiropractic, it must be borne by us even if the public will bear the latter later on.

When this meeting ended there was this much apparent, namely, deep seated resentment in the hearts of many doctors who have been too prone to regard it altogether *too lightly* heretofore.

AMERICAN BOARD OF OTOLARYNGOLOGY

The next examination conducted by the American Board of Otolaryngology will be held at the Ambassador Hotel, Atlantic City, on Tuesday, May 26 at 9 a.m.

Application blanks may be obtained from Dr. H. W. Loeb, Secretary, 1402 South Grand Boulevard, St. Louis, Mo.

MEDICINE AND SURGERY

THE DIAGNOSIS OF CANCER

The keynote of the modern diagnosis of neoplasms, James Ewing, New York (*J. A. M. A.*, Jan. 3, 1925), says is the recognition of many distinct clinical and pathologic entities in the vast fields of benign and malignant tumors. It is no longer possible to content oneself with the simple report that the case is carcinoma or sarcoma. It is necessary to know what exact type of carcinoma or sarcoma is present, what the extent of the disease may be, what degree of malignancy is concerned, and what the natural history of the disease will reveal. In other words, it is necessary for the pathologist and clinician to form a clinical diagnosis and not rest merely on a histologic report. In order to accomplish these results, the pathologist must have a well equipped laboratory and must himself serve as a consultant by acquainting himself with all the clinical aspects of the disease. This situation can be met only

by the most cordial co-operation between the laboratory and the clinic. One of the most prevalent handicaps to the laboratory diagnosis of tumors is inexpert technic in the preparation of microscopic sections. This difficulty seems to be due to incompetent and poorly paid technicians, haste in the demand for reports, lack of time to study the sections properly, and inadequate clinical data. The pathologist is often asked to glance at a section and give an opinion. Early reports require faulty fixation of tissue, resort to the freezing microtome, and often snap judgment. The cancer surgeon should become highly proficient in the recognition of cancer by sight and touch. No aid from frozen sections can replace this capacity. Cutting out a portion of a tumor for diagnosis is a method that renders great service in the recognition of tumors, but it is one that should be practiced with the greatest caution. The indications for a biopsy are in inverse proportion to the skill and experience of the surgeon and pathologist in interpreting the gross signs of tumors. Yet in many instances it becomes an indispensable aid. The removal of a small, carefully selected portion of an accessible tumor seldom results in any harm. Cutting through the skin to excise a portion of a breast tumor is generally to be discountenanced. It is better to remove the whole tumor and follow immediately by the procedure indicated by the results of pathologic diagnosis. The incision of encapsulated malignant tumors growing under pressure is nearly always harmful, and may be disastrous. Incision into bone tumors is one of the last steps to be taken in the diagnosis. The use of the cautery to remove the tissue has been widely recommended, yet the grounds for preferring the cautery over the sharp knife have never been satisfactorily established. Ewing prefers the knife. The results of radiation therapy have revealed some interesting data that may be useful in diagnosis.

POINT OF VIEW OF INTERNIST IN STUDY OF CANCER

The problem of diagnosis in cancer is perhaps attended by greatest difficulty when the stomach is involved. As 35 per cent of all cancers are found within this viscus, John Dudley Dunham, Columbus, Ohio, (Journal A. M. A., Jan. 3, 1925), believes that it behooves us to improve our methods and concentrate attention on this phase of the subject. Current opinion has swung away from the idea that malignant gastric disease frequently arises on a previously ulcerated process. A patient having a long history of ulcer with remissions may suddenly reveal signs of loss of weight, appetite and strength. Such persons all too often have a caricinoma of the stomach. Possibly the explanation may be that a slow development of malignancy has been present from the onset of the first symptoms. Every patient more than 35 years of age who presents himself with a history of indigestion, slight malaise and declining appetite should immediately have a most thorough examination to exclude the possibility of carcinoma. At least 10 per cent of those having such symptoms have carcinoma. Roentgenology, as applied to the gastro-intestinal tract, has supplied such phenomenal aid in diagnosis that gastric analysis has largely been disregarded. A proper evaluation of the latter procedure has an important place in diagnostic methods. The Ewald test breakfast gives more evidence in this condition than the newer distilled

water meal with fractional analysis. Recovery of the chyme from the fasting stomach must not be neglected, as fragments of food from previous meals frequently suggest the onset of stasis. A presumptive diagnosis of cancer of the stomach is made when a comprehensive history and physical and laboratory examinations seem to exclude the presence of other diseases as a cause of loss of weight, appetite and strength in a patient past 40 years of age previously in good health. Immediately exploratory laparotomy should be urged. This advice to be given even though roentgenologic report is negative. When cancer is not present at operation, other surgical disease of the abdomen may be found. The surgeon's attitude toward gastric surgery has changed during the last ten years from a degree of temerity to one of extreme timidity. He is too afraid of making an incorrect diagnosis, too afraid of adverse criticism. When a frank cancer in the operable zone of the stomach is allowed to remain, an injustice is done the patient. The internist believes that a partial gastrectomy should be made in place of merely a gastro-enterostomy. Removal of such growths prolongs lives for years in many instances. A radical operation should be done even though glandular metastases are present. Five such patients in Dunham's experience have lived more than five years, while one is alive nineteen and one-half years after an extensive partial gastrectomy. Dietary regulations after gastro-enterostomy for ulcer or cancer should be rigidly enforced by the interist over a period of several years. Excessive use of condiments and coffee should be forbidden, and a minimum of protein food advised. Six small meals a day should be taken for at least six months following operation. A free use of vegetables is suggested, but only after having been put through a colander. Raw fruit, such as apples, oranges, grapefruit and uncooked tomatoes, cucumbers and cabbage, should be forbidden. All meats should be finely divided before swallowing. As a final thought, Dunham suggests to laymen that thorough annual examination for cancer should be made in every person, beginning with his fortieth year.

SURGICAL TREATMENT OF CANCER

The surgical treatment of cancer in the opinion of E. Starr Judd, Rochester, Minn. (Journal A. M. A., Jan. 3, 1925), begins with the treatment of precancerous conditions. The eradication of the disease in the early stages brings about a cure of the condition. The question of whether a benign ulcer of the stomach ever becomes malignant has been widely discussed. So far as Judd knows, this actual change has never been seen, but the clinical history in some of the cases and the condition found at operation certainly suggest very strongly that an ulcer may become malignant. It is not unusual to operate on a patient with cancer of the stomach whose history suggests ulcer. Whether the lesion was slowly becoming malignant for twenty years, or whether it was present as a benign ulcer during the greater part of this time and then became malignant, may be rather difficult to determine; but the length of the history certainly suggests benign ulcer. Many of the cancers of the stomach that are excised have all the physical appearances of benign ulcer. Judd believes that all ulcers of the stomach should be treated surgically, removing them

as thoroughly as possible; otherwise, we shall all continue to treat certain cases as simple ulcers, when they are in fact malignant. The surgical treatment of cancer is based on the fact that cancer originates as a solitary neoplasm, and if operation is performed while the disease is still confined to a single area, the results will be very satisfactory. Certain cases of cancer seem to be hopeless from the beginning, and surgery, or any other method of treatment, apparently does not influence the progress of the neoplasm. In certain cases in which the condition seems to be very extensive and to involve surrounding structure, there may still be a chance of cure by complete eradication. The most important development in our knowledge of cancer in recent years has been Broders' gradation of the malignancy according to the cell differentiation, which permits a fairly accurate prognosis, and prevents operating on a certain group of patients for whom treatment is of no avail. Judd contends that surgery has done more for patients suffering from this disease than all other methods of treatment combined. Although the results are somewhat discouraging, he believes that every patient who has a malignant growth should be given the opportunity of whatever treatment offers the best results. It is not right to consider cases hopeless without first making a very careful estimate of the grade of the malignancy and of all other factors. Operations on patients whose condition can be shown to be hopeless are a discredit to surgery. Even palliative operations, if the growth could not be removed under ordinary circumstances, should not be undertaken.

ANAPHYLACTIC SHOCK FOLLOWING USE OF AN ORGANIC COAGULANT

Bernard E. Sayre, Chicago (Journal A. M. A., Jan. 3, 1925), relates a case of a severely toxic goiter in a man, aged 30, in which, after enucleation of the gland, a continual oozing on the left side of the trachea could not be stopped. As the bleeding was very close to the recurrent laryngeal nerve and ligation not practical because of danger of injury to the nerve, an organic blood coagulant (coagulose) was applied to the bleeding surface, the area packed with gauze, and the incision sutured in the usual manner. The blood pressure before operation was 160 systolic and 80 diastolic. During operation, it rose to 180 systolic and 90 diastolic, and at the close of the operation the blood pressure had dropped to 165 systolic and 85 diastolic, with a pulse of 120. The patient was breathing well and appeared in good condition. About fifteen minutes after the application of the blood coagulant, the patient suddenly became cyanotic, breathing with great difficulty and inspiring in short gasps. Foam appeared at the mouth. Within a minute or so, breathing ceased. The heart became rapid and the pulse somewhat weak, but continued to beat regularly. Artificial respiration was restored to; stimulants were given hypodermically; oxygen was administered, and breathing was finally resumed. Cyanosis lasted for ten minutes. The patient remained unconscious for two hours afterward, although ether was not given at any time during the operation, and the gas anesthetic had been stopped fifteen minutes previous to the onset of dyspnea.

THE TREATMENT OF GENERAL PARALYSIS BY INOCULATION WITH MALARA

Henry A. Bunker, Jr., and George H. Kirby, New York (Journal A. M. A., Feb. 21, 1925), review briefly the literature on the treatment of general paralysis by means of inoculation with malaria and discuss the probable modus operandi. In their own experience with this treatment between June, 1923, and November, 1924, fifty-three unselected patients with general paralysis were inoculated with tertian malaria. Of these fifty-three patients, eleven were treated too recently to allow an expression of opinion; two received a course of malaria on two separate occasions, and one failed to acquire the infection after repeated inoculation. Of the thirty nine patients remaining, six died during the actual treatment (five) or within a month of its completion (one), and one died eight months subsequent to treatment, after a slight remission of five weeks' duration. Three of the group of six died as a direct result of convulsions; in the case of the other three, death may have been hastened, but was hardly directly caused, by the malaria. Of the thirty-two patients now alive at the end of from three to thirteen months from the conclusion of treatment, fourteen are considered as either unimproved or more or less improved (only one of these fourteen is definitely worse), and eighteen are considered as much improved and may be regarded as exhibiting fairly complete remissions, with a residual mental defect, save in the case of perhaps two patients, either undemonstrable or of the slightest possible degree. Seventeen of these patients were discharged from the hospital from one to ten months ago, and fourteen have returned to their former occupations. These results, completely confirmatory of the data of similar type already published, lead the authors to believe that treatment of general paralysis with malaria is unquestionably a method of value. The proportion of cases in which the disease appears to be brought to a standstill as judged by clinical criteria, in addition to the proportion in which a striking degree of mental improvement comes about, is in itself not without possible significance.

PAROXYSMAL TACHYCARDIA IN MIGRAINE

William A. Thomas and Wilber E. Post, Chicago (Journal A. M. A., Feb. 21, 1925), call attention to a relationship between certain cases of paroxysmal tachycardia and migraine. In the study of a series of cases of paroxysmal tachycardia, they were impressed with the similarity of the cardiac disturbance to the various organic manifestations in the prodromes of a migraine attack and in the vasovagal attack. Future investigation of these cases has led the authors to conclude that paroxysmal tachycardia may be a cardiac migraine, or the cardiac manifestation of the migraine attack. These cases have been studied clinically with great care, electrocardiograms have been obtained during and between attacks, and analytic histories have been taken. The authors consider migraine to be a profound, generalized, constitutional disturbance of physiology and metabolism, manifesting itself most frequently as a sick headache, but also affecting the vagal and vasomotor irritability and equilibrium, and causing through them cardiac, general circu-

latory, respiratory, visceral, visual and mental disturbances. They conclude that paroxysmal tachycardia may be the cardiac manifestation of migraine, occurring in those patients and in those circumstances wherein sick headaches might occur, and may be the only manifestation of migraine, may replace entirely the sick headaches, may alternate either in succession or over periods, and may, during an attack of sick headache, entirely replace it and end it as a tachycardia.

OPTIC NEURITIS IN INFANTILE PARYLSIS

The complication of optic neuritis in infantile paralysis may be more frequent than the number of cases would indicate, as ophthalmoscopic examination has probably been omitted in the majority of cases of the disease in acute or subacute stages. The visual disturbance is only transient and may be easily overlooked. In the case reported by Ralph K. Ghormley, Boston (Journal A. M. A., Feb. 21, 1925), the findings in the optic disk brought about a more detailed history of the acute illness, from which was obtained the story of a transcient disturbance of vision. In a routine examination of approximately 125 cases of infantile paralysis during the last twenty months, no other cases of optic neuritis have been found. Examination of thirty cases of infantile paralysis at the New England Peabody Home for Crippled Children failed to reveal any cases showing eye ground changes. In the case here reported, the changes in the optic disk have receded slowly and there remains a considerable amount of blurring of the margins, although no atrophy has occurred and the patient has no subjective eye symptoms.

SOME SURGICAL ASPECTS OF DIABETES

In order to reduce the risk of operation for the diabetic patient as nearly as possible to the level of the surgical disease for which operation is done, Nellis B. Foster, New York (Journal A. M. A., Feb. 21, 1925), says three conditions must be effected: constant freedom from glucose in the urine; a maximal diurnal blood sugar of less than 200 mg. per cent., and abscence of acidosis. These conditions may be attained by diet adjustment alone; the use of insulin insures success and shortens the time period required. When the nature of operation is such that patient's diet must be limited or restricted to liquids after operation, it is better to use milk for the preliminary period; then no new adjustment is needed directly after operation. Besides, milk has definite advantages in itself; it is a balanced food in respect to fatty acid and glucose ratios, and, in contrast to the usual diabetic diet, it is an alkaline diet. There is no other food so easily measured and whose composition in carbohydrate, protein and fat may be so accurately estimated. And for the expeditious adjustment of diet, accuracy is the master key. The amount of milk in the diet naturally depends on the caloric needs of each patient. By using insulin along with a diet of known composition, it usually possible, if one will take the trouble, to attain normal blood sugar and sugar-free urine in twelve hours. Ketonuria may persist for a day unless considerable glucose is given with calculated doses of insulin to metabolize it. When it is desired to reduce the blood sugar as rapidly as possible, it is necessary to examine the urine for sugar at two hour

intervals, and to estimate the required dose of insulin from this amount of sugar in the urine. In this rapid method there is always the possibility of producing hypoglycemia ("insulin shock"), but this is easily checked by injecting a small amount of glucose intravenously. The whole procedure should be carried out with the accuracy and care given to a surgical operation. Diabetes is one disease that may be handled with almost mathematical precision.

BASAL METABOLISM IN ORGANIC HEART DISEASE WITH DECOMPENSATION

An investigation was made by Walter W. Hamburger and Morris W. Lev, Chicago (*J. A. M. A.*, Feb. 21, 1925), to determine what if any, was the relation of the basal metabolic rate to the various stages and types of cardiac decompensation. As far as possible, patients with uncomplicated heart failure were chosen, to avoid those in whom the basal metabolism might be influenced one way or another by other factors. The striking finding so far has been the general elevation of the basal metabolic rate in cardiac decompensation, the elevation increasing as the clinical picture of decompensation became worse, and decreasing, and even going below normal, as the heart became compensated. Seventeen patients were observed. Of the total number, thirteen patients, or more than 76%, showed a primary or subsequent elevation of the basal metabolic rate at the first determination, but compensation had already become established at the time the reading was made. The lowest initial increase of the basal metabolic rate in the series was 11.8% above normal, while the highest reached 112.7% above normal. The average initial basal metabolic rate increase in the thirteen cases was 39.1% above normal. The prognosis is better in those decompensated heart cases in which the primary or the subsequent basal metabolic determinations are decreased. The vital capacity is decreased in heart muscle failure, and increases as compensation becomes established. The exact causes of the increased basal metabolic rate in organic heart disease with decompensation have not yet been determined.

A CLINICAL AND EXPERIMENTAL INVESTIGATION OF ARSPHENAMIN POISONING

Soma Weiss, New York (*J. A. M. A.*, Feb. 21, 1925), publishes an analysis of accidents due to arsphenamin and records an attempt to approach one phase of the clinical problem with the help of animal experiments. The purpose of this study was to ascertain whether arsphenamin in massive therapeutic doses produces changes comparable to those of acute yellow atrophy of the liver in man and, if such changes are not produced whether any predisposing condition could be induced experimentally, which, together with arsphenamin, produces acute yellow atrophy of the liver in animals. The results of these experiments indicate that repeated doses of arsphenamin, corresponding to massive therapeutic doses, produce small areas of necrosis, fatty infiltration, congestion with round cell infiltration, and occasionally cloudy swelling in the liver cells, with the evidence of fatty degeneration in the tubules of the kidneys in some cases. The poisons produced no changes in the spleen. This tissue injury was

not increased or modified when arsphenamin was combined with mercuric salicylate, in amounts corresponding to therapeutic doses in man. When the doses of arsphenamin mentioned were administered to cats in which liver injury had been produced by choloroform, the liver regenerated at the same rate as that in the series of cats which received chloroform alone. Arsphenamin, therefore, does not appear to increase the injury produced by chloroform. The histologic changes and the behavior of the poisoned animals do not correspond to those observed in acute yellow atrophy of the liver in man. The classification of the toxic reactions cannot be applied rigidly. Cases showing symptoms and signs characterized by skin reaction (dermatitis exfoliativa), and those with vasomotor reaction (edema), are relatively frequent. Twenty-nine deaths, at least, are attributed to arsphenamin. In twenty-one cases of the twenty-nine, death followed the injection of arsphenamin within a few hours. The liver showed no pathologic changes in seventeen cases in which necropsy was held. It is important, however, to emphasize the fact that every case of the group showed severe chronic lesions in other organs. Acute yellow atrophy of the liver, so called, followed the administration of arsphenamin in eight cases, but no predisposing factor was found on pathologic examination which explains the etiology of the disease. In additional cases, death was attributed clinically to arsphenamin, but the necropsy revealed some other cause. Toxicologic analyses were recorded in seventeen fatal cases following the administration of arsphenamin. It is concluded, on the basis of the study presented, that the majority of fatal accidents can be prevented by observing caution in individuals who show cardiovascular and renal disease, clinical evidence of status lymphaticus, or acute infectious disease (pneumonia). The fact that animals under the experimental condition described do not show acute yellow atrophy similar to that in man, and that in the fatal acute accidents in which repeated doses of arsphenamin had been given the liver did not show noticeable pathologic changes, suggests that therapeutic doses of arsphenamin do not produce noteworthy tissue damages in the liver. One cannot attribute acute yellow atrophy of the liver to a toxic effect of arsphenamin. However, as the relationship between the administration of arsphenamin and acute yellow atrophy is definite, the conclusion that arsphenamin plays an *indirect* role in causing acute yellow atrophy is inevitable. One cannot say with certainty whether this role lies in the precipitation of the condition in the presence of predisposing causes or in the efficient bactericidal action of arsphenamin, whereby a toxin is liberated. The fact that the same disease occurs in syphilis without arsphenamin suggests rather the second possibility.

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TREATMENT OF CEREBRAL TRAUMA

By TEMPLE FAY, M. D., Philadelphia

Read Before the Kanawha County Medical Society.

My remarks this evening will be confined to the consideration of (1) Acute Traumatic Injuries of the Brain; (2) Injuries of Childbirth; (3) Post Traumatic Epilepsy.

The subject is so comprehensive it will be impossible to tell you but the essential factors in each group. Particular emphasis will be plated upon the important underlying causes which demand treatment in acute traumatic injuries to the brain.

Under acute trauma we shall consider (1) Fractures of the skull which may be divided into three groups:

A. (1) Simple Fractures of the vault which require no treatment; (2) Fractures of the base. These are difficult of diagnosis even by X-ray. Shadows of fracture at the base are frequently overlooked. The symptoms however, are usually more profound and associated with sub-conjunctual echymosis. Hemorrhage from the nose, ear or posterior pharynx which may or may not be associated with a cerebro-spinal leak, from the nose, ear or posterior pharynx. The treatment is symptomatic as will be discussed later. The application of Dichloramin T, after careful cleansing in case of bleeding from the ears, or a mild antiseptic spray where the nose or pharynx is involved. Quiet and the administration of Urotropin Grs. XX three times a day is the treatment now employed at the University Hospital.

(B) Compound fractures indicate debridement and cleansing of the wound with antiseptics such as Iodine and ether. Loose suturing of the scalp with silkwork gut and drainage.

(C) Depressed fractures which demand elevation and removal of the bone fragments. Later after three to six months, repair of the bony defect

by means of an osteoplastic transplant which is obtained from a neighboring region of the skull after an exact pattern has been obtained of the defect, mapped out on the area from which the bone graft is to be taken. Careful preservation of the pericranium must be observed so that sutures of the bone graft to the pericranium about its new location may be complete.

(2) Intracranial hemorrhage divides itself into three groups:

(a) Arterial which usually arises from rupture of the anterior branch of the middle meningeal artery and may be (1) extra dural, the most favorable type and, (2) sub-dural with the rapid onset of symptoms usually manifest by unconsciousness at the time of accident followed by a lucid interval in which the patient regains consciousness for a varying length of time, to subside again into a stupor marked by progressive weakness, aphasia, falling pulse rates, respirations, with a co-incident fall of blood pressure, especially the diastolic. The neurological examination may disclose pupils unequal, usually dilated on the side of the hemorrhage. Beginning facial weakness which may progress and involve the hand, the arm and lower extremities. Reflexes are usually diminished for a certain period after the injury, but may be increased on the side opposite the lesion. The Babinski and Oppenheim reflexes are of distinct value in determining early involvement of the motor cortex. Weakness and paralysis rapidly ensue. Rupture of the artery sometimes occurs by contra-coup and therefore the site of injury is not an index to the source of hemorrhage.

(B) Venous the large cortical veins which enter the longitudinal sinus may rupture, giving rise to a slow ingravescent type of hemorrhage with symptoms similar to those seen in arterial bleeding, except they may be greatly delayed even to a period of six weeks following the injury. A case of this character is strongly brought to mind in a woman who fell from a step ladder, striking her head in the right occipital region. Aside from a momentary period of unconsciousness she recovered without symptoms, and within a few days took up again her usual duties about the house. Six weeks later, there began a gradual weakness of the face and arm on the right side with progressive stupor, increased reflexes and Babinski and clonus on this side associated with a fall in pulse and respiration. An exploratory of the left motor cortex revealed a large ingravescent hemorrhage which was easily removed, followed by immediate return of consciousness and power in the right hand and leg.

(C) Veins of Galen Syndrome may be encountered in severe injury to the head and has been described by Bagley to produce a definite group of symptoms unlike the usual picture of intracranial trauma. In these cases he found there was a rapid rise in temperature within a few hours to 105, pulse and respiration maintaining a high level in all of the cases. The outcome is always fatal. The symptoms are bilateral with increase in reflexes, and marked stupor. The brain however, shows no evidence of pressure, in fact, in two cases where exploration was performed the cortex was found to be fallen away from the dura. Hemorrhages in the supply of the large veins of Galen at the base, were multiple, involving the corpus callosum, thalamus and septum pallu-

cidum. A recent work by Wilson and Winkleman indicates the frequency of pontile hemorrhage in intracranial trauma and is greater than has heretofore been supposed. It is this group of cases which succumb in spite of any effort directed toward relief and treatment.

Let us turn now to the largest group which present some definite means of treatment and in which a certain per cent may be successfully carried through the period of intracranial pressure which frequently follows even slight injuries to the brain. It is in this group that the best results may be obtained and many cases saved which heretofore have succumbed to the inevitable appearance of intense intra-cranial pressure.

(3) Cerebral Trauma with pressure. This is the most important phase of the subject and will include the (1) management of shock, (2) pressure, and (3) actual brain injury.

It is important that we have definitely in mind the underlying factors which arise in this condition so as to intelligently treat this most difficult group of cases.

Let me therefore at the risk of seeming elementary, review briefly the mechanism of these factors so that the means of treatment described later on can be applied to each case beneficially as the necessity may arise.

Under *shock* we shall consider only the surgical type of shock, so-called Histanime shock or the type of shock brought out by the British Shock Commission during the war. So far the so-called Anoci Shock of Crile has not assumed a character which offers a means of treatment in the acute stages of cerebral injury.

Let us understand this surgical shock definitely. It may be produced by actual loss of blood volume from lacerations of the scalp or it may be produced by extensive trauma to the head or other parts. Able, showed Histamine could be extracted from tissues. Richards showed Histamine when injected into circulation produced profound shock. Experiment, cat, cord cut, leg lacerated, shock. Cord uncut, femoral vein tied—no shock, (Platismograph). In other words liberation of some substance presumably Histamine (?) into the blood stream produces shock.

(1) Rapid pulse;
(2) Rapid respiration;
(3) Low temperature;
(4) Cold leaky skin;
(5) Syncope.

Hemoglobin has been found 140, blood more viscid with transudation of plasma into tissues, hence blood volume available for circulation depleted. Pulse and respiration rise. These must be combatted as we all know by fluids intravenously, transfusion, stimulation, heat and quiet.

In intra-cranial shock we are dealing with an upset vasomotor mechanism and a question of blood volume and blood pressure. Hence this factor is of prime importance in all intra-cranial injuries. It must be your first consideration. Neurological examination, operation all other factors must be considered only after the period of shock has subsided. This is evidenced by a return of the temperature to normal, a subsidence of the pulse rate and a rise in blood pressure.

Please bear in mind the pulse rate, throughout the course of treatment, should in my opinion be considered a fair index of blood volume. In the absence of myocardial involvement

the cry of the heart for more blood to maintain the proper pressure level, this of course is retroactive with the vasomotor regulatory mechanism but may be considered as an indication for more fluid in the blood stream.

With this factor of shock clearly in mind let us turn to the most serious factor though at first not the most important. *Intracranial pressure,* so-called "cerebral edema," "medullary edema," "acute internal hydrocephalus," etc., presents the problem which becomes rapidly terminal unless proper relief is afforded.

The underlying factors in this mechanism are so important that a clear understanding of each must be had in order to combat the symptoms as they arise.

The brain being tightly enclosed within the cranium and more tightly limited by a relatively non-elastic covering, the dura, permits but small range of volume increase. The fontanels in a child are evidence of this ever-fluctuating brain volume. Following a severe contusion there is the same tissue reaction as seen elsewhere in the body, vascular engorgement with increase in brain volume at first at the expense of cerebro-spinal fluid volume if rapid escape of cerebro-spinal fluid is possible by normal or mechanical means this addition of brain volume and congestion may produce only symptoms of focal character. If however, the normal pathways of release of spinal fluid are impaired, intracranial pressure becomes manifest, compression of the vasculature and for a short time the expression of venous blood to meet the increasing volume due to brain swelling and ever increasing cerebro-spinal pressure, for excretion of spinal fluid by the choroid will proceed as seen in hydrocephalus to the point of almost complete destruction of the brain, very like excretion of urine in a kidney with hydronephrosis may entirely destroy that organ.

With the increasing intra-cranial tension and compression on the vessels, the blood pressure on the systolic side is raised to meet this resistance until the point of greatest possibility under the circumstances has been reached. Here then, ensues a gradual ischemia and anemia of the brain and we see signs of stupor, and medullary symptoms begin to assume a grave character with the terminal outcome not far away.

This is a brief outline of the progress in these cases. Let us turn to the underlying cause.

We may trace briefly the cerebro-spinal circulation to see what is disturbed in the usual function of this system. The fluid secreted in the lateral ventricle by the choroid plexus passes by way of the foramen of Monroe to the third ventricle, thence through the aqueduct of Silvius into the fourth ventricle, here in a fissure between the cerebellum and the medulla reaches the subarachnoidal space forming the Cisterna Magna, from this reservoir it finds its way always *under* the arachnoid around the sides of the pons, passes upward through the incisuria tentorii to reach the subarachnoid space at the base of the brain; from here it is diffused over the cortex following the convolutional sulcae to reach the Pachionian bodies which lie on each side of the longitudinal sinus, usually 6 or 8 in number.

These Pachionian bodies are peculiar structures resembling villae of thin arachnoidal tissue extending into the lacunae or blood lakes of the

longitudinal sinus and separating the spinal fluid from the blood venous system by a thin film which is permeable to spinal fluid. They are not secretory in character.

As 80% of absorption of spinal fluid occurs by this pathway as well as into certain large cortical veins which contain small pores, we see at once the importance of disturbance of this mechanism in the production of intracranial pressure. Less than 20% of the fluid finds its escape along the nerve trunks of the spinal cord. Concussion to the brain causes rupture of the arachnoidal membrane and the escape of cerebro-spinal fluid *between* the arachnoid and the dura. Here it acts as a foreign substance and accumulates without means of escape, causing the so-called "wet brains" seen in certain groups of cases. Its presence may give rise to localized pressure just as a subdural hemorrhage may, but the onset of symptoms is usually more gradual and delayed.

Injury by blows on the head likewise may give rise to temporary disturbance of the pachionian bodies so that spinal fluid may not escape in the usual pathways. Hemorrhage or actual contusion to this area adds to the disorganization of the system.

The fluid finding no means of escape and being continuously and relentlessly secreted by the choroid soon accumulates to the point where pressure is manifest. When back pressure at any point occurs there is a bulging of the arachnoidal covering in the ciserna magna and pressure here becomes great enough to give cardiac and respiratory symptoms by direct pressure on these centers which lie in the floor of the fourth ventricle.

It is evident any obstruction to the outlet of cerebro-spinal fluid in the fourth ventricle, in the Aqueduct of Sylvius or third ventricle will cause an internal hydrocephalus.

Obstructions caused by inflammation or obstruction of the arachnoidal pathways will give rise to external hydrocephalus. The pressure arising after acute injuries to the head due to a temporary disorganization of the absortive mechanism is therefore simply a mechanical condition demanding removal of fluid either directly by tapping or indirectly by dehydration.

Having a definite understanding of the factors involved we may now turn to the symptoms and treatment of intra-cranial pressure.

The respiratory center lies in the calamus scriptorius. A small quill-like projection on the floor of the fourth ventricle. Its structure is such that it lies exposed to pressure from three sides, which may cause constriction of the vessels with a resultant ischemia and a lessening of respiratory impulses that pass down to the phrenic centers. Hence a fall in the respiratory rate.

It is evident one must restrict fluid intake in the patient so as to prohibit unlimited secretion by the choroid plexus, a matter difficult enough even under active dehydration. If the source of this unabsorbed fluid is curtailed then the obstructive factors may be given time for re-adjustment. So that dealing with shock, the most important factor in the early stages of trauma one must ever bear in mind the fluid administered must be just enough to combat the element of shock (depletion of blood volume) and not too much, so as to aggravate the period of intra-cranial pressure which is sure to follow. The fluid intake must be carefully regulated for several days so that on a mo-

ment's notice, if pressure becomes marked the excess fluid may be withdrawn by dehydration within a few hours. On the other hand, dehydration must not be carried to the point where depletion of blood volume becomes so great that the pulse and respirations are forced above normal toward the picture of shock.

We reach now the group of cases which present the two problems simultaneously to such a marked degree that many die in spite of any means of relief at our disposal. To treat the shock adequately is but to increase the intra-cranial tension. To dehydrate accentuates the shock by further depletion of blood volume. One is literally between the devil and the deep sea. As has been said, most of these cases die, a few may be steered through the horn of the dilemma by giving fluids sufficient to combat the shock and tapping the ventricle frequently to relieve the intra-cranial pressure. Frequent spinal puncture may be resorted to if proper precautions are taken to avoid a foramenal hernia (patient should be prone with foot of bed elevated and fluid withdrawn gradually, otherwise intra-cranial pressure may jam the cerebellum into the foramen magnum when the spinal column of fluid is withdrawn, causing abrupt respiratory failure.)

We have said the pulse may be considered when above 100 as a fair index of blood volume, so too the respirations when below 18 may be regarded as a fair index of intra-cranial pressure. A fall in pulse rate is also indicative of pressure though the respiratory rate is more reliable.

The temperature when subnormal marks the phase of shock, when above normal is unimportant until it reaches 105 F. or 106 F., when a terminal outcome seems imminent.

Temperature readings above 105 F. should demand active efforts at reduction such as sponges, ice packs and cool baths. The lethal temperature of brain tissue is about 108 F. in the animal and death from this cause alone may ensue if the temperature is permitted to reach this level. It has been found that Phenacetin Grs. IISS may help to break a rising temperature curve.

The general treatment for cranial injuries is well known. Absolute quiet with sufficient sedatives. Avoid large doses of morphine or heroin as these may complicate or produce respiratory symptoms. Bromides and chloral have been found of use. Rectal administration in doses, bromide Grs. LX. Chloral Grs. XXX, or if given by mouth half of the above dose will be found efficacious.

Ice bags to the head, counter irritation to the abdomen and feet. This latter feature may be worth while to a greater degree than we are inclined to suspect. It was strongly brought out in the case of a little girl struck by a mail truck, admitted to the University Hospital, unconscious with a right hemiparesis. She remained unconscious nine days when a pneumonia set in. This was probably influenced by the presence of a fractured clavicle with limitation of breathing. With the onset of pulmonary congestion, she became conscious and her aphasia rapidly cleared. She made a remarkable recovery and was discharged after five weeks, the hemiparesis almost entirely disappeared.

Here was a case of severe contusion and cerebritis, the longest period of unconsciousness I have seen with eventual recovery. Her condition was precarious for days but careful

regulation of her fluid intake which of necessity was by duodenal tube and frequent dehydration I feel was responsible for her survival. Placing the patient on the face with elevation of the foot of the bed will improve symptoms of respiratory depression very quickly and satisfactorily. The respirations assuming a more normal rate and rhythm. This is probably due to the increase of blood pressure which the position affords and consequently an added margin in overcoming the ischemia due to cerebro-spinal fluid pressure. It may also favor somewhat the added weight of the column of fluid represented by the distance from the anterior horn of the lateral ventricle and the floor of the fourth ventricle.

Ventricular drainage and lumbar drainage may be resorted to in cases where pressure is high and yet the need of fluids is evident by the pulse.

Gross brain destruction is not common; it has been placed as low as 6% however, definite focal areas of fine cortical ruptures or hemorrhages is more common than suspected. I was greatly impressed by a series of brains, 45 in all, shown in Boston, by the coroner, all acute trauma cases; all had microscopic evidence of brain injury but the most remarkable thing was every specimen showed evidence of contra coup involvement and the contra coup lesion was usually the greater.

It is well to bear this point in mind and look for symptoms which might occur at a point in the brain opposite to the site of injury.

The case cited under venous ingravescent hemorrhage also bears out this point and was one of the reasons for explaining something which otherwise seemed difficult. The patient was struck in the right occipital region. The hemorrhage was over the left motor area. Contusions of the brain offer no special form of treatment unless associated with hemorrhage.

It is becoming more evident that subcortical lesions exist which otherwise would escape notice especially so in the Pons. The rapid respiratory rate bespeaks irritation and not depression. We as yet have not been able to explain it satisfactorily whether on an oxygen; the disturbance, or irritation by direct injury to higher exciting centers.

Regarding the injuries of childbirth, I have had little experience with this type of case. Sharpe, who has done a great deal of work on this subject, recently gave a summary of his findings in the *West Virginia Medical Journal.* The presence of 13% of intra-cranial hemorrhage in the newborn is a surprising and interesting finding. The treatment by lumbar drainage is rational and the information may be of decided value in helping to explain many of the so-called idiopathic epilepsys.

Regarding post-traumatic epilepsy, the condition lends itself in certain cases to operative relief where there is definite evidence of depression or focal symptoms following injury. Exploration may be justified in the hopes of finding a cystic condition which may follow some months or years after severe head injury. Usually the symptoms of Jacksonian epilepsy are the first from which the patient seeks relief and frequently adhesions between the dura and cortex, or cystic collections around old organic areas, may bring forth when removed, sufficient relief to justify the procedure in many cases. However, frequently only a milky exudate is seen along the course of the vessels and operative

procedures are of no avail. In cases where cranial defects are present the irritation of the adherent dura to the cortex and the approximation of the brain to the scalp may produce sufficient irritation to cause convulsions. This group have been found to be greatly benefited after the scalp has been carefully dissected free from the dura and an osteoplastic bone graft placed over the defect. Rossett has recently pointed out that Myoclonus may be induced by a hyperapnea and wherever damage to the pyramidal system has occurred, these convulsive manifestations are more prone to exist. This opens a question as to the possible cause and treatment of many of our epilepsys. Given a pyramidal system already injured or impaired, which shows a tendency to convulsions in the presence of a simple hyperapnea, it may be possible eventually to explain the occurrence of epilepsy upon the acid base equilibrium in the blood. Such work is now under way and the results as yet are not sufficient to warrant definite conclusions.

THE USE OF MAGNESIUM SULPHATE IN OBSTETRICS.

By H. S. KEISTER, M. D., Fairmont, West Virginia

Read before the joint meeting of the Marion and Monongalia Medical Societies at Morgantown, April 7, 1925.

While visiting in the Los Angeles General Hospital last June my attention was called to their use of magnesium sulphate intravenously for the control of eclamptic convulsions. Their cases while limited were uniformly successful and seemed worthy of more extensive trial; therefore I decided to do some work along this line.

I had in mind the sedative action of magnesium sulphate on the nerve cells as well as the intra-spinous use of magnesium sulphate for the control of tetanic convulsions.

The treatment consists of intravenous administrations of 20 c.c. of 10% solution of magnesium sulphate as soon after the first convulsion as possible.

Eliminative measure, such as phlebotomy, stomach lavage, catharsis, colonic flushing with glucose and soda are carried out as in the treatment of any toxemic conditions. I have had an opportunity to treat only two cases of eclampsia so far by this method.

Case No. 1

Para 1. Age twenty, in her fourth convulsion on my arrival. At term, but not in labor. I gave her 20 c.c. of 10% magnesium sulphate solution intravenously followed by 1,000 c.c. normal saline by hypodermoclysis. Eight hours later 10 c.c. of magnesium sulphate was given intravenously because of restlessness. No more convulsions. Thirty hours later spontaneous delivery of a normal female infant. Uneventful recovery.

Case No. 2.

Para 2. Age 23 years. Upon this patient I personally did a Caesarean section two years ago after she had had fourteen eclamptic convulsions, resisting all medication. This time I was called to see her in her eighth month of pregnancy. She had just finished one decided convulsion. She had a pale dry skin, oedema of the face, tongue clear, eyes slight nystagmus, pupils equal and reacted to light and later to accomodation.

Heart and lungs negative, legs oedematous. Pulse equal, full and bounding. Blood pressure 170 systolic, 120 dyastolic. Urine contained much albumen.

Twenty c.c. of a 10% solution of magnesium sulphate was given intravenously immediately, followed by a modified Stroganoff method of treatment consisting of quiet darkened room, glucose and soda enema, saline cathartic, morphine sulphate grain ¼ hypodermically. Free administrations of water (no chloroform). One hour later Chloral Hydrate Gms. II in 100 c.c. of milk (if comatose per rectum). Three hours later morphine sulphate grain ¼ hypodermically. Five hours later chloral hydrate Gms. II. Repeat the magnesium sulphate on second day. This patient did not have any more convulsions and her blood pressure reduced to normal in eight days. Urine clear in twelve days, oedema gone at the end of the first week. Gave her magnesium sulphate 20 c.c. 10% solution intravenously every 10 days.

I delivered her at term five weeks later of a living boy baby. Uneventful recovery of mother and baby, in excellent condition. I have treated five cases of toxemia of pregnancy by this magnesium sulphate method with gratifying results. Gave them 20 c.c. of a 10% solution intravenously every four to six days in the beginning of treatment and every ten days after progress was made, together with mild eliminative measures.

One case with rather marked symptoms cleared up beautifully with only one injection.

These injections should be strictly sterile and administered slowly as the patients complain of a peculiar feeling all over their bodies, immediately after the administrations which clear up in about ten minutes.

In normal deliveries I frequently give morphine sulphate grain 1-6 together with 2 c.c. of a 50% solution of magnesium sulphate hypodermically. When the cervix is about two-thirds open, repeat the magnesium sulphate hypodermically every one-half to one hour, depending on the severity of the pains. In most cases I get a decided intensification and prolongation of the action of the morphine. The keen edge of the pains is decidedly reduced with no narcosis of the baby.

For hard deliveries and low forceps cases, I use morphine sulphate grain 1-6 with magnesium sulphate 50% 2 c.c. hypodermically and repeat the magnesium sulphate as just mentioned; when the uterus is completely dilated and the pains are coming strong and regular by at two or three minute intervals I give ether 2½ oz. with olive oil 1½ oz. in combination, with a piston syringe and a male rubber catheter, into the colon, which has been previously cleaned with a enema. In about 25 to 30 minutes the patient becomes about one-half to two-thirds asleep and delivery proceeds with very little discomfort.

In case it is necessary to do a low forceps delivery, just increase the ether and olive oil mixture about one-half and wait about 20 to 25 minutes and the forceps can be applied and an extraction done.

In case your patient is not asleep, and you have waited long enough for the absorption of the anesthetic, just increase your colonic anesthesia. This can be done, if so desired to complete anesthesia, though I do not recommend it at this time. I rather prefer a few inhalations of ether or chloro-

form. I did a low forceps case by this method last week with gratifying results.

I am disposed to try the intravenous use of magnesium sulphate in case of pre-eclamptic toxemia, which do not improve under the usual treatment, in the hope that the toxemia may be controlled and the pregnancy carried to spontaneous labor without eclamptic attacks.

There has been observed no effect on the labor, either of hastening its onset or of interfering with its progress after it starts. My first idea was to control the convulsions by the paralyzant or sedative effect on the voluntary muscles.

I first feared a respiratory paralysis, but have not noted any deleterious effects (10 c.c. of a 2.5% calcium chloride solution intravenously will take care of it should it occur.)

I believe that there is a depletant effect by withdrawing of fluids from the tissues into the blood stream, thus reducing the oedema. In reducing the oedema of the brain the coma clears up more rapidly and the increases of watery elements of the blood increases the urinary output and relieves the patient of her toxins. The action of magnesium sulphate is supposed to be by its penetrating into the space between the terminal processes of the neurouns whereby the contact is cut off.

Dr. Lazard of the Los Angeles General Hospital has treated fourteen consecutive cases of eclampsia without mortality with this magnesium sulphate treatment.

The results I have had in this small series of cases have been so uniformly good that I feel that in the intravenous use of magnesium sulphate, we have a method of treatment which yields results far better than any we have made use of heretofore.

CAESAREAN SECTIONS, WITH REPORT OF CASES.

By EDWIN F. SHEPPARD, M. D., Fairmont Hospital, Fairmont, W. Va.

Read at Morgantown, W. Va., April 7, before the members of Monongalia and Marion County Medical Societies.

In reviewing the history of Caesarean section one is impressed with the fact that this procedure was practiced some time before the sixteenth century, with the idea of obtaining a living child from the body of a dead or dying mother.

It was some time between the years 1500 and 1575 when Poro recommended his method of amputating the pregnant uterus.

In 1610 Trautman of Wittenberg probably did the first authentic Caesarean section.

After a short time all procedures previously practiced were shadowed by symphyseotomy which, in a short time, fell into disrepute, uterine amputation again becoming a very popular procedure.

During this period and for the first time the uterus was incised and left in place though the wall was not sutured.

Sutures were first used in 1769, but not generally used until 1882, at which time Sanger recommended the first true and efficient uterine suture.

It is astounding to note the fact that the mortality antedating 1882 was at the best about 55 per cent.

From this time on various methods were described and practiced. Some of them as follows:

Amputation of the uterus through the abdominal route.

Amputation of the uterus through the vaginal route.

Incision and delivery without suturing the uterine wall.

Abdominal section with incision at fundus of the uterus and parallel to its long axis.

Transverse incision into the uterus (high and low) using the extra and intra-peritoneal routes for reaching the uterus.

Frank of Cologne in 1906, recommended removing the child through the extra-peritoneal route, the abdominal incision being made immediately above the symphysis.

It seems that many years were spent in search for a route through which the child could be removed to the best advantage, with comparatively little attempt to improve technic.

This operation has been greatly simplified and the mortality greatly reduced and I attribute the latter to the fact that the present day technic can not be questioned.

At present we may dismiss all the methods alluded to, including the old classic cesarean section, which is now in vogue, and choose between the extraperitoneal and the intraperitoneal routes, in either case reaching the child through an incision made in the cervical portion of the uterus. This method being described as cervical cesarean section, or, by DeLee, Laporotracheotomy. Poro's amputation operation may follow either of these if indicated.

It is not the purpose of this paper to make an exhaustive study of the many indications for cesarean section. Such a review, while it could no doubt be made interesting and profitable to those making a special study of obstetrics, would be out of place before a meeting of general surgeons and medical men. However, I will endeavor to bring out a few of the most important points on the subject as will be of use in handling the more common conditions one is liable to meet with in the ordinary course of hospitals practice.

With the modified and perfected technic of today the cesarean section operation is an operation of comparative safety. The mortality has been gradually but progressively lowered until at present it is not over one or two per cent.

With the operation thus shorn of its terror, it is being more resorted to where the passage of the child through the birth canal is attended by di.....culty.

While obstetrics is rightly one of the most conservative branches of medicine and surgery I am inclined to think that some have been ultra-conservative by forgetting that, in some cases, the abdominal route is much safer than unduly prolonged and mutilating high forceps delivery with the associated vaginal and perineal laceration, trauma and injury to the child.

However, the argument in favor of cesarean section with all its glowing report should not lure the surgeon to the abuse of this procedure.

We must condemn the tendency, so commonly met with, to memorize the indications, forgetting the absolute contra-indications.

First in importance, is an operator experienced in this special procedure and surrounded by the necessities for the performance of a successful major operation. And for the relative indications the mother in condition to stand the operation and the child alive.

It must be born in mind, however, that for the absolute indication there are no governing conditions. The child must be removed abdominally whether or not it is alive and regardless of the patient's condition—if infected the uterus amputated or the child delivered extraperitoneally.

The absolute and one of the most frequent indications is afforded when the parturient canal is so contracted as to offer a serious mechanical obstacle to labor. The absolute pelvic indication being a conjugata vera of 5.5 c.m. The relative 7 c.m. In the latter spontaneous delivery is impossible but permits delivery after craniotomy. These limits being somewhat altered in flat pelves. It is necessary of course to take into consideration the size and consistency of the child's head as well as the character of the uterine contractions. The pelvic outlet must be considered as well as the superior strait.

If examination reveals only a moderate degree of disproportion between the pasage and the passenger, with a history of previous operative labors with dead children, caesarean section should be performed at the end of pregnancy, preferably before labor begins.

I will mention without discussion other indications:

Exostosis.

Neoplasms of the uterus and adnexa.

Prollapsed cord with undilated cervix.

Ante-flexed uteri.

Dystropia dystocia.

Eclampsia.

Placenta previa.

Abruptio-placenta.

Vaginal and cervical stenosis.

Abnormal presentations with common complications.

Cicitricial tissue as a result of carcinoma of the cervix

Healed vesico-vaginal fistula.

Aside from the well-known absolute indication all others consider the benefits of the mother and child and are therefore relative in this sense.

In the absence of an absolute indication caesarean should never be performed when the child is dead. Other contra-indications are afforded when the mother is infected, in poor condition or among poor surroundings for an aseptic operation. Again, when the mother has been long in labor or subjected to frequent vaginal examinations. Should Caeserian Section be decided upon in the presence of such risks, the extraperitoneal method should be chosen or the uterus amputated.

The above indications are fairly well covered by Peterson's general classification:

1. Obstruction to labor.
2. Uterine hemmorrhages.
3. Constitutional crisis.

Miscellaneous.

It would be impossible to take up this classification and discuss all its phases. I will touch on the indications for cesarean section in the following cases (which fairly well represent the above classes) only by way of case report:

I. Obstruction to labor due to contracted pelvis.

Mrs. C. S., age 30, multipara.

Came to hospital January, 1921. In labor.

Confirmed history showed she had two children destroyed in their delivery. Examination showed that she had a c-v of 7 c.m. Her attending physician was of the opinion that she would deliver spontaneously if given a proper chance. I was again called twelve hours later. There was no en-

gagement. Patient submitted to operation. Child and mother made good recovery.

Eighteen months later this woman returned to hospital and was delivered of a living child—by the abdominal route. The mother lived.

II. Uterine hemorrhage.

Mrs. J. A., age 21. Multip, with narrowed pelvis.

History of first painless, causeless hemorrhage from the uterus followed later by marked pain and abdominal distress. Patient was within two weeks of term. When admitted to hospital patient was markedly shocked, the cervix was not dilated. Cesarean section was done. Very little ether was necessary due to her depressed condition.

Child and mother made nice recovery.

Citrated blood was given intravenously before and after operation.

III. Mrs. J., age 28. Primip.

Brought to hospital unconscious—having had three convulsions, giving history of marked visual disturbance at intervals during the last trimester of pregnancy. At time of admission the systolic blood pressure was 200. A specimen of her urine showed 4 plus albumen. Vaginal examination revealed a non-dilated rigid cervix. Conservative treatment had been tried without any reaction worthy of note. Abdominal Cesarean Section was performed. Due to the toxic condition and probably the administration of a considerable number of drugs the child died. The mother made good recovery.

IV. Obstruction to labor due to the presence of a tumor.

Mrs. E., age 31, was admitted to hospital August 21, after being in labor twelve hours.

Three examinations had been made. Examination showed the presence of a large tumor mass choked into the pelvis preventing the progress of the child's head. Abdominal Section was performed. The child and mother lived.

Due to the patient's condition and in view of the fact that she had been examined a number of times, I did not remove the tumor. Nine months later she returned and the tumor was removed.

An indistinct, pale line marked the post-operative uterine scar. No adhesions present. The tumor was a dermoid cyst.

My experience is limited to a small number of cases—twenty. Due to the limited time on this paper I will not report in full on all of these cases but merely state that other cases done by me were:

Three due to contracted pelvis.

Three due to the presence of tumors.

One in which labor was made impossible due to old pelvic fractures.

One intestinal obstruction at time of labor.

Three others came under No. II. of the above classification.

Five others came under No. III. of the above classification.

It was in the latter group where my only death, fetal or maternal, occurred.

Eclampsia is the gravest complication in obstetrics. Grave because of its often sad results—the loss of mother and child.

There is no doubt but that the majority of obstetricians believe that emptying the uterus as soon as is convenient with safety, is the proper procedure. The uterus should be emptied as soon as possible and with the least possible trauma.

How to terminate pregnancy in these cases must be determined by the condition of the cervix, the remainder of the passage, the number of convulsions, their frequency, the condition of the patient and the manner in which she responds to medical treatment.

When the cervix is rigid and not thinned out, manual dilitation or divulsion of the cervix will aggravate the eclamptic seizure, especially in the primipara, to a greater extent than delivery through the abdominal route. On the other hand, it is not wise to resort to abdominal Cesarean Section in eclamptic cases if the cervix is dilated or easily dilatable. Version and extraction would be preferable.

In each of these cases I have operated there had been one or more convulsion, high blood pressure, and in all but one unconscious, and in each case manual dilitation would have been necessary for delivery through the vaginal route. One mother and two children died.

I do not think that any proecdure would have saved the mother. She was dead before the operation was hardly finished. A living child was recovered.

My twenty cases were done as follows:

Eight high abdominal-uterine.

Two extraperitoneally (low uterine).

Two vaginal Cesarean Sections.

Eight abdominal cervical sections.

Three of the first eight were done under local anesthesia as well as three of the last eight.

After noticing the after effects, the rapidity and completeness of recovery, I am persuaded to think that the latter is far superior to any other method.

LAPEROTRACHELOTOMY TECHNIC

After careful preparation of the patient an incision is made (14 to 16 c.m. long) beginning at the publis. The fascial incision is made a little to the left of the linea alba. The rectus muscle is displaced and the peritoneun is opened extramedially, the bladder pushed down to the right, the lower uterine segment exposed, a transverse incision made in the peritoneum, one or two c.m. below its uterine attachment, the lower flap pushed downward and the upper flap pushed upward sufficiently to allow room for the uterine opening.

It is not necessary to go farther with a description of each step in this operation. Let us suffice to say that care must be taken in packing the abdominal cavity off from uterine leakage—three layers of sutures in the uterine wall, omitting the endometrium when placing the first layer of sutures. The abdomen is closed in the usual manner.

By this method, especially if local anesthesia is employed, the post operative condition is pleasing. Infection is better taken care of, fewer hernias occur, uterine rupture is not likely to occur in subsequent pregnancy and labor. The uterine contractions do not interfere during operation and are not so likely to tear the sutures loose after operation. Adhesions are not so likely to occur.

With a full realization of the fact that the pregnant uterus (where sepsis from below is present or likely to develop) can not be incised by the abdominal route without grave danger of a fatal issue from peritonitis, I would mention the importance of choosing the extraperitoneal route. Hysterotomy has its field of usefulness also.

Data given in this paper, as in other surgical procedures, can not be taken as hard and fast rules applicable in all instances.

The paramount idea must be surgical judgment after free consultation with medical men and obstetricians.

REGULAR OR PSEUDO-MEDICINE

By RAY KESSEL, M. D.
Charleston, W. Va.

Selfishness and jealousy are vital forces in arraying men and women to take a stand for or against a principle. Neither of these two motives activated me in writing this article. I have no competitors in my professional duties, I have no colleagues. I am not prejudiced against the adherents of pseudo-medicine, I am tolerant. I am not fearful of their encroachments; because I am trained, licensed and in good standing with the reputable members of the regular medical profession. My professional efforts are acceptable to both the Federal and State Governments. I am earning a reasonable livelihood by practicing present day standard medicine.

Regular medicine apparently is being questioned, but it is not in jeopardy. It is too well founded to be cast aside for false doctrines. Its scientific investigations and artistic attainments have reached a plane of usefulness that is of service to all the countries of the world. The common sense and practical recommendations of the regular medical profession regarding sanitation and hygiene are of the utmost value to all mankind everywhere. What is more desirable than "To make growth more perfect, life more vigorous, decay less rapid and death more remote?" The history of medicine is as old as the history of the human race. The past century has witnessed a phenomenal growth and development in sanitation, internal medicine and surgery. "Science is no tradesman and works not for the improvement of any calling; but solely because truth is good." Regular medicine has stood the tests of time.

Each year the profession becomes more rational and less empirical. In the Spanish-American War of 1898, with 107,000 of our troops in camp, 20,000 contracted typhoid with over 1,800 deaths. Typhoid inoculations were not in vogue during that period. While I was in uniform during the World War I never saw a case of typhoid or smallpox. Our soldiers and sailors were protected against these two highly communicable diseases by vaccination. When the recent pandemic of influenza swept over the globe the mortality was high both in camp and at home. The medical profession had no specific to administer nor any method by which we could estimate the toxicity of the infective agent.

One of the most difficult problems that confronts the practictioner in treating a communicable disease, and most diseases are, is to ascertain the resistance of the patient and the toxic characteristics of the infection. These two biological phases are vacillating and extremely difficult to approach. Cancer is today our worst enemy. Its cause or causes are unknown, and until they are found, treatment will continue to be surgery and radium and these agents are of value only in the early stages of the disease.

Regular medicine is applicable to the needs of man throughout his earthly career. Occasionally even before his birth, certainly at his birth.

If I were sick and needed medical services I would prefer seeking a physician who could and would diagnose my illness and prescribe accordingly, rather than have an untrained person manipulate my spine for a supposedly abnormal vertebra. Syphilis can be inherited. Mercury and arsenic properly administered are specifics for the disease. Poisons taken internally, accidentally, in my mind require antidotes and symtomatic treatment—certainly not massage and spinal adjustments.

It is not difficult to get recommendations and testimonials for pseudo-medicine and nostrums. The average person enjoys some degree of notoriety. Publicity frequeutly tickles one's vanity. The American is credulous, he does not object to being stung. The daily press contains lurid descriptions of the magical wonders of pseudo-medical activities and nostrums, such as Lydia E. Pinkham's Vegetable Compound, Wine of Cardui, Tanlac and Doan's Kidney Pills. Thoughtful people are realizing that such preparations are compounded to sell rather than to be administered.

In many rural sections of West Virginia there is a scarcity of regular physicians. This condition has brought about quite a bit of study and investigation by both the profession and the public, as to the cause and how corrected. Poor roads no doubt are keeping many well-trained young physicians from seeking rural locations. A rural physician spends too much of his time plodding along a rough road instead of visiting the sick. Physicians seldom save life—they help in prolonging the span of life and alleviating suffering. Licensing the pseudo-cults will not benefit the rural sections. Medical Ishmaelites locate in cities and towns and not out in the country districts.

They are looking for the neurotic and dyspeptic, the idle rich and those who enjoy being pampered.

Some years ago an itinerant "Doctor" Palmer while sojourning at Davenport, Iowa, announced to the world a new system of healing—chiropractic or hand practice. Palmer said, "The cause of disease is a mechanical obstruction of the natural functions." The human mechanic can remove and adjust that cause by his knowledge of anatomy and a highly cultivated sense of touch. Doing with the hands what the medical men aim to do with drugs and the knife. Chiropractitioners do not believe in the FACT that pathogenic germs can and do cause disease. They are opposed to the use of drugs. They say that they can cure disease by adjusting the spine. They claim to cure disease when regular medical men fail. They ignore the principles of scientific investigation.

At the recent session of our State Legislature bills were introduced into both houses with an idea of enacting a law to license chiropractictioners in the State of West Virginia. After some discussion and much caucusing both branches of our Legislature voted to license the cult. When the bill was carried to our Chief Executive he kept the bill for five days without either signing or vetoing it, automatically it became a law. Of the four legislators that represented Jackson County three were for the bill and one against it. Evidently regular medicine was unsatisfactory.

If chiropractic medicine is scientific and correct, then regular medicine is wrong and regular practictioners should have their license revoked. Also expensive laboratories

and hospitals should be converted into commercial houses instead of being used to prevent and treat sickness. Such men as the Mayos, Bloodgood, Kelley, Deaver, McGuire, Matas, Bass, Oschner, Cabot and Rosenow who are representative masters in the regular medical profession, are impostors and should be suppressed.

Regular medicine is near and dear to me. The most active part of my life has been spent in medical preparation and medical practice. My junior brother, C. Royal Kessel, is now a professor in the medical department of our State University at Morgantown. My baby brother, Russell, will graduate in medicine the latter part of this month from a reputable regular medical college in Philadelphia. He completed the graded school course, four years' high school course, two years of college work and four years of medical college training, and shortly after graduation will enter upon a twenty-seven months internship before he engages in private practice. Why is it necessary for a prospective physician to take such a thorough course before he engages in his life's work? It is because medicine is such a gigantic study with all its ramifications. After a young man has completed a thorough course in the profession for the practice of regular medicine it certainly should qualify him to diagnose and treat sick people better than an individual who has a meagre education and even inferior medical training for pseudo-medicine. It is painful to me to see medicine prostituted by those who are ignorant and mercenary. A man cannot extract a great deal of honor from medicine, but he can reflect honor upon medicine and the medical world.

A DETAILED STUDY OF FIFTY CONSECUTIVE CASES OF BRONCHIAL ASTHMA.

By KENNETH D. GRAVES, M. D.
Roanoke, Va.

Read before the Mercer County Medical Society, Bluefield, W. Va., April 30, 1925.

Asthma in the old terminology of disease was construed as being any disturbance of the bronchi, either directly or indirectly, causing spasmodic shortness of breath and wheezing. Osler in his earlier editions refers to it as a neurotic disease, although he mentions the possibility of such factors as feathers and dust playing a part in the etiologic role.

In this study I have made an effort to exclude the report of patients with such etiological factors as congestive heart failure, renal disease, simple congestion of the lungs, tuberculosis, bronchiestasis, thymus disease, etc., and restrict my report to cases which I regard as true bronchial asthma. These cases gave cutaneous skin reactions as follows:

Group 1. Consisting of cases receiving no benefit from their treatment. In this group are seven cases, of whom five were sensitive to one or more proteins. In my opinion, while certain materials were found to which these patients were sensitive, the true causative factor was not discovered.

Of the cases showing a fair degree of improvement Group 2, four cases out of five, were sensitive to one or more proteins. The fifth case, which did not give a skin reaction to anything, was empirically treated by in-

struction in house cleaning, which benefited but did not entirely relieve him.

Of those cases giving good results, Group 3, thirty-six out of thirty-eight were sensitive to one or more proteins. Since we are primarily interested in what to do and how to do it in relieving asthma, I shall discuss chiefly my Group 3, consisting of cases who were altogether or virtually relieved.

Following is a protocol of this group of patients, showing their individual sensitiveness:

Mrs. B.: Oat, tomato, mustard, egg.

Mr. G.: Bacteria.

C. H.: Dog, wool, chicken.

T. T. S.: Chicken feathers, orris.

Dr. D.: Rabbit, chicken feathers, goose feathers, egg, milk, dust.

R. C.: Chicken and goose feathers.

Mr. V.: Goose feathers and dust.

Mr. H.: Ragweed, dust, wool.

Miss McF.: Ragweed, goose feathers, orris.

Mrs. B.: Rabbit hair, wool, dust, orris.

L. L.: No sensitization. Hernia, which when reduced, gave relief.

Mr. G.: Chicken and goose feathers.

John W.: Cattle hair and goose feathers.

G. W.: Dust.

E. T.: Ragweed, dust.

Mrs. R.: Bacteria.

Mr. P.: Goose and chicken feathers.

M. P.: Dust, postum.

J. J. N.: Bacteria.

Mr. M.: Chicken and goose feathers, dust.

Mrs. L.: Bacteria.

Mrs. T. L.: Bacteria; dead tooth drawn, and vaccine made from culture.

Mrs. H.: Bacteria. Dead tooth drawn, no other treatment.

B. G.: Dust, orris, rat, chicken and goose feathers.

Mr. X. D.: Goose feathers, orris, tobacco, dust.

Mrs. C.: No reactions; relieved by changing residence.

M. B.: Goose feathers.

J. W. A.: Dust, horse hair.

F. W.: Dust, ragweed.

Miss S.: Dust from sleeping porch.

Mrs. E.: Dust, glue.

Mrs. B.: Orris, dust.

R. McC.: Wool, chicken, dust.

A. H.: Goose feathers, timothy, horse hair, orris.

R. P.: Chicken and goose feathers.

Mrs. G.: Horse hair, orris, chicken feathers, dust, ostrich feathers.

Mr. H.: Goose feathers, dust.

Miss A. S.: Goose feathers, orris, horse hair.

Mr. R.: Dog hair.

Summary: Of these cases giving good results from treatment, 36 out of 38 gave skin reactions to one or more foreign proteins. This sensitiveness was to the following proteins: House dust, 17; goose feathers, 15; chicken feathers, 11; orris, 9; bacteria, 5; wool, ragweed and horse hair, 4 each; egg, rabbit hair and dog hair, 2 each, and one each of ostrich feathers, cattle hair, oat, tomato, mustard, tobacco, glue and timothy. Strange to say, the case who was sensitive to milk was not sensitive to cattle hair.

Two of this group of cases did not reveal any form of sensitiveness. In one the history was obtained that whenever his truss supporting an inguinal hernia slipped his asthma began. After repeated sensitiveness tests, as we did not put much credence in his report, we finally gave up, got him a properly fitting truss pend-

ing herniotomy, and he was entirely relieved. The other case was that of a woman who gave a pretty clear-cut history of her asthma attacks only occurring in a certain house. We were unable to discover sensitiveness to any protein, but when she empirically moved her residence her asthma was relieved.

It is especially important to secure a detailed history in dealing with asthma. For instance, cases occurring during the night are more often due to such epidermal substances as feathers; those coming on about dusk, and when the body becomes chilled, are more often due to bacteria. Those which occur in the day time may be due to almost anything. The most troublesome cases I encounter are of the irregular type, coming on once in several weeks or months. My experience has been that the most common cause of the bacterial type of asthma is sinus infection. I want here to differentiate between sinus infection and such nasal disorders as polypi and deviated septa. Nasal polypi, when they exist in asthmatics, practically always follow asthma, rather than vice versa. I am unable to find the history in my series of an asthmatic who was benefited by an operation for deviated nasal septum.

The treatment consists of removing the offending protein as far as possible. If this is not possible or practicable, we desensitize the patient, using the specific protein which appears to be causing the trouble. For instance, if a patient were sensitive to ostrich feathers and egg, we could probably instruct her to discontinue the use of ostrich feathers and desensitize her to egg, since it is hardly feasible to stop her use of egg in any form, although occasionally a patient can use well-cooked egg without any trouble when raw egg would give symptoms.

Although I realize that the following course of desensitization is not unattended by danger in the hands of those who do not realize its possibilities, our best results in desensitization have been accomplished by means of large doses of specific antigen. I am satisfied from my own experience, and the reports of Besredka and others on animals, that too small a dose increases rather than diminishes sensitiveness. I, therefore, determine the minimal dose which will give a reaction, and after explaining to the patient that possibly I am going to make him have a severe spell of asthma, and that it will be necessary for him to remain in the hospital about two or three days, I inject from three to five times the minimal reaction dose, repeating this in from twenty to thirty minutes. This usually brings on a rather severe attack of asthma, with or without anaphylactic reaction. This is controlled by atropine, adrenalin and occasionally morphine. I insist that after leaving the hospital the patient expose himself daily, as far as possible, to the protein, in order to avoid a return of the sensitiveness. This appears to the casual observer to be a rather drastic form of therapy, and I must say I prefer not to resort to it if it can be avoided; but in certain selected cases it has given good results.

The prognosis of asthma cases is always questionable, depending upon the perspicacity of the physician in locating the causitive factor, as well as upon the fidelity with which the patient adheres to his instructions. For instance, in cases caused by house dust it is not sufficient to tell the patient to go home and clean his

house. It is also necessary to explain to him in detail that his trouble is caused by the minute particles of house dust of which he catches a glimpse when a ray of sunlight filters into a dark room. We also go into details with him as to the necessity of removing all heavy woolen draperies, rugs, carpets and upholstered furniture from the room in which his attacks occur, usually the bedroom; and instruct him to wax, oil or varnish the floor. He may be assured that he will have a return of this trouble in from four to eight weeks, depending upon how soon he begins to let down the bars in his campaign against the dust, and that this is to be the signal for renewed activity in his domestic cleanliness. A vacuum cleaner is a dust asthmatic's most valued possession, once it becomes installed and appreciated.

Summary: Of fifty consecutive cases of asthma, seven or 14% were not benefited at all; five, or 10%, were considerably benefited, but still somewhat disturbed by the disease; while 38, or 76%, were completely relieved so long as they followed instructions. Of these 38 cases, in 36 we obtained 88 reactions from 22 proteins, while two appeared to be due to some nonspecific factor.

Average duration of disease of patients relieved, 7.3 years in 34 cases.

Age ranged from 5 to 69 years. Average, 36 years.

My very strong impression is that their relief depends upon the diligence and skill which are brought to bear by the physician in their behalf in locating the cause; and finally upon the fidelity with which our patient follows our instructions. I know of few diseases in which co-operation is more necessary, for the mutual satisfaction of patient and physician.

OUR PRESENT UNDERSTANDING OF RICKETS.

By GEORGE M. LYON, B. S., M. D.
Huntington, W. Va.

Read before the Cabell County Medical Society, February 18, 1925.

INTRODUCTION

In preparing this paper for tonight I have used very freely that excellent review on rickets so admirably presented by Dr. John Howland in the November (1923) issue of "Medicine.' I would urge all of you who have not done so to read it. In order to bring before you many of the interesting facts presented there by him and fearing that you may not get around to read the article I have taken the privilege of using it very freely feeling that it will be well worth while and that I may be pardoned if I can just bring out here tonight the thorough manner in which modern methods of research are beginning to solve the complicated problems of nutrition and metabolism. We are just on the threshold of understanding the accessory food factors or vitamins so important and so necessary in health.

For the sake of convenience the paper is divided into three parts: I. History and Development of Our Present Understanding of Pathogenesis; II. Chemistry of Rickets; III. Treatment of Rickets.

THE HISTORY AND DEVELOPMENT OF OUR PRESENT UNDERSTANDING OF PATHOGENESIS.

The disease was first mentioned by Glisson in England in a monograph on disease. In spite of this he must not have been the first to have observed it. Deformities of body and form were more studied by the popu-

lace and artists than by physicians and we find the term 'rickets' appearing in the Bills of Mortality as early as 1633.

Pommer in 1885 gave the next written mention of it and at that time he established on a firm foundation the pathology of true rickets. Previously many abnormalities of the newly-born and of the deformed child were referred to as "rickets." Chondrodystrophy, osteogenesis imperfecta, etc., were mistaken by even the famous Virchow for rickets. Many felt it a congenital disease. Pommer showed that there were definite bone changes in rickets that were not present in the bones of newly-born children.

About 1750, roughly, cod liver oil was given in a general empiric way as a general "body builder and tonic," particularly in the cases of deformed children and failing septugenarians. The exact origin of the use of cod liver oil as such is not known. Trousseau wrote that he learned of its use from Bretonneau and he in turn had learned it from the father of a patient whose brother had been successfully treated with cod liver oil in Holland. It was a common practice along the Baltic Sea to give weakly children and ailing "old-timers" cod liver oil and ray liver oil.

During the last six years great strides have been made in the study of rickets by several separate groups of investigators. Today we have perhaps as complete an understanding of the pathology and treatment of rickets as of any of the disorders of metabolism. The exact mechanism of the etiology is not known, yet we know well the condition controlling this mechanism and they are successfully controlled in the prevention and the cure of the malady. The list of workers who have devoted time and energy to the study of rickets and its associated conditions is a very long one and as we have learned much about metabolism in the study of rickets so we expect to find the fruits of this work extending deeper and deeper into the understanding of other metabolic problems.

Rickets is a disease of modern origin. Old medical literature, in spite of the remarkable powers of observation of the ancients, fails to reveal anything that might be taken as a description of the condition or its resulting deformities. Artists and sculptors would have delighted in the portrayal of such grotesque and interesting figures as rickets would have furnished them. Pott's disease, chondrodystrophy, pygmies, etc., were found but nothing of a syphilitic or a rachitic nature. Likewise, the bones of these early day infants show no signs of rickets yet frequently they show signs of osteogenesis imperfecta, chondrodystrophy or tuberculosis. The Queen of Punt, evidently a chrondrodystrophiac, is portrayed in all of her royal and grotesque proportions. The Egyptians had the gods Ptah-Sokar and Bes who were both pictured as chrondrodystrophiacs and of them countless statuettes were made. Pygmies and ateleiotic dwarfs with their remarkable and characteristic facial expressions were often chosen as subjects for statuettes and sculpture. Nothing in any clime has ever been found that indicates that there were any rickets in these ancient days even as late as the time of Christ. Bones have been found in great quantity in Nubia, Egypt, Baltic Sea coasts and Peru and yet in none are found any evidences of the bony changes of rickets. Lortet of Lyons,

however, has made the very interesting observation that monkeys were confined in the temple of Thebes 2,000 or more years ago, show unmistakable rachitic changes, in bones recently unearthed. Bones of more recent date have been found in the old crypts and charnel houses of England bearing striking testimony to the freedom of rickets of man up to the beginning of the seventeenth century and its gradual increase from then up to the present. In latitudes extending from that of middle Italy to that of the North of Scotland about 75 to 90 per cent of the artificially fed children in the cities of Europe and America are victims of rickets in the winter and spring months. Incidentally at this time also the infectious diseases are most rampant and the general resistance of most children seems to be lowest. Rickets is a disease that attacks the rich as well as the poor, but usually its frequency is proportional to the degree of poverty and unhygienic manner of living. Rickets contributes greatly to the infant mortality by diminishing the resistance to infection and by lowering the tolerance to various foods, and consequently it lowers metabolic powers and stunts and deforms and weakens the child.

Early observers tried to produce rickets experimentally by giving to dogs a low calcium diet. Perhaps a few times rickets was accidentally produced in this manner but the results were never obtained with any degree of certainty or regularity. The resulting condition was usually an osteoporosis mistaken by them for rickets. Next phosphorous low diets were given with the same object in view. Again bones were produced, differing from the calcium-low-diet changes, but still not typical of rickets, which has a very constant and definite bone picture.

More than 25 years ago Bland-Sutton at the London Zoo instituted an unusual form of treatment for his charges in the Zoo. The effect of his work had a profound influence on pediatric thought and practice from his time on. The litters of lion cubs had died regularly as the result of extreme rickets. After weaning they were usually fed nothing but horseflesh. He had them add to this diet a mixture composed of raw milk, pounded bones and cod liver oil. This was given at least once daily in the place of the horseflesh. Cheadle's account of his results is most favorable but Findlay's rather pessimistic. However, the mortality of lion's cubs in the London Zoo was markedly decreased from that time henceforth. Following this very interesting procedure it became firmly implanted in the minds of many that rickets depended in great measure on the individual being deprived of fat in some form. The frequent development of rickets in children fed on condensed milk or proprietary foods added further substantiation to these views. The favorable influence of cod liver oil on these cases when developed and its power to prevent the development of rickets clinched the correctness of these early observations.

Then Findlay, the great apostle of environment and lack of exercise, tried to produce rickets in dogs with a diet consisting in the main of carbohydrates and with a minimum of fat. He was able to do so only when the dogs were denied sunlight and exercise. Therefore, he claimed that lack of exercise and fresh air to be the etiological factors involved.

Almost contemporarily with Findlay, Von Hansemann, with his keen interest in the rickets of zoo animals and other animals in captivity, announced his "environmental" views, showing that wild animals never had rickets until captivated. Yet when captivated, rickets quickly became their scourge. He showed that horses, cows, sheep, pigs and dogs (but never cats), when kept in captivity developed rickets. He then drew the analogy that when man domesticated himself and began living in houses and wearing clothes that he also began eating a diet equally as "domesticated" and that rickets was an inevitable consequence. He felt that domestication and captivity were the main factors in its cause.

Edward Mellanby first regularly produced rickets experimentally. He fed puppies on diets consisting of a minimum of skimmed milk, with an unlimited amount of bread and with salt, orange juice and yeast. With certain modifications, his experimental diet is today the basal-rickets-producing diet. He added various oils, fats, meat, etc., to test their anti-rachitic values. He showed experimentally that cod liver oil was by far the most active of the anti-rachitic foods, that butter fat had some anti-rachitic power and that vegetable oils had essentially none. He demonstrated that cod liver oil retains its power to overcome and prevent rickets even after being heated to 120 degrees Centigrade for four hours, while that of butterfat is meanwhile lost. He concluded that the fat-soluble "A" found so abundantly in cod liver oil is the anti-rachitic vitamine. The British Medical Research Council in their report, vigorously backed this view in contradiction to that of Findlay that it was a lack of fresh air and exercise.

Findaly and Noel Paton repeated Mellanby's experiments with animals that were kept in the country. They remained free from rickets. Those confined to the laboratory became rachitic. No wonder they felt they were right. Mellanby confined animals on a good diet and no rickets developed. No wonder he felt he was right.

Now, out of this maze we know that either cod liver oil or sunlight (not necesarily fresh air or exercise), will not only cure it but will also prevent it. Park, Howland, Shipley, Powers and others closed the controversy when using McCollum's diets they produced rickets with almost mathematical regularity, proving their clinical findings with accompanying radiographic changes. For the first time these workers used the radiogram as a concluding test as to the presence, degree and status of the rachitic changes. They further showed how the clinical human form as well as the experimental animal forms could be cured or prevented by means of cod liver oil and by sunlight. They used the radiograms as permanent records of the progress of the curative changes.

Sherman and Pappenheim in one center and McCollum, Park and their co-workers in Baltimore almost simultaneously got the same results and in much the same manner. They have been able to produce rickets, scurvy, xerophthalmia and a multiplicity of forms of osteoporosis, each type depending on the salt character and other food factors in the diet. Histological, radiological and chemical studies have been most laboriously carried out. Their work stands as a

monument to the best ideals and methods of rational and worthy research, the kind on which rests the solution of more problems in metabolism. Korenchevsky has recently confirmed their results at least as far as calcium-low diets are concerned.

Although an innumerable variety of diets was used in the production of rickets there are two chief types of diet upon which young animals became rachitic. In the one the calcium was very low and in the other the posphorus was very low. The action of these diets is more pronounced if in the calcium-low diet the posphorous is present in plentiful amounts and if in the posphorus-low diet the calcium is in excess. With any diet rickets may be prevented or cured if it is composed of 2% or more of cod liver oil. The same is true of other fish oils—shark liver oil and burtot liver oil seem equally efficacious. Fifteen per cent or more of butter fat is necessary and of egg yolk almost as much, to prevent rickets. Suet seems to have a slightly favorable effect, but lard and vegetable oils have none. Orange juice and tomato juice have no effect. A good salt mixture (calcium and posphorous in proper amounts) even in the absence of more fat soluble A than is just required to prevent the development of xerophthalmia, acts as a barrier to the entrance of rickets. Experiments may be repeated and the results can be predicted with almost mathematical accuracy. McCollum, Park et al., have shown that there is an antirachitic factor distinct from the fat soluble A. Cod liver oil may be heated sufficiently high and long to destroy its power to cure xerophthalmia, the test for the presence of fat soluble A, but after such treatment there appears little if any diminution in its power to cure rickets.

In 1889 Huntly, and in 1890 Palm, both Indian Medical Missionaries, described the antirachitic properties of sunlight and they seemed to appreciate that the sunlight was quite specific in its activity in this line. In 1912 Raczynski gave the first undisputable evidence of the beneficial effect of sunlight on rickets. He subjected to chemical examination the bodies of two puppies of the same litter, nursed by their mother. One was kept in the sunlight and the other in the dark. The one kept in the sunlight contained much more calcium and phosphate than the one kept in the dark.

Huldschinsky in 1919 first used the Quartz mercury vapor lamp and the clinical and radiological results were conclusive that first he was dealing with rickets and, secondly, that the Quartz lamp rays were effecting a cure. Hess and Unger first used sunlight alone to cure and prevent rickets and their results were decisive.

Thus a disease of both dietary and environmental control has been solved and we can now look upon it with complete mastery.

It is interesting along this line to note that in India where girls of caste after marriage withdrew to their domiciles and seldom if ever leave their own walls or ever become exposed to sunlight and where good diet is the rule, the rachitis tarda of older childhood and adolescence is very frequent. Their babies are also highly affected. Sunlight protects the babes of the tropics and the dainty fish livers protect the babes of the most Northern climates.

While we know the conditions under which rickets develops, and while we can now control it at will, we still do not know with certainty how or why the sunlight and the cod liver oil

in two such different forms, both cause a deposition of the lime salts in bone and bone producing cartilage, and both prevent and cure rickets.

POST-OPERATIVE HEMATEMESIS WITH NO DEMONSTRABLE LESION TO EXPLAIN ITS OCRENCE.

By C. FRED FISHER, M. D.
Richwood, W. Va.

There are several post-operative complications that give the surgeons great concern. One of the most serious and puzzling is post-operative hematemsis, and particularly is this true where there is no lesion in the gastro-intestinal tract to explain its occurrence.

This condition was first noted by Mr. Berkley Hill and communicated to Fox, who reported it in his book, published in 1875. Sir William Jenner, in the same year, described to Fox another case. This interesting and serious complication has been observed following appendectomy, herniotomy, ovariotomy, operations on the liver, operations on the bowel, cholecystotomy, drainage of pelvic abscess, operations on bladder, ureter and kidneys, operations for removal of retroperitoneal tumors and operations on the neck and face.

A number of papers have been written since the first case was mentioned by Fox. Von Eiselburg (1899) reports eight cases in one paper, occuring in the Konigsburg Clinic in two years. Mayo-Robson (1901) reports three cases. H. Croom (1908) describes a case following simple salpingo-oophorectomy. Busse (1905) collected ninetysix cases and reported fourteen cases following abdominal operations, and included one following an operation on the neck and face. W. E. Lee (1908) reports a case following an operation for hernia. G. Schwalback (1908) describes thirty cases, in most of which the hematemesis followed appendectomy. William H. Battle and E. W. Corner, in their work on the Vermiform Appendix (1910), describe a case reported by Dieulafoy. H. J. Patterson (1913) reports one case. Oscar Aloil (1920-1921) reports eighty-two cases in the literature, twenty-seven of which occurred after herniotomy. Cases have been reported by Lucas, Champoniere, Matheson and others, in which the question of the absence of an explainable focus is doubtful and are not mentioned.

In the past several theories have been advanced to explain the occurrence of this complication, and while interesting, the etiology has never been satisfactorily explained.

Noting the different operations following which this condition has occurred, it is very evident that it is most frequent where the operative procedure has necessitated celiotomy, but is mentioned once following an operation on the face and neck.

Von Eiselburg considers the condition as due to torsion or ligature of the omentum, causing multiple gastric hemorhages. McKay suggests that a common factor is shock, producing portal engorgment, and a secondary venous stasis in the gastric wall, and resulting in diapedsis or rupture of the capillary wall. Others have suggested that the bleeding is the result of operative trauma to the gastro-intestinal tract, and caused by thrombosis, or that it is the result of multiple infected emboli from such sources of infection as the gall bladder or appendix, and set free by op-

erative manipulation and distributed by the blood-stream.

Busse feels that there must be some erosion present which, under the influence of the narcosis, or the vomiting, or operative trauma, gives rise to the hemorrhage. He also called attention to cholemia, circulatory disturbances, hypertension, thrombosis and embolism of the artery and of the mesenteric vein, the nervous influence, and ligature of the mesentary and omentum. Croom states, whether it has a septic origin or not, it is usually associated with sepsis. Anesthetics have been mentioned as causative factors but with the number of anaesthetics given and the comparative rarity of this condition, this possible cause might satisfactorily be ruled out. Rodman, in his oration, A. M. A. (1900), considered sepsis to be the cause in a great number of cases.

The reflex origin theory is of experimental importance as the observation of Schiff, Talma, Pende, Cioffi and Tizzoni show. Romano's research on the pathogenesis of shock and on the functional and organic changes in the suprarenal capsule, is very interesting in this connection. The changes are felt chiefly by the sympathetic system, and are especially angiotonic in character, giving rise to the possibility of gastrointestinal hemorrhage.

From a study of the cases reported, it is evident that age has no definite influence upon the occurence of hematemesis.

The diagnosis is not difficult. The onset of symptoms may be as early as forty-eight hours after operation, or as late as the tenth day. The amount of blood vomited may vary from the small amount of "coffeground" material, which reacts to tests for blood, to free and copious hemorrhages. The blood vomited may be bright red in color, but more often varies from light brown to black, and containing brown flocculent masses which respond to the reaction for blood. The hemorrhage may occur but once, may be small or large, and may be repeated a few times. Epistaxis oftens accompanies the hematemesis.

The general symptoms and findings are in proportion to the amount of blood lost and in the cases with marked hemorrhages the picture is one of profound collapse.

Treatment: From the experience of Reichard operative interference in this condition is not advised and treatment more of the expectant type is instituted.

Rest of an absolute type is necessary and is best secured by moderate doses of morphin repeated at proper intervals. Discontinue everything by mouth. Ice may be applied to epigastrium and heat to extremities. Salt solution and nutritive enemta may be given by rectum as indicated, and if necessary salt solution may be given subcutaneously alone or combined with adrenalin chloride. Hot gastric lavage, temperature 115 degrees, is advised. After stomach is cleansed it has been advised to instill into the viscus a pint of salt solution containing one-half drachm of adrenalin chloride 1/1000. This may be repeated if necessary. Battle and Corner suggest gastric lavage of sodium bicarbonate, one drachm, to one ounce of water. The entire plan of treatment, as stated above, is expectant.

Prognosis: The prognosis is always grave. In ninety-six cases studied by Eiselburg, Franque', Lampugnani, Theleman and collected by Busse, fifty-three resulted fatally. Lee has placed the mortality at fifty-five and

seventy-two and one-half per cent. The prognosis depends on the condition of the patient at the time of onset, the amount of blood lost and the efficiency of the treatment instituted.

I have had recently a case in which the treatment and result were satisfactory. It is as follows:

Mrs. V. Life was admitted to McClung Hospital, May 7, 1923, with a large strangulated ventral hernia. The family and past personally histories are negative, with exception operation mentioned below. She has had two children and menopause was instituted normally fourteen years ago at the age of 45. Ten years ago she underwent an operation for suspension of the uterus, for the correction of retrodisplacement. A hernia was present in the line of incision, which was the low mid-line type, from the day she was discharged from the hospital. The mass had always been reducible until the day of admission. The patient was stout; temperature, 97; pulse, 110; blood pressure, 180 systolic; 104 distolic. Operation advised at once and consented to and done under ether anaesthesia. Considerable difficulty was encountered in reducing the contents of the sac, because of adhesions, and extensive manipulation became necessary. A portion of the ometum was excised. The abdomen was closed without drainage. The peritoneum and muscle were approximated and held in place by sutures of chromic cat-gut, No. 3. The fascia was plicated and a double row of sutures used. The skin was closed by silver wire. Time of operation, one hour and forty minutes. Patient reacted well and vomited a small amount of greenish colored fluid on two occasions, and her condition seemed satisfactory. Forty-eight hours after operation she vomited a small amount of brownish fluid. Two hours after this she vomited up a large amount of brownish fluid containing a quantity of bright red blood. This was repeated again in one and one-half hours in larger amount. Pulse rate increased to 126 per minute. Temperature fell from 99 3/5 to 97 4/5. Treatment was started as folows:

One-eighth grain morphine hypodermically, repeated every three hours. Ice was applied to the abdomen and Murphy proctoclysis of normal salt solution started. Nothing was allowed by mouth. Gastric lavage of salt solution, temperature 110 degrees, using one-half gallon of fluid, returned discolored light brown with a faint odor, containing small, brown flaky material.

Shortly after this patient vomited again, but smaller in amount and containing some fresh blood. Gastric lavage was repeated, using fluid 115 degree. The fluid was used until it returned clear, and one-half pint of normal salt solution containing one drachm of adrenalin chloride, 1/1000, was instilled into the stomach and left. The remainder of treatment was continued for twenty-four hours. There was no return of symptoms. Patient from this time on made an uneventful recovery and left the hospital in twenty-one days, and is in good health today, over one year after operation, and there is no recurrence of the hernia.

In cases where the pre-operative prognosis is not good the onset of complications are not so difficult to explain, but I imagine this condition in a simple operative procedure might be hard to satisfactorily explain to the patient and his friends alike.

CONCLUSIONS.

(1) The etio-pathogensis of this condition is very complex.

(2) It is usually fatal, but fortunately relatively uncommon.

(3) Treatment is essenally expectant and medical, not surgical.

(4) Shock, sepsis, operative manipulation and anaesthetics have been cited as possible etiological factors, but the part played by each is not clear.

(5) From the case reported it may be seen that two of the possible causes of this condition are present: (a) Ligation of the omentum; (b) Operative trauma to the intestinal tract.

(6) The occurence of "unexplainable gastric hemorrhage will eventually become a reflection on our diagnosti" power.

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DIAGNOSTIC PROBLEMS OF BILIARY DISEASES.

By R. O. ROGERS, A. B., M. D.
Bluefield Sanitarium, Bluefield, W. Va.

Read Before the Cabell County Medical Society, Huntington, W. Va., April 23, 1925.

The diagnosis of disease conditions of the biliary tract presents no difficult problems in the ordinary case. Pathological changes are very decided and the resulting morbid physiology gives rise to manifestations which make unmistakable clinical pictures of disease. This is true where the pathology is really gross. On the other hand pathological changes may be very slight and often the clinical picture of disease is notoriously obscure. Disease recognition in this class of cases is fraught with special difficulties because we cannot disassociate disease in the tract proper from that of certain intra-abdominal organs which lie in close proximity and which may be affected one way or the other through the sympathetic nervous system or by the extension of infection itself. In any diagnostic discussion it is obvious that all classes of cases must be considered, including even the elementary classical case of gallstone colic, but our interest in this

paper will be directed more to obscure pictures of disease where diagnosis involves at least some effort.

The actual existence of disease without apparent clinical manifestations and the admission of the so-called silent gallbladder, calculous or non-calculous, need not interest us greatly. A myth or an actual entity, the assumption itself of silence precludes its clinical recognition, and its occurrence must belong entirely in the notations of operative findings and in the records of autopsy. It is, nevertheless, of fundamental importance in the progress of disease recognition that disease of the gallbladder is of much more frequent occurrence than its clinical interpretation would indicate. Autopsy records bear this out and show an incidence of gallbladder disease much higher than we are accustomed to think of. To the abdominal surgeon the experience is of frequent occurrence of palpating stones in the gallbladder when the abdomen was opened for a condition entirely independent of any disease in the biliary tract. In other instances, where the relief of certain reflex digestive disturbances is sought, the finding of a diseased gallbladder may represent the factor in producing symptoms more certainly than a doubtful co-existing chronic appendicitis. Oftentimes a clinical history reobtained as an afterthought or more carefully gone into reveals positive clinical evidence in cases which otherwise might have been passed on as the silent type, and it is probable that much fewer of these cases fail to give symptoms and represent rather a failure to elicit proper clinical histories or an inability properly to interpret obscure pictures of disease.

The laboratory in recent years and other departments of a group practice have come generously to the aid of the clinician and have clarified greatly situations which formerly were obscure. Peptic ulcer, for instance, where a syndrome formerly was the sole basis of diagnosis, can now be recognized in nearly every instance and its location accurately determined by X-ray studies. The X-ray certainly has contributed something in the recognition of gallbladder disease, but the most enthusiastic workers in this field do not claim more than 50 per cent of positive results, and this relative high percentage of findings must be considerably less with the average radiologist. Radiograms of the gallbladder made possible by the intravenous injection of the sodium salts of tetrabrom-phenolphthalein and tetraiodi phenolphthalein may offer in the future some certain means of studying accurately a diseased gallbladder, but for the present at least this procedure is hardly more than experimental. The drainage and collection of bile through a tube inserted in the duodenum offers possibilities of determining the nature of existing infection, but it is difficult to rule out the element of possible contamination, and in practice this procedure is of questionable import. In newer methods, therefore, the recognition of biliary disease has not made great advance and has to depend in the great majority of instances upon a clinical history, existing symptoms, and whatever physical evidence of disease that may be apparent to the clnician.

In developing a diagnosis of disease in any locality generally, and especially in disease of the biliary tract, certain knowledge established from observation and constituting a part of a clinical picture furnishes at once a suggestive working basis where the

complaint is at all pertinent. Every one is aware thus that something like 75 per cent of cases of biliary disease occur in women and that 90 per cent of these women have borne children. A cholecystitis of varying degrees of severity, recognized or not, must be of fairly common occurrence at any age of adult life, but stone formation and the crippling results of disease are rarely seen until the third decade of life and the great majority of patients seeking relief of symptoms are in the fourth and fifth decades. Most of these people are overweight and even obese, and "fat, fair and forty," when coupled with digestive disturbances is a designating alliteration which includes a large number of gallbladder cases. Because of the known common occurrence of cholecystitis in the active course of typhoid fever a history of the patient having had this disease is looked upon still as significant, but in the light of more modern conceptions of infection and its source we are more in the habit now of expecting in gallbladder disease a prolonged history of recurrent tonsillitis and of neglected dental caries or oral sepsis from any cause.

The patient's own story, properly interpreted and supplemented by whatever objective data it is possible for the clinician to obtain, should make a definite diagnosis comparatively easy in the majority of instances of biliary disease. These people will complain of pain of varying degrees of severity, in a fair proportion of cases will recall one or several attacks of jaundice, and will recite usually a long list of digestive disturbances characteristic of no definite condition in particular. The pain may be of the severest nature or may be nothing more than a discomfort, the jaundice a mere icteroid tint or the deep yellow of complete common duct obstruction, and the digestive disturbance casual to the point of provoking no complaint or developed to a stage of serious disability. Objective examination may reveal nothing, commonly a tender point can be elicited at the ninth costal cartilage, and rarely definite tumor and a frank peritonitis are local evidence of disease.

Obviously the earliest manifestations of disease are those of a cholecystitis in the precalculous stage, and attacks of indigestion are suggestive in which flatulence is a pronounced feature and where the attacks occur at irergular intervals, suddenly and without apparent cause. Of still more significance is the occurence of stabbing pain about the right costal margin and tenderness and rigidity over the gallbladder area, accompanied in some instances by an icteroid tinge or frank jaundice. The cholecystitis may never be productive of stone formation, as in the case in particular of the so-called strawberry gallbladder, and in such instances irregular digestive disturbance, usually of the flatulent type, and attacks of pain and tenderness in the gallbladder area may be the only evidence that we possess of disease. In this type of case recognition is sometimes extremely difficult. Of less common occurrence than in disease complicated by calculi, a most acute process nevertheless may develop, but the signs of local peritonitis in the right upper quadrant accompanied by septic temperature and leucocytosis leave no doubt about the nature of trouble we are dealing with.

In the calculous stage of biliary disease the most characteristic symptom of course is biliary colic. Patients harboring gallbladder disease as a

rule do not come to operation early, and it is often possible to obtain a history of several such attacks, occurring at frequent or wide intervals and generally over a period of years. The severe pain is so characteristic and points so definitely to disease in the biliary tract that its description seems uncalled for. The attacks may be entirely of a fleeting nature and may be relieved as suddenly as they appeared or may persist for hours unless relieved by morphia, and more rarely may continue with remissions for days. Jaundice appearing towards the end of a paroxysm is very significant, but since its occurrence is dependent upon obstruction to the common duct, either due to stone blocking the duct or to pressure from a lymph node or a general inflammatory engorgement, its absence, which is the rule in two-thirds of cases, is unimportant. The finding of a stone in the feces following an attack of colic is necessarily positive proof of calculi, but it is doubtful if the pains would be taken often to verify diagnosis in this way.

In cases where frank attacks of biliary colic are a feature recognition of disease is hardly ever a difficult problem, and even the patient is usually aware of his trouble. Unfortunately, from the standpoint of diagnosis, severe colic occurs only in a minority of cases and the pain dependent upon the presence of stone or associated inflammatory change may consist of nothing more than a dull ache in the right hypochandrium, a mere sense of discomfort, or repeated attacks of pain in the back. The complaint of some sort of pain, however, referable to the gallbladder area and an associated irregular type of indigestion, characteristic only because it fits nothing else in particular, will cause attention to be centered in the gallbladder area and render recognition of disease possible. The term is liable to mislead, but "biliousness" describes fairly accurately a lot of these cases.

It is an obvious fact that long standing disease of the biliary tract, especially when associated with stone formation, favors certain complicating situations which, because of their severity, are ordinarily easy of recognition. A stone, for instance, blocking completely the cystic duct may give rise to hydrops of the gallbladder and a tumor easily recognized by palpation. In other instances, where infection is more active, a suppurative or gangrenous cholecystitis may occur with all the signs of a severe local peritonitis. Stone in the common duct may be silent for periods of considerable time, but the rule is jaundice rather persisting with periods of remission. Complete obstruction may occur with deepening jaundice, but this is not common with stone, and we may more accurately suspect malignancy of the head of the pancreas. Due to a relatively rich lymphatic supply, stone in the common duct associated with infection may give rise to chills, fever and sweats or the condition which is often designated as the intermitten hepatic fever of Charcot. A suppurative cholangitis represents a terminal stage of bile stagnation and infection, in which diagnosis is interested only in provative factors.

There are certain conditions which may be easily confused with disease in the biliary tract and which obviously must be kept in mind and their existence excluded when possible. In peptic ulcer there is usually a characteristic syndrome and in doubtful cases the X-ray is a deciding

factor. The benefit of the X-ray is also utilized in carcinoma of the stomach where an element of doubt obtains. In cancer of the biliary passages and the head of the pancreas a differentiation may be extremely difficult, but painless and progressing jaundice with distension of the gallbladder points strongly to malignancy of the head of the pancreas. Early carcinoma of the gallbladder cannot be diagnosed without exploration. Acute pancreatitis may have many of the features of acute biliary disease, but shock out of proportion to what we expect in the latter should cause us to suspect the former; exploration here is often the only recourse and differentiation unimportant since immediate operative interference is indicated in both instances. Stone in the right kidney is sometimes confused with biliary colic, but neither condition calls for immediate drastic measures, and time and a little investigating should clear the situation. A condition which may represent an acute process in the gallbladder, a perinephritic abscess, or a high postperitoneal appendix, calls for the very soundest judgment of procedure. The same reflex gastric disturbances may have their origin in either a diseased gallbladder or a chronic appenditis, and often there is nothing in the clinical history to make it evident that we are dealing with the one or the other. The two frequently coexist, and we do well to give assurance before operation that disease in both may be responsible for the existing symptoms. To mistake crises of tabes for biliary colic is an error for which obviously there is no excuse.

A condition still remains where gallbladder disease is often assumed and where a matter of diagnosis is of the utmost importance. I refer to what is commonly called the chronic abdominal invalid. These people complain of all sorts of indigestion, are usually obstinately constipated, and recite as many types of pain and other departures from normal as there are patients. Some of them are cases of pure neuroses and improve temporarily on rest, diet, and any change of surroundings. Others are victims of visceroptosis and are benefited by prolonged posture in bed and properly fitting abdominal supports. They are never well for long periods of time and are willing victims of the over-zealous surgeon. The appendix is the first offender and is removed. The enforced rest in bed for two weeks and an operation experience bring about some improvement, but old symptoms recur, and the gallbladder is the next front of attack. Rarely these people undoubtedly have gallbladder disease, but to be certain that it exists is one of the most difficult of diagnostic accomplishments, if possible at all. Even with the abdomen opened the question may be problematical still. We may be assured of possible results if there is real palpable evidence of disease, but a pale gallbladder with doubtful thickening of its walls and a palpable lymph node may be high sounding pathology to dictate to a waiting stenographer, but it is doubtful if the patient parts with symptoms. Noted adhesions may be the result of former disease but are more probably adventitious bands developed in fetal life. We should go slow with a positive diagnosis of gallbladder disease in these cases, and if we are looking for a high rate of satistory end results in surgery, we do well to treat such cases along medical and hygienic lines.

The area of the biliary tract has

been aptly called the region of abdominal romance, and certainly there is no other area of the body where morbid physiology of many structures is centered in more confused mystery. With the utilization of every diagnostic refinement, in a fair number of instances we are unable to say positively the nature of existing disease. The X-ray is certain in its limited field, but is of no value in the majority of cases where negative findings obtain. Rather definite clinical pictures develop, however, and we can be reasonably certain of disease and even its nature in the majority of cases. A clinical history, painstakingly obtained and properly interpreted, is still our greatest recourse in ferreting out disease in this area.

ANNOUNCEMENTS AND COMMUNICATIONS

EXAMINATION QUESTIONS.

Given by the Board of Examiners for Registered Nurses in the State of West Virginia, April 29, 1925.

1. Give the dose of powdered opium, morphine sulphate, Paregoric, tincture of opium. Define anodyne, narcotic, hypnotic, sedative? Give an example of each.

2. Give the symptoms and treatment of morphine poisoning.

3. What is a specific remedy? Mention three specifics and give their doses and the diseases for which they are used.

4. Where and on which artery would you make pressure for hemorrhage following amputation of the middle of the thigh?

5. What glands secret the following: Saliva, bile, pancreatic juice, gastric juice?

6. Describe the location and function of the kidneys. How would you detect albumen or sugar in the urine? What is the significance of casts and albumen in the urine?

7. Tell what you know about the following glands: Thyroid, thymus, adrenals, pituary, spleen.

8. Mention three complications which may follow an abdominal section.

9. Define fracture and give the cardinal signs of a fracture. Define compound, simple and comminuted fractures.

10. Describe the after care of a tracheotmy case. Define suppurative otitis media. Why is it dangerous?

11. How would you treat a patient with a post partum hemorrhage before the doctor arrives?

12. Give the symptoms that usually occur in a patient with a fibroid of the uterus?

13. Give in detail the pre-natal care of an expectant mother.

14. Outline the cause, nursing care and complications of typhoid fever.

15. Name six pathogenic microorganisms and the disease caused by each.

16. (a) What is a dairy? (b) Outline proper care in the handling of milk; (c) Give chief sources of contamination; (d) Why is it necessary to have cows tested for tuberculosis? (e) What percent of butterfat should milk contain?

17. (a) Name two sources of iodine in the diet; (b) Why is iodine beneficial? (c) Give the approximate number of calories needed for an adult male performing ordinary manual labor; (d) Give the proportionate amount of carbohydrates, proteins and fats in such a diet.

18. (a) What are vitamins? (b) What disease is caused by deficiency of vitamin "A," "B" and "C"? (c) Name foods that contain each of the

vitamins and some that contain all three.

19. (a) Why is it important that an infant who has had ileocolitis for several days be given water? (b) How may the water be administered when the stomach or bowels neither will tolerate it?

20. (a) Mention three common complaints that have been made of graduate nurses? (b) Name some points nurses should observe in their professional relations to each other; to the physician; to the hospital.

DEMONSTRATION OF NURSING PROCEDURES.

1. How would you change a bed with a patient in it? How would you change the mattress?

2. When is an abdominal binder indicated? How applied? How would you give a hot pack?

3. Drape a female patient for a vaginal examination.

4. Place patient in the Sims position; in the Trendelenberg position.

5. (a) Indications for the Murphy drip; (b) How would you prepare for the Murphy drip? (c) How would you restrain a delirious patient?

To Members of the Medical Societies of Virginia, West Virginia and North Carolina:

The bound volume of collection letters gotten out for the medical profession by the Professional Credit Association have obtained results for physicians ranging from "satisfactory" to approximately $1,000.

Our printers offer to manufacture 500 or more copies of this book and deliver them to members of the State Societies at $2.50 each. The book contains 300 letters, 150 of letter No. 1, and the same number of the second letter—enough to handle 150 bad or slow accounts. Every physician should use these letters. We need every order we can get to make up the order for 500. Simply enclose your check for $2.50 with this card today, mailing it to the Virginia Medical Monthly, 104½ West Grace St., Richmond, Va.

P.S.: These letters get results without offending your patients and without collector's commission being deducted.

GORGAS MEMORIAL.

Beginning early in May with the Special Medical Societies, which constitute the membership of the Congress of American Physicians and Surgeons, the progress of the Gorgas Memorial Institute has been publicly reported to many interested groups.

The same program is being continued during May among the State Medical Societies and will be extended into June.

The Memorial was congratulated for its able work in urging the recognition of scientific medicine as the only authority in health matters, especially at a time when influence of this kind is needed in so many communities of every State.

In Washington at the Congress of American Physicians and Surgeons a representative of the Gorgas Memorial Institute publicly thanked the State and special medical journals and county society bulletins for their generous allotment of space to Gorgas Memorial news. Their co-operation, it was explained, had brought the Gorgas program before many doctors who otherwise, owing to a limited field organization, would not have been reached.

"The Gorgas Memorial," the representative stated, "has passed the experimental stage. It is demonstrated that the public is willing and anxious to be guided in matters of

health by the real authority—the scientific medical profession. People are entitled to proper health information furnished them in conservative, ethical, interesting ways, from a reliable source. A program of this kind cannot be developed by the individual physician. But the Gorgas Memorial affords the channel through which it can be done. Judging from the responses to our effort of the past four months, it appears we have struck the right note with lay public as well as the profession.

"It is only by educating the individual in the truths of scientific medicine that the various irregular cults can be checked and that improper medical legislation can be obstructed. We want your help—we want your advice—we want your association in developing the Gorgas idea. You can render aid most effectively by becoming a member of your State Governing Board. Many of you are already members. I urge you to immediately respond in order that we may expand the Gorgas program to the fullest extent as quickly as possible."

ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1924.

Cloth. Price, postpaid, $1.00. Pp. 82. Chicago: American Medical Association, 1925.

This volume contains the reports of the Council on Pharmacy and Chemistry that have been adopted and authorized for publication during 1924. Some of these reports have appeared in The Journal of the American Medical Association. Others are now published for the first time.

The annual volumes of the "Council Reports" may be looked on as the companion volumes to New and Nonofficial Remedies. While the latter contains the medicinal preparations that are found acceptable, the reports contain the reasons why certain products were not accepted. Thus the present volume contains reports on the following products which the Council denied admission to New and Nonofficial Remedies: Aolan, Aspatol, Atussin, Peptoproteasi, Paraganglina Vassale, Fosfoplasmina, Asmoganglina and Endo-Ovarina Tablets, Borosodine, Carsinol, Colodine and Colobromidine, Ferrasin, Glyeuthymenol, Hoyt's Gluten Flakes, Iodeol, Loeflund's Food Maltose, Mistura Creosote Comp. (Kilgore's) and Tablets Cascara Comp. (Kilgore's), Neo-Riodine, Nicomors, Peptone Solution for Hypodermatic Use (Armour), Pixalbol, "P-O-4," Pollantin, Promonta, Pruritus Vaccine Treatment-Lederle (Montague Method, Restor-Vin, some "mixed" vaccines of G. H. Sherman and Tersul Hiller.

The volume also contains reports on products which were included in former editions of New and Nonofficial Remedies but which will not appear in the 1925 edition because they were found ineligible for further recognition. Among these are polyvalent antipneumococcic serum, colon bacillus vaccine, gonococcus serum and gonococcus vaccine.

The volume contains a number of reports of a general nature. For instance, a report on the therapeutic value of benzyl benzoate; a report on anaphylaxis produced by thromboplastic substances and a report on the therapeutic use of digitalis.

Physicians who keep fully informed in regard to the value of proprietary remedies will wish to own this book.

THE WEST VIRGINIA MEDICAL JOURNAL

JAS. R. BLOSS - - - - - - - - - - - - - *Editor*

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All original articles for The Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all parts of the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

Advertising forms will go to press not later than the tenth of each month.

All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

Should be made by check, draft, money order, express order or registered letter to Sterrett O. Neale, Executive Secretary, 211 Smallridge Bldg., Charleston, W. Va.

Editorial Office: 804 Lincoln Place, Huntington, W. Va.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

REDUCED FARES TO BLUEFIELD.

A reduced fare to the Bluefield Convention has been obtained, the Executive Secretary announces.

If 250 tickets are sold to Bluefield from stations in West Virginia outside the 67-cent fare zone surrounding Bluefield and Princeton, medical men and members of their families will be entitled to a half-fare rate back home.

Acceptance of the State Society's application for a reduced rate was acknowledged in a letter from Mr. C. M. Burt, Chairman of the Trunk Line

Association, New York. Here are the conditions:

Tickets will be sold at the usual one-way fare between the dates of June 5 and June 11. All members in purchasing tickets for themselves and their immediate families should ask their station agents for CONVENTION CERTIFICATES. They must not ask for receipts.

If the station agent does not have the certificates, which would be probable at the smaller, local stop stations, members are urged to purchase tickets only to the stations where they can be obtained, or better still, ascertain the fare from that station and write ahead for your ticket.

Immediately upon your arrival at Bluefield, present the certificate to your Executive Secretary, Sterrett O. Neale, to be endorsed. Then, on June 12, the last day of the Convention, a special railroad agent will be in Bluefield, at the West Virginia Hotel, between the hours of 8:30 a.m. to 5:30 p.m., to countersign the certificate. When his signature is affixed, and if 250 certificates have been endorsed by the Executive Secretary, all members and their families residing outside the 67-cent zone, will be entitled to the one-half fare rate for the return journey.

Convention certificates are obtainable at all of the principal city stations. A member at Mannington could obtain his at Fairmont; a member at Benwood could obtain his at Wheeling, and so on. But many of the smaller stations may have them. Inquire!

Members of the Mercer and McDowell County Societies are redoubling their efforts to obtain the largest number possible at this, the Fifty-eighth Annual Session. There is a prevalent feeling that it is to be one of the most important sessions in Association history because of the many important questions to be considered.

CULTS AGAIN!

The Legislature, without either the consent or interference of the Governor, has passed and put upon our statute books a law which permits the chiropractic cult to practice medicine in West Virginia, to heal the sick by so-called chiropractic methods, and making chiropractors a part of the body which has the power to regulate and enforce public health policies in our State without regard as to their qualifications.

And after so honoring the chiropractic cult the Legislature, in the self-same law, declares that chiropractors are not competent to give expert medical testimony in any personal injury damage suit in any court in West Virginia, and the Legislature further sets forth that under no circumstances shall a chirporactor be paid any fee out of the workmen's compensation fund.

In other words, the compensation fund and those most likely to be made defendants in personal injury suits are protected and—the public be damned!

Governor Gore, at a conference in his office April 20 with 50 or more doctors, representing virtually every county in the State, said that the chiropractic bill had not reached his office. He said he had not read the bill and he requested the members of the medical profession there present to select a committee of four or five doctors whom he could call upon short notice to go over the bill with him when he had time to consider it.

The writer was appointed to select the committee—which selection was promptly made—and the Governor's

office was notified how the writer, as chairman, could be reached.

But the call never came.

We have information that the reason given for allowing the bill to become a law was the unwillingness to veto any bill that the Legislature had spent ten days at $5,000 a day to enact.

The Governor does not know how much of that $50,000 went for legislative trades and political propaganda and even if he did know, what is $50,000 when compared with the havoc wrought upon the public health and dignity of the State of West Virginia by this act.

The standards of the practice of medicine have been lowered, but the standards of the profession have been perceptibly enhanced by the noble efforts put forth by physicians of the State to defeat this legislation.

We express the sentiments of 99 per cent of the physicians in West Virginia when we say the health commissioner could have prevented the enactment of this law if he had exerted his influence against it, as did the members of the State Association, instead of adopting an indifferent attitude.

We can not very well feel proud of the State Health Council as it is to be constituted, and we may expect reciprocity agreements between West Virginia and other States to be curtailed.

It is too early to outline any policy to be pursued but a full report of the proceedings will be presented at the State Association's annual meeting in Bluefield by the committee on legislation and public policy and it is hoped that some definite plan of action for the future will be adopted.—C. A. R.

ALUMNI ARRANGEMENTS.

Dear Doctors Throughout the State of West Virginia:

Let us arrange for alumni meetings here at the time of the State meeting in June.

I suggest that the members from your school get in touch with each other between now and the meeting, select your secretary or chairman, and have him get a list of all the names who expect to attend the State meeting, arrange for a get-together meeting Thursday afternoon, June 11, and then gather around the banquet table in a bunch that night and be prepared to give your college yells and songs.

Dr. Walter E. Vest, C. & O. Hospital, Huntington, W. Va., is arranging for an alumni meeting of the members of the Medical College of Virginia, Richmond, Va. All who have attended this school please get in touch with Dr. Vest at once.

All who have attended the Baltimore Medical, Physicians and Surgeons College, and University of Maryland, Baltimore, Md., as these three are now consolidated into one—University of Maryland—select your secretary and arrange for an alumni meeting.

Up until you select a secretary you may send your name or any correspondence to me and I'll gladly turn it over to the secretary as soon as one is chosen.

This alumni get-together meeting is intended for all M. D.s who attend the West Virginia State Medical meeting in or out of the State.

H. G. STEELE, M. D.,
Chairman General Arrangement Committee.

YES!

On the back cover of a recent issue of the West Virginia State Health Bulletin is a map of West Virginia and bordering States, showing West Virginia in heavy black type and showing the expenditure of money for public health work as compared with that of neighboring States. The map carries this caption:

"Is our health of less value than our neighbors?"

We can answer unequivocally, "Yes!" when we consider the fact that a part of our health appropriations now will go to support the ideas and condone the results of cult practitioners and to regulate and enforce such laws as passed by the recent Legislature.

If the Public Health Council would uphold the efforts of the West Virginia State Medical Association, the color of the map could be changed and the sum total increased.—C.A.R.

A visit was made by this writer to the Brooke County Society last Thursday night. Unless we are greatly mistaken here is the nucleus of a very good social unit in medicine. It is a signal proof that numbers bear no relation to push, action nor vitality. It is also proof that age nor years of service have nothing to do with the spirit. We saw Dr. Harden, hardened old pioneer that he is, working with Dr. Mullen, there about a year. Both earnest, yet lively; both dignified, yet jolly; both with the same aim—a first-class Medical Society. It was indeed an inspiration. The meeting is at a member's residence usually, and in this case Mrs. Mullen served a sumptuous repast.—H. M. H.

COUNTY SOCIETY REPORTS

Editor West Virginia Medical Journal.

The Barbour - Randolph - Tucker County Medical Society met in Hotel Tygart on May 15, 8:30 p. m.

The following members and visitors were present: Drs. B. I. Golden, Magill, McIntosh, Groomes, Perry, Hamilton, Rohrbaugh, W. S. Michael, Hall, G. S. Moore, Owens and Irons; Dentists J. U. Baker, Musser, Parmisano; ladies, Mrs. Hoover, who is prominent in Red Cross work, and all health movements; Mrs. O. Hertig, school nurse for Elkins; Mrs. Kendall of the State Tuberculosis Association, all of Elkins, and the following from Philippi: Miss Munson, school nurse for Barbour County; Miss Mayo, child welfare nurse for Barbour County, and Mrs. Shafer and Miss Dunnington, who are active in health movements. These from Elkins: Prof. W. W. Trent, superintendent Elkins schools; Prof. Riddle, principal of Elkins High School; Dr. Joseph E. Allen, president D.&E. College; Hon. H. G. Kump, Rev. Harrison of United Brethren Church; Rev. Martin of the Episcopal Church; Rev. Cline of the United Brethren Church; N. I. Hall of B. of E., Elkins.

Minutes of previous meeting read and approved.

Letters from Dr. Jeffers, president State Society, and S. O. Neale, state executive secretary, read.

The Secretary reported that he had met Dr. Henshaw at Philippe, May 2, as directed, and that Dr. Henshaw said he would take up the Newman matter with the attorney-general at once.

The topic in which most of those present were most interested was Dr.

C. H. Hall's talk on "Calcium Hyper Saturation of Tuberculosis with Presentation of Cases." Dr. Hall reported fifteen cases as treated by this method. Eleven of his own and four of other physicians. In cases not well advanced the treatment has proven quite satisfactory, freeing the sputum of tuberculosis bacilli after a few treatments, the patients improving in every way. Appetite greatly improved, strength and energy gaining, and adding flesh. Dr. Hall said that as to whether this treatment would prove curative it was impossible to say, as it was too soon to determine.

His cases were divided into four classes. First class: Five cases in which no cavities were found; second, four acute cases; third, four chronic cases of long standing, having taken sanitarium treatment; fourth, two cases well advanced, very bad. One of these had been afflicted for two years, both of these last cases were hopeless, and seemed to get little or no benefit from treatment and both died. Both were emaciated and seemed to dread treatment—which caused them to desist treatment and go home. We could see no good result, unless it may have prolonged life. The cases which promise great benefit belong to the three first classes. Of the fifteen cases treated, eleven show no tuberculosis bacilli, two died, and two still have tuberculosis bacilli.

The report was discussed by Dr. Magill. He said that by no means was this presented as a "cure all" remedy. It is used as a systematic saturation, which, when used soon shows in the face; the injections are to be given each alternate day six successive doses, then keep patient under observation. So far no fatal results have been reported. The treatment causes but little pain or discomfort. It is exceedingly interesting to watch results. Until four injections no appreciable improvement is manifested, but after this sleep is better and appetite improved and on ausculation the respiratory sounds show marked improvement.

On motion, the Society commends Dr. Hall for his courage and initiative in pushing the Calcium Chloride in treatment of tuberculosis.

Dr. B. I. Golden gave an enthusiastic talk on "Every Man's Duty of Health Protection," in which he forcibly presented the lack of proper care in legislating on all health matters. Vast sums are spent at each meeting of our legislatures, in lobbying for and against laws sought to be enacted; and this, too, to prevent the enactment of laws prohibiting all the isms and cults and improper health laws. Dr. Golden insists that the public should see that good, true men are sent to the legislative bodies, that the public may be safeguarded. As the law now is, ignorance is at a premium and the public is endangered. Cases of contagious and dangerous diseases are put in care of those who know nothing of disease or treatment, and the public is not safeguarded.

Dr. S. G. Moore gave a talk on "Misfits," in which he called attention to the misfits in our public schools and institutions by reason of defects, most of which can be remedied or removed. Some of the most frequent are diseased tonsils, adenoids, teeth, and mental misfits, morons and imbeciles, some of whom, while unable to harm in a general way, are prodiguous in special lines as has been shown especially in music and other lines. In our public institutions or homes we get children with defects

but we have no means of aiding them, as the State makes no provision for such cases.

Dr. Moore said some authorities claim that 85 per cent of the people are morons, and that it only takes some unusual excitement or provocation to demonstrate this tendency as we see in mobs and their acts.

He insists that something must be done to determine the capabilities of the young and then train them in the lines of adaptabilities. Thousands of dollars are usually spent in giving young men a college education, when it is worse than a waste, as the man has no capability and gets no good. Some way must be found to find a proper handle by which the young can be made useful.

Dr. O. L. Perry gave a talk on "Diptheria, Past and Present." By reference to the past we see how we have advanced. The disease was not understood fifty years ago. Its dangers or its cause was not known. Frequently whole families were taken away. Vast methods were employed in treating but none were effective. It was called putrid sore throat, membraneous angina and diphtheria, but until anti-toxine was discovered we had no reliable remedy. Now diphtheria is not the dread disease it once was.

Dr. W. S. Magill gave a spirited talk on "Vaccination." Vaccine as a preventive for smallpox was discovered by the immortal Jenner, yet one hundred years later, or in 1894, when I was in McDowell County, in this State, I was anxious to know what this State was doing to check the ravages of smallpox. On inquiry I found they had employed a politician, who probably drew a salary of about $1,500 annually, to look after this matter of such vital importance. So I wrote to him and in a short time I received through the mail two pieces of glass, between which was a dirty smallpox scab, bound in with a string.

He was surprised to learn from the report of the health physician that of 1,100 children in public schools in Elkins under 8 years of age not more than 10 per cent show any evidence of vaccination. This is a dangerous situation. Experiences of other cities just now should cause us to take prompt action. We are, in some way, our brother's keeper, and we should agitate till we force general vaccination.

Hon. H. G. Kump responded to the topic, "What Can I Do?" He said that in the line of discussions he was much interested, but did not feel qualified to discuss intelligently. However, as a laymen, he was willing to follow the suggestions of the medical profession.

Prof. W. W. Trent expressed much interest in the discussions and expressed his desire to co-operate in all proper health measures.

Prof. J. E. Allen was much interested, especially in what Dr. Hall reported, and hoped the new treatment of tuberculosis might be a realized success, as it promised.

Rev. Cline, who had taken the tuberculosis treatment, felt assured he was greatly benefited in every way. He strongly advises others to take the same treatment.

Rev. Harrison said what medicine and church most needed was unity and co-operation. Most interesting meeting.

DR. J. C. IRONS, Secretary.

On April 28 the Marion County Medical Society held its regular meet-

ing in the Fairmont Y. M. C. A. We had a large attendance, there being 28 members of the Marion County Medical Society and 13 members of the Monongalia Society. This was not a joint meeting, but the men from Morgantown and Monongalia County joined us to honor Dr. Paul Titus of Pittsburgh, the speaker of the evening.

Dr. Titus is a very prominent obstetrician, and an able speaker on his specialty. His address was called "The Average Obstetrical Case." He showed lantern slides illustrating the phases of delivery, methods of delivery, use of foceps, Caesarean Section, as well as slides to show complications which may arise, and methods for meeting them.

His lecture was well worth hearing and was very well illustrated. Any doctor doing obstetrics should hear him.

The following members were present: Drs. H. S. Keister, K. Y. Swisher, Etlor Pitassi, E. W. Strickler, H. R. Johnson, L. S. Smith, E. P. Smith, A. W. Smith, C. W. Waddell, C. L. Holland, J. E. Offner, G. R. Miller, G. V. Morgan, E. W. Howard, G. H. Traugh, C. O. Henry, P. F. Priolean, W. F. Boyers, C. L. Parks, J. J. Jenkins, J. B. Clinton, L. N. Yost, C. J. Carter, E. F. Sheppard, J. M. Trach, C. S. Fleming, L. D. Howard and J. A. Reidy.

The following members of Monongalia County Society were there: Drs. C. F. Boyer, R. W. Fisher, E. B. Tucker, B. M. Stout, S. S. Wade, R. H. Edwardson, A. E. Smith, C. W. Moser, E. R. Taylor, H. C. Powell, L. C. Cobum, David Holt and S. F. Talbott.

G. H. TRAUGH, Secretary.

On May 7, at the Waldo Hotel, Clarksburg, the Harrison County Medical Society entertained the members of the Marion and Monongalia County Medical Societies and their wives.

About 200 were there, altogether, and the affair was certainly worth attending.

Dr. W. C. Moser of Morgantown represented the Monongalia County Society, and read a paper on "Roentgenological Diagnosis of Gastric Conditions."

There were about forty-five in the Monongalia County crowd.

Dr. Walter Guy Lough of New York Post Graduate School, a former Fairmonter, represented Marion County and read a paper on "Colitis, Diagnosis, Symptoms, Treatment."

There were 55 in the Marion County group and it included the following doctors and their wives or guests: Drs. E. T. Sheppard, E. W. Howard, C. L. Parks, D. D. Howard, J. B. Clinton, H. L. Horton, J. R. Tuckwiller, C. W. Waddell, H. S. Keister, H. R. Johnson, E. P. Smith, A. L. Peters, C. M. Ravage, E. W. Strickler, J. A. Reidy, L. D. Norris, J. M. Trach, L. N. Yost, G. H. Traugh, W. T. Leahy, C. L. Holland, G. V. Morgan, C. J. Carter, J. C. Collin, W. T. Boyers, G. R. Miller, C. O. Henry, K. Y. Swisher and G. H. Broomfield.

The meeting was the first of a series of three which will be held this year. The next one will be in Fairmont. Next year we hope to continue. The usual plan is a dinner for all, roses for the ladies, while scientific program for the men is given, then a dance.

Of course each society takes its turn of entertaining and the other two societies furnish a speaker, who may be either local or imported.

G. H. TRAUGH, Secretary.

OHIO COUNTY.

On Friday, April 24, 1925, we had Dr. William O'Neill Sherman of Pittsburgh, Pa., as the speaker of the evening, his subject being "Treatment of Puerperal Infections with Sodium Hypochlorite." Discussion by Dr. J. E. Marchner and Dr. J. P. Cole.

The doctor, unable to keep his first appointment, showed he was a "good sport" and came down to once more give the "idol of his eye" another boost. "Men may come and men may go" in the admiration for Dakin's Solution, but Sherman, we fancy, will go on forever. According to Sherman, if you are not getting results from Dakin's Solution it is your fault and not the antiseptic's. . He has a specially devised apparatus for holding the solution in contact and avers he gets excellent results. We can recall his lecture on Dakin's Solution at the time of the War. His allegiance to it has never wavered.

Owing to a bad combination of weather and other affairs going on he did not have the attendance his first appearance would undoubtedly have brought.

When we were president we had a couple of fine lecturers who ran against these combinations of weather and several other counter attractions. They are what makes presidents turn gray.

Shermn is well thought of here and is always a welcome talker.

Friday, May 1, 1925, we had Dr. William A. Frontz of Baltimore, Md., to address our Society, and he had for his subject "Some Consideration Regarding the Pathology and Treatment of Enlarged Prostrate," with lantern slides. Discussion by Dr. G. Ackerman and Dr. F. E. Roberts.

Frontz handles his prostates through the perineum, and as you see the beautiful slides and drawings it rather appears easy. Doubtless it does to him in practice, although we have seen few do it with such ease and celerity in "real life." He has a very elaborate way of measuring the pressure in the bladder and keeping the bladder sterile as well. We are never so lost in admiration as when we see these beautiful plates of the prostate peeling out of its surroundings. Anyone who can make them do that causes us to be a hero-worshipper.

Dr. Frontz is a good talker, requires no manuscript, has a good delivery and Dr. Ackerman and Dr. Roberts gave his talk their warmest commendation.

Friday, May 8, 1925.

We are writing late at night, or rather at 1 o'clock in the morning, and across from us is Rembrandt's "Lesson in Anatomy." It is a wonderful picture and one we prize highly. The eager faces of the men crowded around the subject; the wonderful light, that was peculiarly that of the artist, playing on their countenances, and the calm, confident figure of the lecturer, his steady face almost persuading you to believe he is really talking out loud, while one eloquent hand gives direction to his words; the other grasping an instrument which in turn catches up the tissue. It takes your breath—this picture! You never forget it. That is why it will ever be a masterpiece.

Gone is that day. Gone are the ruffs about the neck. Gone the big hats—the short breeches—the large collars—even the Van Dyke beards. But today we had the modern version of just the same story. In a noble room in the Scottish Rite Cathedral gathered the doctors of this vicinity and save for their apparel all was the same except that instead of the rather grand manner of Rembrandt's master, stood a slender, graceful man—young in appearance at least—who carried out a program of remarkable thoughts and theories. In the audience were men who faced him as did those in the picture. Some leaned forward eagerly. Some were skeptical. Some wanted a pound of flesh. Some were for putting their fingers in the wound. Some believed a new day was near. Some thought it commercial and tried to prove that he sold doves and pigeons in the temple. But there were none who regretted the day, nor the hour, nor the opportunity to hear him. For the speaker was Dr. A. J. Pacini of Chicago, Ill., on "Modern Physiotherapy."

When we first laid eyes on the speaker and before we knew just what he was going to talk about we thought of the word Vivid. It describes him and as he proceeds in his discourse you feel that the speaker is almost a living example in some obscure way of the subject he teaches, so ultra violet is he.

The writer of this article is not ready by any means to accept what he heard but in this forum of reportorial effort our business is to present what was given impartially, if such can be, and let those who read do their own thinking.

The greatest thing about this meeting was the fact, it so admirably reminded you of the old saying that "Knowledge is Power," and that there is nothing more intriguing, more inviting, more interesting, more satisfying to our senses than knowledge when it is well presented.

The audience wore a look as happy and as contented and as satisfied as if they had just witnessed a pleasing theatrical performance and it proves this one thing, if no other, that science is just as amusing, as relxing as anything can be *if it is well presented.*

You need not to be told that what follows will not in any way illuminate (everything was light today) you as to the subject matter of this performance. It is simply beyond this reporter to do it. He acknowledges it right in the start. The speaker has a wonderful delivery. He satisfies you in that from the very beginning. He never gropes for words nor thoughts. He has a peculiar trick of throwing the accent on whole words so that they stand out in bold relief from the others in the sentence. He does everything with celerity and he never pauses for any reason except when he wants to do it. We can see him yet, gracefully drawing on the blackboard and at the same time upsetting a good many antique articles of thought.

He took up the matter of stimuli and showed how the application made all the difference and that if you wanted to get a tonic contraction of a muscle you simply must get a wave length similar to that which will conform to its normal activity, and that if you shorten the wave and increase the velocity and number you superimpose the stimuli and get a turmoil, so to speak, and a clonic result and rapid muscle fatique—demonstrating that carelessness in wave length

might easily defeat the purpose you started out to achieve. We gathered from these remarks that if you are about to use electrical apparatus and expect results you are to endeavor to obtain, with reasonable care, the proper wave length and the difference between proper and improper is not so great and yet if it is not proper you might just as well not use it for you may get an aggravation of what you set out to relieve. You that have radio in your homes know that a little turn of the knob may change the sermon on Sunday night, the family are gathered about to hear, from Pittsburgh into a jazz orchestra from Chicago. You *must* get the proper wave length for the case.

He next came across our old friend, Sir Isaac Newton, and the celebrated beam of light that accommodated that famous observer by passing through a prism into the since famous rainbow of light with its red at one end and its violet at the other and which he named Spectrum.

Then he told how the French later had taken this rainbow up in their study of photography. He discoursed on one of them taking a thermometer and finding it was hot, so to speak, in red, not so much in orange, less in yellow, neutral in green, no reaction in blue, indigo and violet. Next, how they had gone on and found out that light increased powerfully from neutral green on, higher in violet, and then some enterprising one has gone outside the violet and discovered out in the 'great open spaces" beyond violet were still more powerful light rays Nature's human eye could not get so they were called ultra violet. He then said the modern scientific world had added more beyond these; namely, the X-ray and next Radium and the Gamma Rays.

Next he related how another Frenchman, seeking glory, had decided to try the other end of the rainbow and he had founded the Infra Red Rays which might be styled as ultra or beyond the Red Rays with more heat.

He incidentally remarked, to our edification, that this rainbow was no longer small but ran into miles and yet the eye could get but *twelve inches* of it (O what is man, O Lord, that Thou art mindful of him). There is something, is there not, in a thought with that significance? Like a little ant running back and forth, the eyeball picks up twelve inches of rays and man, groping about with his faculties, as they are, gets the ultra violet, the X-ray, the Gamma Ray a little on one side and some Infra Red on the other end. What's out beyond them? Is there one which we can communicate with the so-called dead? Is there one we can cure all diseases with? Is there one that shall aid us to stop war? And when we die do you suppose in our next life we pick up with our new eyes the whole, big rainbow—or shall we hazard only a part of it? With the red end we produce Diathermy or Thermopenetration; with the ultra violet we stimulate the light proclivities.

He dwelt on all the world's Bibles and how each one, including our own, began with the Lord saying, "Let there be light" and there was light. He recalled Loebs' saying that life consisted "in slavery to light."

His next thought recalled a paper this writer wrote when he was about eighteen in which was stated God was a big being or mass like a ferment, such as yeast or mother in vinegar. That it could give off and still be as powerful as ever. That in each one

of us was a little of this and we could increase our ferment activity if we wanted to (being constructed in His image), and if we did we could give off, too, and still be as powerful as ever. And we remember we ended up by saying some day it might rush together again in one big mass. Some years later we re-read this and indulged in a big hearty laugh at our own expense. We wondered just what we were like at the rather confused moments we wrote it. Today we were not so sure of our later position. For the speaker said today we were but an offspring of the molten mass of the sun and so dependent were we on the central mass that if we did without it for very long our blood would congeal in our vessels and we would become a jelly-like, protoplasmic mass. Light—this light from the sun then was what determined our being here. Perhaps the sun worshippers of the early American civilization had a good idea after all.

Bryan to the contrary, notwithstanding, Pacini thinks we were mud at the start. Out of the ooze, light transformed an amoeba. Light irritated it by stimuli in spots on its ambitious circumferance until these spots developed into muscle-like portions. Other little spots had other views of transcendentalism and instead of staying in the cell's borderline they retired to the center and decided to become nervous centers. The outer always sensitive to the red; the inner sensitive to the violet, so to speak. By and by the amoeba with aspirations that would do justice to the chambered nautilus and its "Build Thee more stately mansions, O My Soul" wandered from the watery ooze to the dry land where sensations from the ever friendly sun came thick and fast and so the tadpole and the frog and the lamprey with the little knob on its head. All life then is motion and motion in wave lengths is evidently the Song of Life, especially transposed in terms of light lenghts and your big fan with its rainbow of miles and miles.

Then he gave Loeb's view of the moth and the candle. Loeb took the moth and evidentally, as there are two sides to all questions, there are two sides to the moth and, as we know, to about all else that moves and lives. Each side of the moth is sensitive to the Slavery of Light. There is the candle burning brightly like a corner on Broadway. There is the moth flying in a straight line. The light of the candle strikes it on *one* side. The effect is relaxation on that side. But the impulses are being sent down equally to the wings. "What will I do?" sings the moth. There is only one thing to do. You know where the boat goes when a fellow has a big biceps and triceps on one side and an artificial arm on the other. The boat goes in a circle. Now the moth begins to do the same thing. But as it nears the candle the intensity squares with the distance according to your school-day Physics. What happens is that the moth is a slave to the light which in the end is its destruction. You would think succeeding generations of moths would develop compensatory sensitized cells which would offset this old enemy, "Slavery to Light." Candle-Light S t a b i l i z e r s (patent applied for). But they don't, evidently, and so you will always have to clean out the electric light globes of thousands of moths for many years to come because the moths relaxed on one side; kept the engine running on the other side; flew in ever decreasing circles and discovered that

well-known fact that although water is wet—fire burns.

As we get out of the moth class we find that "Slavery to Light" is translated into "Love for Light," and if you have money enough you fly around in circles until you seek the sun and light in winter and your love of light ends in your being burned at Palm Beach.

Light then is life. Light is motion and motion is life. Motion is a matter of wave lengths. Pacini says these can be measured down to a millionth of a milliampere by a rod. This writer read the other day of how all the most infintestinal portions still have motion within them and that you can transpose certain properties of divisions of atoms *without* traversing the space between. This is getting beyond our depth and we feel like we did as a boy when we began to measure Eternity and a queer feeling came over us and we recalled the two colored gentlemen, one of whom said to the other, "Boy, what does dis here world rest on?" Answer, "Rocks, you crazy fool." "Yes, but what dey rest on?" "Why you ignerant nigger, it is rocks all de way down."

The division of atoms and wave lengths shade into where they are not only ultra violet for our eyes but our brains, too.

Next he moved on into his subject where he drew a lot of jars on the blackboard and these he labeled the different rays in the small rainbow, which, he says, we now appreciate. First the Infra and then on through the spectrum to the Gamma Rays. Then he took up carbolic acid and he could see where you could employ, if you knew how, certain rays with wave lengths which would do what it does, i. e., its escarotic power; or a kaloin poultice and do what it does; or with certain of the violet rays do what digitalis does.

With all due respect to the lecturer (and believe us we had a lot) we believe our late Dr. Abrams of California intimated just such a thing when he used his oscillator or whatever it was called. As a physio-therapeutist, he believed all these remedial agents could be immitated if you selected your wave length correctly. He thought wave lengths could be measured so accurately that they would be the same in Tokio, Berlin or Rochester, Minn., (if they use anything like that way up there). As far as we are concerned, we thought the dosage of Digitalis was the same in all these places, too. Furthermore, some enterprising pharmacologist might argue the sun put the necessary number of vibrations in the leaves of the Digitalis plant so we would not have to go to a machine to get it.

When we had listened to this brilliant talker who does his own laboratory work, and was the collaborator of Steinmetz of the General Electric Company, and can claim Pacini, the physiologist, as a grandfather, we thought what we said in an article in *The Journal* on Mental Healers, he is either a John the Baptist of a big discovery or pursuing a first-class scientific will-o'-the-wisp in an electrical graveyard.

He fascinated fifty "hard-boiled" (we apologize for the phrase, yet it is the best there is) medical men. Whether they realized it or not, we do not know, but he had them flying around a fanciful, electrical candle until they either had their wings singed or else fell at the foot of the flame. That is all there is to it. You that smile at this just wait until you

hear him talk. After hearing a whole winter of talkers at medical meetings we ended up rather blase to all external stimuli. We had had only four hours sleep and came near nodding once or twice but in the end he hit us like the sunlight struck the amoeba and pretty soon sensitized spots appeared on our periphery. Little knobs of interest and we who are a first-class doubter of all things electrical came to the point of wondering where we were at.

Crile at one end, the late Abrams at the other, say we are nothing more than electrical machines—so-called masses of electrons. Some one else says we come in with so many and when we use them up we die whether it is the age of 14 or 80. Pacini says we are slaves and lovers of light and light is at the foundation of the electron. The analogy is wonderful and complete from their standpoint of the physio-therapeutist. When we are prone to criticise a brilliant man of this type we always try to remember Columbus, Galileo, Harvey, Socrates, Martin Luther, Joan of Arc and all the others who were stoned by those who, just because they could not see, would not believe.

Then again there creeps over you the all-swaying personalities of Confucius, Christ, Peter, who has a great church still under his sway; Napoleon, Alexander, and the others who dominated life and that makes you believe that somewhere out in the Great Open Spaces where dwells the ultra violet is some all-wise being who started the electrons (as the colored man in his homely way did not say) as a gift. Something had to start them, didn't it? That this great being was like Confucius or Napoleon with a swaying mind over those that come in contact with it. We suppose it would be lonely to be out in Time and Space alone. That he did start the light to make something out of the ooze. Later he liked it so well he put something of himself into it and that something is greater than electrons. It is personality, of which Pacini is so great a living example. We mention all this because, say what you will. Pacini's idea takes the idea of sentiment and love and friendliness out of life and makes it a matter of wave lengths. You are what you are because you are so many electrons or units with such and such a wave length. That you are poor, or rich, or white, or black is, as this reporter sees it according to Pacini, accidental. When you look around you perhaps it is the best view to take of the "World's Mortalia." We are sorry for ourselves here. Someway or other we suspect we are in danger of being antiquated in this matter of physiotherapy. We still believe in the matter of personality not accounted for by mechanical means, i. e., wave lengths. We are confused. We are afraid of waking up some morning and finding Pacini was right, we are only wave lengths subject to sensitizations from light or its offspring, electricity. But we would not have missed Pacini's lecture for anything, even if we were one who only had his wings a little wee bit burned.

STATE AND GENERAL NEWS

Dr. Tom A. Williams, known to so many of the West Virginia physicians, has returned to his home in Washington, D. C., after spending the winter at Miami. Dr. Williams plans to attend the meeting of the State Association at Bluefield.

Dr. Frank LeMoyne Hupp of Wheeling attended the meeting of the American Congress of Physicians and Surgeons in Washington, May 4 to 6, and on the 9th sailed for Europe on the "Veendam," where he will attend clinics and sightsee until September. Dr. Hupp is accompanied by Mrs. Hupp.

Dr. L. V. Guthrie, superintendent of the Huntington State Hospital, attended the meeting of the American Psychriatrist Society in Richmond, Va., during the month of May. Dr. Guthrie is auditor of this society, which is composed of the superintendents of the institutions for nervous and mental diseases, and physicians specializing in this branch of medicine.

Dr. William E. Neal of Huntington was overwhelmingly victorious in the primary in that city by winning the nomination of the Republican party for mayor.

It is announced that Dr. Claude C. Drace has become associated with the Wheeling Clinic. Dr. Drace's work will be confined to pediatrics and internal medicine.

Dr. Charles W. Waddell of Fairmont has sold the residence he now occupies to Dr. James B. Clinton and has begun the erection of a handsome new domicile just across the street.

Dr. and Mrs. L. D. Norris of Fairmont entertained a few friends at dinner the other evening in their home on Oakwood Road to celebrate the fourth anniversary of their marriage. The party was arraigned as a surprise for Dr. Norris. Covers were laid for eight.

Dr. H. S. Keister of Fairmont received word a few days ago of the death of his father, Eugene Keister, at his home at Upper Tract, near Franklin. Mr. Keister was 70 years old and his death occurred very suddenly. Dr. and Mrs. Keister went to Upper Tract to attend the funeral.

Fred E. Brammer, M. D., Huntington, W. Va., announces the removal of his office to Suite 1118-20, the new Coal Exchange Bldg., corner Fourth Avenue and Eleventh St.

OHIO COUNTY NEWS NOTES.

Several, ourselves included, wrote the Governor about the Chiropractic bill. We also enclosed a clipping of an advertisement of the bepictured face of Dr. Malin of Bellaire, Ohio, who cured a case of typhoid fever in nine days with a few adjustments, and advised everybody, according to the Golden Rule, to pass the good word along.

We would not presume to criticise a Governor, for you never know when you might want an appointment on some board or other. We voted for the Governor, and coming up in the railroad train from Charleston with several others we had a long talk with him. But we shall always regret he did not approve or veto it. He came into office with the hearts of his admirers beating strong because they felt here at last was a man of strong opinions (right or wrong). It may be all right, doubtless is, the better

way, to let them become a law without signature. We are no politicians, our performance at Charleston makes it doubly sure, yet we are going on what we hear, when we say the Governor lost by it, and will take a lot of demonstrating to make up that loss.

They tell me the members of this last Legislature rather prided themselves on "opposing" medical men. A doctor in a nearby county said it was told to him, by one on the ground, you actually were hissed if you were foolish enough to stand up and defend the medical profession. Few men are more conservative with history than medical men. They know any number of instances not only in General History, but the History of Medicine, where men who were right were stoned by the rabble. The French Revolution is too recent for a certain type to have outgrown so quickly. We predict a reaction some of these days that will be of great proportions. Meanwhile, those who have cried loudest for those not in the medical profession should have the opportunity to call them, and them alone when they are ill.

This reporter in "snooping" around has picked up this information, and that is the honest doctor who fights abuses and irregulars, and the other ills that beset us, is not one-half so much afraid of chiropractors, nor legislators with peanut outlooks who listen to some strong agency whispering through the trees, nor people yelling at the top of their voices about personal liberty as he is of the men in his own profession "who letteth not the right hand know what the left hand is doing." There are doctors perhaps in our own State who will "hobnob" with these senators and legislators the same as ever and, perhaps, tell them it was only a few soreheads who went to Charleston to kick because that's all they are good for—to kick. A big percentage will help the chiropractors out of bad holes the same as ever, although now that they can sign death certificates, it is doubtful whether they will need them.

The wife of Dr. Turner Morris, vice president of the State Society, was very ill with pneumonia. At one time she was very serious. She has now fully recovered. We saw her Friday night and she almost looks her old self again. The Doctor and this reporter had a talk together on doctors' wives, and we agreed we take our wives too much for granted. How often you hear members of the laity say, "I would not be a doctor's wife for anything." It is a difficult life for any woman. It takes a woman of the finest caliber. The hours of their husbands are ruinous to social life, and if they do go, nine times out of ten they don't know how to do anything. Doctors are fairly good at poker, but they don't play that out in the open—and while you can make as much playing bridge, the doctor's thoughts may go a wandering at the crucial point and all is over. Doctors may think they can dance, but it is an illusion—although we will make excetions in the cases of Doctors Simpson, Anderson and Steele, who evidently were born with the ability.

If wives wanted to get jealous they could work themselves up into such a state only too often—but if a valet learns to not take his master too seriously now and then, it is certain doctors' wives never do. The most we have seen regard their husbands' foibles as they would children.

We, with Dr. Morris regard doctors' wives as a great set of women

who are entitled to an unusually great amount of credit for whatever success their husbands may have attained. Most doctors regard their success as wonderfully personal. Their wives let them think so. But when a doctor sees his wife ill, especially within the clutches of a disease like pneumonia, it is then he realizes how miserably small he is compared to her who lies so quiet, so patient and so still.

Speaking of doctors and their wives, none are any happier than Dr. and Mrs. F. LeMoyne Hupp. Dr. Frank is one whose life arouses our deepest envy. Having lived lives of activity in their profession, not only in a medical and surgical way, but also in State, National and Local Society work, they are now, as Mrs. Hupp puts it, going to enjoy a little of life—so off they went to the Congress of Physicians and Surgeons at Washington. Dr. Frank was concerned with the American Surgical Association and in hastily looking over the pamphlet he appears to be the only fellow from West Virginia. In looking over the program we notice on Wednesday morning Leon and Freeman was on for a "Crushing Operation for Varicose Veins of the Leg." We should have liked to have heard this.

We received a letter from New York later from the Doctor ere he and his wife sailed for a long restful tour of Europe. We will say this for Dr. Hupp: He understands better how to be a doctor and a real human being who has other tracks than one, better than anyone we ever heard of.

Dr. Bippus, our local president, in returning from a wedding in Ohio at a good speed, suddenly saw that the end of the good road merged off into a muddy stretch. His car, imbued with the nuptial flight so recently participated in, tried to join in wedlock with a post on one side then on the other. Result: Dr. Bippus seriously injured his happy, genial countenance. Mrs. Bippus was unhurt. The Doctor laughs at it now, but it evidently was no real laughing matter.

The alumnae of Jefferson Medical College met at Washington, Pa., on Tuesday evening in a "get-together" affair preparatory to their big celebration in May at Philadelphia. Medical men from Pittsburgh, Wheeling, Washington, Waynesburg and Wellsburg were there. The affair was at the George Washington Hotel and we understand was highly successful.

Wheelingites present were: Edward Phillips, Gilmore Hoge, Arthur Hoge, Tom Armbrecht, E. L. Armbrecht, Edward Dickey, Zuback, Tomassene, Plant, Linz, as well as internes from Ohio Valley General Hospital, Scott and Holm. Doctors Dickey, Linz and Armbrecht did the talking for Wheeling. We sometimes wish all the members of the State were as loyal to their State Association as these various various Philadelphia graduates are. They are the real thing.

The annual election of officers will take place on next Friday evening.

Dr. Drace has been added to the staff of the Wheeling Clinic as a specialist on children's diseases and internal medicine.

Dr. Charles Clovis, Dr. Mabel Clovis, their daughter, Martha, together with Miss Isabelle Rogers, will go to Atlantic City next week in his new Rickenbacker. Dr. Clovis attends the meeting of the X-ray men. Headquarters at the Chalfont Hotel. Miss

Rogers attends the sessions of the Division Laboratory Technique. In our humble opinion, and it is shared by a great many Wheeling medical men. Miss Rogers is one of the most expert and accurate workers in laboratory technique in the business. She would have made a second Madame Curre had she tried.—H. M. H., Reporter.

MEDICINE AND SURGERY

OSTEOPATHS SEEK FULL RIGHTS AS PHYSICIANS.

When osteopathy was originated as a method of healing, it disowned any interest in or relationship with either the practice of medicine or medical education. In the appeal of osteopaths to legislators for the legal right to treat sick and injured people, the assertion was made that, since they were "not using drugs" and "not making use of surgery" they were, therefore, "not practicing medicine." For that reason they claimed—and successfully in some states—exemption from the requirements of preliminary and medical education invariably required of physicians. The licenses granted to osteopaths under such assertions were supposedly limited to treatment by the osteopathic or manipulative method. In recent years, however, the osteopaths have completely reversed their attiude and are demanding, not only the privilege of using narcotics—the most dangerous of drugs—but also the same rights of unlimited practice as are granted to qualified physicians. In no instance, however, in the bills presented to legislatures in which they asked for these unlimited privileges, is any clause found requiring them to possess premedical and professional qualifications equal to those required of physicians. If osteopaths desire privileges to practice as physicians and surgeons, why should they object to equal educational and professional qualifications? If, as is sometimes claimed, oteopathic colleges teach all subjects required in medical schools, why should not osteopathic schools be inspected and classified the same as medical schools? There is certainly no need of, or excuse for, two laws regulating the practice of medicine in any State, one providing low educational qualifications for osteopaths while another insists on higher qualifications that are considered essential for physicians. The people of each State have the right to expect that every person granted a license to treat the sick and to assume the responsibility for life or death should first be properly qualified to assume that responsibility.—Jour. A. M. A., May 2, 1925.

(Abstract of paper on "The Transplantation of Distant Skin Flaps for the Cure of Intractable Basal Cell Carcinoma," read at the meeting of the American Surgical Association, Washington, D. C., May 5, 1925, by J. Shelton Horsley, M. D., Richmond, Va.)

The pathology of basal cell cancer is discussed. There is marked variation in the morphology and structure of certain types of basal cell cancer, from the common small spindle or filament-like cells in closely packed masses to columnar cells arranged as acini. It is suggested that the cause of this variation is that basal cell cancer, being derived from the deep layers of the epidemis, is more closely akin to the hair follicles and sweat

and sebacous glands, which also arise from the deep layers of the epidermis, than spinous cell cancer which begins in the superficial layers. Therefore, reversion to gland structure would be more likely to occur in basal cell cancer than in spinous cell cancer.

The rarity of metastases of basal cell cancer is noted. Spinous cell cancer, especially in the more malignant forms, metastasizes readily in the lymph nodes, but basal cell cancer seems to require for its progress a breaking down of the resistance of the adjacent normal tissue, probably by some substances elaborated during its growth. As basal cell cancer occupies areas that are frequently attacked by spinous cell cancer, the cells of a basal cell tumor doubtless have access to the same lymphatics and blood vessels as would the cells of a spinous cell tumor. It is reasonable to assume that those basal cells are transported, but they do not survive because the resistance in the distant tissue inhibits their growth. It seems logical, then, to transplant distant tissue to cover the raw surface left by excision of an intractable basal cell cancer with the expectation that such a flap will tend to prevent recurrence.

Ten cases of intractable basal cell cancer, treated according to the principle of transplanting distant flaps over the area left after the cancer has been excised, are reported. There was recurrence in five of these ten cases, but in no instance was the recurrence in, or in immediate proximity to, the transplanted distant flap. In all of the recurrent cases the cancer was excised and there has been no further recurrence in three cases, while in two where it was difficult to adjust the transplanted flap to the wound the cancer continued. On the contrary, in a patient in whom a distant flap was transplanted in order to cover the raw surface after excision of an extensive spinous cell cancer a recurrence appeared under the flap and quickly invaded the flap. In most basal cell cancers in early stages simple methods of excision with a knife, cautery or paste, or treatment by Roentgen ray or radium, are usually effective, but in a few instances these measures do not avail. It is in these intractable cases that a thorough excision, preferably with the electric cautery, and transplantation of a flap from a distance afford an opportunity for cure after other methods have failed. The principle of the operation is based upon the peculiar pathology of basal cell cancer in that it does not metasasize.

HICCUP: THE WINNIPEG EPIDEMICS

During November and December, 1919, Winnipeg experienced its first epidemic of hiccup, an extensive outbreak of at least 1,000 cases, according to the report by FRED T. CADHAM, Winnipeg, Manit. (*Journal A. M. A.*, Feb. 21, 1925). A further, but smaller, outbreak occured in 1922. It recurred in November, 1924, during which epidemic a record of 1,400 cases was obtained. The population of Winnipeg and its suburbs is approximately a quarter of a million. During each epidemic all the cases appeared within a period of six weeks. Cases were noted in the surrounding towns of Manitoba one week subsequent to its appearance in the city. Only twice was a record obtained in which more than a single case occurred in a household; and when two cases did occur, the onset was simultaneous. Each outbreak took place

in November, coincident with the onset of winter, reached its height by the first of December, and declined rapidly. No definite etiologic factor was established. Cultures made from the nasopharyngeal secretion obtained from patients invariably yielded a streptococcus. This was an oval shaped, green-producing coccus, nonhemolytic, fermenting dextrose, lactose and maltose, and insoluble in bile. It rapidly died on subcultivation. Using the method described by Rosenow, separate cultures of this strain, obtained from sixteen patients, were injected into sixteen rabbits, five of which developed myoclonic spasms of the diaphragm, intermittent in character, and lasting from one to thirty-six hours. The filtrate from cultures of this organism in fluid mediums also produced these spasms in two rabbits out of eight inoculated. Each epidemic of singultus has been associated with an epidemic of an illness of short duration with varied symptoms, at present designated, with professional aptitude, by the blanket term "influenza." The first epidemic of hiccup in 1919 was coincident with Winnipeg's first epidemic of encephalitis. During the lesser singultus epidemic in 1921, there were reported thirty-one cases of encephalitis. In the winter season of 1922-1923, 108 cases were noted, but during that season no record was obtained of a single case of hiccup. Three cases of encephalitis during the epidemic of 1919 were ushered in by hiccup. One patient in 1921 developed hiccup simultaneously with myoclonia of the arms, legs and abdomen. During the recent epidemic of singultus, a woman, aged 40, had an attack of herpes zoster, followed two weeks later by insomnia and excitability. There was a striking similarity between the epidemics of hiccups and encephalitis in the difficulty to trace contact; in the records of but a single case in a home, and also in the seasonal incidence. No evidence was obtained locally of any case of encephalitis in which there had been a previous attack of hiccup The illness was self-limited, therefore it is difficult to evaluate any method of therapeutics that may have been used in these epidemics. No fatal result from an attack of hiccup has been reported in the local epidemic. The nature of the relationship of epidemic hiccup to epidemic encephalitis is not yet determined. In these epidemics, many features present themselves for consideration: the difficulty of tracing direct contact; the high incidence in males; the association with a streptococcus, and the relationship to influenza and encephalitis. Then, too, there are the interesting symptoms such as the intermittent character of the spasms, the neuritis, slow pulse and low temperature findings. The clinical evidence is such as to encourage a further investigation of the theory that there is, widespread in the community, a disease, suggestive of an infection of the central nervous system, with symptoms varying from those of a mild, acute neuritis to those of epidemic encephalitis, and including hiccup.

THE PARATHYROID HORMONE

Among the endocrine glands that have been the subject of intensive investigation in recent years, the parathyroid structures have been the focus of much attention. The great importance that they have physiologically is out of all proportion to their small size. Removal of the fragments of tissue that constitute the parathy-

roid glands results in serious symptoms; and unless suitable therapy is vigorously instituted, death is certain to ensue. The outstanding manifestation resulting from extirpation of the parathyroids is tetany. The severity may range from a mere hyperexcitability of the nerves, which requires careful electrical tests to elicit its presence, to the severe symptoms designated as tetania parathyreopriva. It is the merit of recent biochemical research to have demonstrated clearly that in these conditions there is a pronounced change in the content of certain blood components. Greenwald has summarized the latest information in the statement that there are two, and only two, well authenticated metabolic changes after parathyroidectomy. One is the lowered calcium content of the serum or plasma, and the other is the diminished excretion of phosphorus in the urine. These must be regarded as being intimately connected with the sequence of symptoms observed. The most successful procedures for treatment, such as feeding milk or administering calcium salts, are in accord with the considerations just presented.

Postoperative tetany has been relieved, even in man, by parathyroid grafting. This fact, in connection with other obvious considerations, has sponsored the belief that the parathyroid supplies an indispensable hormone to the body. The attempts to use desiccated gland substance or extracts in a replacement therapy have not, as a rule, been attended with success. Nevertheless, Collip of the Canadian University of Alberta at Edmonton, in summing up the theories of parathyroid function, believes that the balance swings in favor of a hormonic function having to do normally with the regulation of calcium metabolism through a specific control of blood calcium concentration.

Proceeding on this hypothesis, Collip has succeeded in preparing extracts by acid hydrolysis of parathyroid glands, that control or prevent the tetany in parathyroidectomized animals, and permit them to live. The active principle in this extract produces its effect by causing the calcium content of the blood serum to be restored within normal limits. A close parallelism has been observed between the clincical condition of experimental animals and the calcium content of the blood serum. Coincident with the marked improvement observed after the use of the active extract, a rise in blood calcium has been noted. It has been quite conclusively shown that the extract may be effective by the oral route. It is felt, however, that the best results are to be obtained by subcutaneous injection; that is, that the full effect of small doses is better elicted by this mode of administration of the hormone. So far as one can judge at the present stage of the study, Collip's work represents an outstanding achievement worthy of one who has already made a splendid contribution to the technic of the isolation of insulin.

An important additional outcome of Collip's studies has been the discovery that ovedosage with the active hormone extracts may push the rise of blood calcium to a condition of veritable hypercalcemia that may even become fatal. The symptoms of hypercalcemia are anorexia, vomiting, apathy, drowsiness verging into coma, and a failing circulation. The blood becomes highly concentrated. These findings on animals, on the one hand, warn against careless applications of the new discovery to man,

and, on the other, extol the advantage of animal experimentation as a preliminary to human therapy. As Collip himself points out, it is possible that the newly found hormone may have many practical uses. Calcium metabolism enters into many medical problems. An agent is now at hand which influences profoundly the calcium metabolism. It must be recognized, however, that the parathyroid hormone is a most potent therapeutic agent, and that its use may be attended with great danger unless due precautions are taken to avoid an overdose and the development of hypercalcemia. It may be that a condition of mild hypercalcemia would be of definite benefit in certain conditions. Only by careful clinical studies, however, will the ultimate merits or demerits of this hormone be determined.—*Jour. A.M.A.*, May 16, 1925.

THE PAIN OF GASTRIC ULCER

Relief from the epigastric distress associated with chronic peptic ulcer is usually secured by eating, by emptying the stomach, or by the administration of alkalis. The rationalization of treatment as diverse as this must depend on a knowledge of the immediate occasion of the pain and the mechanism concerned in its genesis. The suggestion most commonly quoted at present makes active peristalsis responsible for the sensation of marked discomfort. Thus, it has been concluded that the peristaltic contractions are felt as pain when the ulcer is in an "irritable state," whereas similar peristalsis may proceed without conscious sensations at other times when the issues are less irritable. The cogency of such an explanation must depend in large measure on the evidence that peristalsis and pain demonstrably occur and cease simultaneously. Ortmayer, who has investigated this aspect of the subject experimentally in human patients, remarks that any theory of motor phenomena as the cause of pain in ulcer, except that of continuous localized spasm, is at variance with the clinical observation that distress of ulcer, when present, is usually continuous. The patient himself often describes his pain as gnawing or boring, not as a "spasm." Ortmayer's own observation of gastric movements recorded by the balloon method give no evidence that sodium bicarbonate and calcium carbonate, for example, relieve the pain of ulcer through lowering tension or tone or through decreasing peristalsis of the stomach, so far as either of these factors can be recorded by the procedure used. She says that it has always been difficult to explain the quick, unfailing relief to the pain of peptic ulcer obtained by giving a sufficient quantity of neutralizer, by emptying the stomach, or by eating on the basis of motor activity alone; for rapid simultaneous changes in the gastric motor activities are not observed. Hence one must still remain skeptical toward the conclusion that peristalsis causes the characteristic pain of gastric ulcer, even though it may be somewhat discomforting to an inquisitive generation to continue to employ modes of treatment that are empirically effective though scientifically inexplicable. —*Jour. A. M. A.*, May 16, 1925.

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THE PRESENT PROBLEM

By GEO. D. JEFFERS, M. D.,
Parkersburg, W. Va.

President's Address delivered at Fifty-Eighth Annual Meeting of West Virginia State Medical Association, Bluefield, W. Va., June 9, 1925.

For all that we are in the middle of the last year of the first quarter of the new century, I doubt if many of us have realized how swift the pace, and how tremendous the accomplishments of this interval have been, changing the conditions of all mankind. Just a bare quarter of a century ago one of the sciences allied with our own medical science, that of immunology, did not exist. A half a century ago and bacteriology was waiting to be "invented." One of the most strikingly significant statements of the past year in any field of activity is that in the United States as a whole, within the last ten years, five years have been added to the average human life. It is almost unbelievable, and yet it is the cold statistical statement of a commercial body dealing with vital statistics as related to financial profits in life insurance. The present problem that I am going to place before you is: Just where does this concern the medical profession as a whole? And echo answers, Where? Just how much of this tremendous human achievement is associated in the public mind with the medical profession? Just how much and how far has the human opinion of the day been made acquainted with the important facts that these five years are immediately and directly related to the two sciences of bacteriology and immunology with the allied science of sanitation? And all of it, every last fact, has been due to the studies, researches and experiments of the medical profession? If you were to ask any half a dozen men at random to what influences he attributed some of our present day comforts, he would, five times out of six, say: To the public health service, or to the board of health, if that hap-

pened to be the title of the particular body in his vicinity. He knows the public health regulations, but he doesn't associate them with the family physician, not by any means. Where does this concern us? Less than a year ago, one of the members of our honorable body stated in open meeting that "a great many of our present health officers are put up for political purposes, draw a salary—and do nothing." And we have the cold fact staring us in the face that our health officials are known to the "man in the street," that the health officials get all of the credit, and that we seem to be sitting idly by while our profession is being taken away from us.

Quoting from an address by the president of the medical society of our sister state, Virginia: "The regular profession is now confronted in this state with an insiduous effort to undermine its prestige and impair its efficiency by bills that will be presented to the next legislature to license various healing cults." Does that apply to West Virginia? Does it apply to all states? Is not every state in the union overrun by chiropractics, osteopaths, naturopaths, mental healers, spiritual healers, and hosts of the undesignated? Why? *Because they organize enough public opinion to influence legislation in the direction which they wish it to take in so far as it concerns themselves.* Of the medical profession proper they take no notice whatever. As an influence directing public opinion, to them, and to a great extent, the general public with them, it does not count. If it is necessary to have a license they take measures to obtain a license to practice whatever the cult happens to be. *And that is distinctly one of the problems before us every day all day.*

I have before me a copy of the *Atlanta Constitution*, of date February 26, 1925, containing a news dispatch from London: "February 25, Five thousand qualified physicians are tramping the streets of London looking for jobs at anything from $10 a week up. Some of them are sleeping at night along the great curve of the Thames embankment—the world famous resort of the down-and-outers. Tremendous activity in British and Irish medical schools has created a surplus of both men and women physicians since the war. Thousands of them are confronted with the choice of abandoning a profession to which they have devoted years of training, or of starving. National health insurance has made the young physician's lot difficult. Under the insurance scheme millions of persons, by paying a small weekly fee are assured of medical attention. Each insurance physician has from 500 to 16,000 patients on his list. For each patient the physician receives an annual payment of about $2.00. The law forbids any physician to attend more than 2,500 insured patients, but many of them enter into pseudo-partnerships, the other partners being salaried assistants of the principal physician."

Just what bearing has all this news from far-off Britain on the present medical problem in West Virginia, do I hear? Note "the law forbids any physician to attend more than 2,500 insured patients." What element of the population carried through that law? What relation did the humane ideas which formed the basis of the many workmen's compensation acts have to the health in-

surance laws? And just how much of it all was effected without any consideration of the medical profession whatever? Or by the medical profession either, I might add. Does it not bring us abruptly face to face with the revolutionary fact that our business in life is tending in precisely the opposite one from that traditionally associated with our profession? Whereas, even yet in the rapidly developing scheme of human civilization the public mind connects our activities with the care of the sick, the actual fact is that our activities are more directly concerned with preventing the incidence of sickness, and on a very large scale at that. Again, we are contributing to the elimination of the practitioner from medical practice. We have been so pre-occupied with the purely technical side of our profession that we have hardly observed the evolutionary and revolutionary changes going on about us that are determining our status by forces wholly outside of our control. The average citizen, laborer, business man, clerk, lawyer, newspaper man, tradesman, thinks of us as not concerned with public and political affairs, and go about legislation and elections with a blithe and genial disregard of any opinions we might collectively have. And we accept the situation as presented!

Consider the proposed Twentieth Amendment to the constitution of the United States—how many of us have given it a second thought? And yet it directly concerns us. It looks like a humane measure, that children shall be forbidden to work in factories and other places up to the age of eighteen. Here in the south we allow children under fourteen to work in factories; our brothers of the north think they are handicapped by such labor, because it is cheap and plenty. But enlightened Massachusetts was one of the states to vote against the Twentieth Amendment. Manufacturers of Massachusetts have come south with their plants and failed of commercial success in the field of raw material, cheap labor and plenty of both—why? Because the "labor was too ignorant;" the school law which compels school attendance in Massachusetts until the age of sixteen were productive of better work, and more of it when it did reach the market for labor. *Now, children are children whether they are in Massachusetts or in West Virginia; and it very immediately concerns us as medical men that our children should have every advantage of health and education that we can give them, and my point is that all this is achieved by legislative measures with which we, as a class, have practically nothing whatever to do. We leave it to the so-called politicians.* And they do probably the best that they can, without much help from us.

I recall the case of a brother physician much concerned with the problem of a community school nurse. The population of his section was largely foreign; their ideas of living were different from American ideas; public health, hygiene, sanitation, as we see them, were quite foreign to them as a whole; and, as they did not speak English, there seemed to be little encouragement in the outlook from the doctor's point of view. The community nurse occurred to him as a solution, to reach the parents through the children in school; *and it consumed five or six years to bring about this simple public health measure,* not because it was unnecessary, not because the necessity was not keenly understood, but because it

must be put into effect by some legislative measures, and the doctor was only one unorganized entity against the whole electorate who controlled the public purse.

It is at least a whole century since the medical world has accepted insanity as a disease, but how much of this idea has permeated the public mind? It is less than a dozen years since the Association of Criminal Law and Criminology has been established, and far less than that since the idea entered the legal mind that the criminal might be something other than a criminal; for instance, a patient, as the medical profession has regarded him for so long. In this one respect alone, the medical opinion has had absolutely no effect on the public mind. A doctor is called as an expert in a criminal case where the defense is insanity; a hypothetical question a mile long is framed, and submitted to him for an opinion, which he gives to the best of his knowledge. Does it have any effect? Generally speaking, he is listened to and the jury of laymen will proceed calmly to pass upon the crime and ignore the *opinion*, as they would ignore the advice if it were given. Again, the point I would emphasize *is that in influencing public opinion and professional opinion outside of our own profession, we are almost utterly without weight.*

What have we in West Virginia to do with the matter of immigration? I am moved to mention the subject by the recollection of a paper published in a medical journal some three years ago perhaps. The journal was not one of very large circulation. The article was by one of the health officials of the City of New York, now a United States senator. The article in question was in a way a report of a trip which the official had taken to foreign countries to inform himself of conditions of immigrants seeking asylum and hope for betterment in our country. One of the incidents of his paper was the story of a trainload of refugees enroute to the United States from far off Siberia, whose travels before reaching the port of embarkation had covered several months, during which there had not been so much as a cupful of hot water in the possession of the two or three thousand persons who had started the journey and the few hundred of them that were left after the hardships of the journey. Without every measure of disinfection known to science that whole community was unfit for any society, from the point of view of cleanliness, alone, without taking into consideration the question of the many serious disease conditions consequent upon plain filth; and they were on the way to this land of promise. Does immigration concern us in West Virginia, I ask? Will Dr. Copeland make a better legislator than his neighbor when the matter of immigration is imminent for legislative measures?

One of the most significant and far-reaching of the bad habits (save the mark!) of the medical profession is that of talking only to each other effectively. Some irreverent, flippant wag or other, in the long and dim past of the pilgrim fathers of Massachusetts bay, aptly spoke of the settlement as the place where "Lowells speak only to Cabots, and Cabots speak only to God." Our habit of talking almost exclusively to each other or to our medical societies invariably reminds me of this bit of irreverence. Here, Dr. Copeland has, or had at the time, one of the strongest and most telling arguments to

present to a willing public and the place that it appeared for public consumption was a minor medical journal, instead of in a syndicate of newspapers of wide distribution to direct all of the force of public opinion that would be created by public knowledge of the conditions under which this group of emigrants would reach our hospitable shores. Far be it from me, or the profession of which I am a modest member, to deprive any unfortunate of opportunity or asylum; but, since the immigration question is one that has been considered of sufficient importance to require a special immigration commission to deal with it in its various relationships, *the public health as seen by a recognized health officer should in some fashion or other reach the public which was directly concerned,* which I am sure, it most emphatically *did not.*

Coming back again to these published statements of our officials, that is officials in our field, but happily in another state. "One third of the births of the 70,000 babies born in Virginia are delivered by midwives; two thirds of the more than 5,500 midwives in the state are colored, and in the main, ignorant, dirty and superstitious." I dare say we in West Virginia are not much better off; and here "60 per cent of rural school children have some defect apparent to the lay observer, i.e., the school teacher." Just how much of this could be avoided by the medical examination of immigrants or the regulation of midwives and the *encouragement of the profession of the trained nurse?* We all admit these necessities among ourselves. We all know that at the beginning of this century the first quarter of which is already past, we had not a dozen trained nurses within the boundaries of the state. We are better off than we were, to be sure; but what are we doing about it in a public way, by which I mean in the way of directing public opinion to our purely professional interest in the public welfare? We could with great profit take a leaf from the vade mecum of the much abused organization, Tammany Hall, the political organization of one of the parties in New York City. When a measure is proposed for public action, Tammany's method is to instruct each individual who has a voice to be effective, i.e., a vote, precisely what the purposes of the measure are and how the measure will effect the individual, the community of which he is a member, and the state of which he is a citizen. Tammany is more concerned with politics at home than with national politics; just as the doctor is more concerned with the individuals of his particular community; the water supply, the transportation service, hours and condition of labor, the housing situation in its immediate relationship to him, these are brought directly to the attention of *every individual,* not to some or a few. And the result is that "things get done, not talked about."

A few weeks ago a book was published on "Scientific Research and Human Welfare" by a man who is now president of a university, who was formerly director of an agricultural experiment station, and of a school of agriculture and mechanical arts in a western state agricultural college, wherein it is expounded that the wonders accomplished in scientific research are almost beyond human comprehension, the added span of life, the conquest of disease, by hygiene, by improvement in dietetics,

by sanitation, by scientific research in fact. And the author of the book, Dr. Franklin Stewart Harris, finds that in this age of the conquest of all of nature's forces, the great equalizer, the factor that has exerted greater force than all others is—paper. The researches were of little practical value until the knowledge of them became general. The free exchange of ideas, even scientific ideas and the results of scientific research demanded a medium. All people everywhere, whatever their creed, their color, or their nationality were ready to welcome with open arms the research which helps to banish ignorance and to contribute to the welfare of mankind. Scientific research found the medium in perfected processes for manufacturing steel, in perfecting machinery for making paper, in perfecting methods of cheapening paper, so that a cheap distributor was found or produced for the dissemination of the results of the research, and for the free exchange of ideas. "The pen is mightier than the sword," but the pen without paper was without might. A few years back the per capita consumption of paper in this country was a few sheets of letter paper a year; the average consumption of today is 17,000 sheets, or 137 pounds of paper for every individual in the United States, sick or well, young or old, rich or poor, lettered or unlettered, ignorant or cultured. In the fields of research today, $4,000,000 are devoted to medicine with another million devoted to allied studies, the results of which will become public and practical through the medium of paper. What has this to do with us?

From a retrospect of the last twenty-five years, from a survey of the past, present, and very immediate future, it does not require very keen vision to interpret the signs and the tokens. Our profession will be practiced in the preventive sciences; we shall be obliged to adopt the role of teachers, of instructors, of directors, not of individuals, but of movements and of communities, and we shall have to make use of every agency that will contribute to the success of our teaching, to public health, to public welfare, to public wealth in so far as that is concerned with sound minds in sound bodies, which is very far indeed. And the insignificant sheet of paper will be one of the agencies.

The social changes in the conditions of the masses in our country, whether they be industrial, commercial, religious, educational, or any one or several of them combined are already, whether we wish it or not, changing the status of the medical practitioner from that of a purely personal relation to one which will be semi-public in the immediate future, and it behooves him to look forward and to anticipate the consequences. Industry is mobilizing medical attainments, legislation is reaching out for them; the medical statesman is abroad in many lands. It was said of Sir Auckland Geddes, late ambassador from Great Britain to the United States, that he was not a diplomat but an anatomist; and the quick reply came from some of his admirers that "if he could analyze the anatomy of the human entity, he would be all the more able to analyze the anatomy of a few diplomatic facts."

What are we all going to do when the habit becomes general of the mothers of the country betaking themselves to the maternity hospitals for delivery of their progeny? The

private physician will follow her; he will have no choice. A long time ago it used to be said that woman's place was in the home; and the women said the occupations of home had been taken away from the home and she had to follow them. If the time has arrived in the fullness of perfection of sanitation, and hygiene, and hospital attendance and residence that the purely functional duty of reproducing her kind is carried to fruition away from the home, what is the doctor to do but follow? Incidental to this, will not the doctor find out that he is just as necessary on the executive budget of the hospital as he is on the medical staff? I am not suggesting that we all go out and play politics, or preach legislation, or do violence to our general sense of the fitness of things, but all these stray thoughts combine to force me to the conclusion that we have too long held aloof from purely civic and community interests and too long allowed our fellow citizens to consider us a class apart, concerned only with sick people. In the millenium approaching there will be no sick people. Science will have overcome all of the ills that flesh is heir to, and our occupation will be gone.

As I have hinted, these are but random thoughts that sometimes beset me and I pass them on for what they are worth. Our place in the sun is of our own choice for the future. The work of humanity and human welfare will still be our chief concern, but we must broaden our field of activities to include the market places, the halls of legislation, the direction of education, the co-operation of the spiritual with the physical, of the moral with the mental, the union of all endeavors and efforts for the ideals of human happiness.

SOME PROBLEMS IN THE DIAGNOSIS AND TREATMENT OF GALL BLADDER DISEASE AS SEEN BY THE INTERNIST.

By JOHN PHILLIPS, M. B., Cleveland Clinic, Cleveland, Ohio.

Read before the West Virginia State Medical Association, Wheeling, W. Va., May 13, 1924.

The diagnosis of acute inflammation of the gall bladder and gall stone colic, in patients presenting typical clinical syndromes, is very easily made. However, there are many patients who present themselves for examination because of indefinite distress in the epigastrium or right hypochondrium, and in these cases all the diagnostic skill that the physician can command will be required to establish the diagnosis.

In many cases, a correct conclusion demands a careful history and physical examination, together with exhaustive X-ray and laboratory studies.

In the history, the age, occupation and sex of the patient should be especially noted as gall stones occur more commonly during the period of middle age; in individuals whose occupations are sedentary more than in individuals who lead an active physical life; and females are more frequently affected than males. Pregnancy and obesity, each of which weakens the tone of the abdominal muscles are predisposing factors.

It is important to investigate a history of attacks of acute indigestion or "ptomaine poisoning," unassociated with diarrhoea, to find whether these have been severe enough to require a hypodermic injection for relief and to learn what has been the distribution of the pain in these at-

tacks, whether referred to the back, to the right shoulder, or to the neck, and whether jaundice followed. The patient should be questioned as to the occurrence of attacks of chills, fever and jaundice, or of diseases such as typhoid fever which are not infrequently followed by disease of the gall bladder.

Kehr and others have stated that not more than from 5 to 10 per cent of patients who have gall stones present symptoms of their presence. This statement is founded on the finding at autopsy of gall stones in patients who have died from other diseases. However, the histories of these cases may have lacked information regarding symptoms of gall stones which the patients might have had years before. The general concensus of opinion at the present time is that "innocent gall stones are a myth" and that in many of these cases, even though there may not have been a history of gall stone colic, the occurrence of various symptoms referable to the stomach may have been noted. As Moynihan has so aptly stated "the stomach is very tender in its sensibilities, and cries out the warning when the neighboring organs are attacked."

The symptoms of the so-called gall bladder "dyspepsias" include nausea, vomiting, the belching of gas and sour eructations, distress in the stomach when the latter is empty, dull pain or a feeling of fullness in the epigastrium after eating, drowsiness, headache, and at times a shivering sensation. The distress is often worse at night after eating certain articles of food, particularly if the patient is nervously exhausted and tired. There may be a dull pain in the back simulating lumbago, or a dull pain in the neck and shoulder may suggest the diagnosis of neuritis. On more than one occasion, the writer has seen a so-called neuritis of the shoulder disappear with the removal of gall stones, a circumstance to which Sir James Mackenzie has called attention in his excellent book on "Symptoms and Their Interpretation."

Patients with "gall bladder dyspepsias" present a very difficult problem in diagnosis, particularly in the differentiation of a diseased gall bladder from a duodenal ulcer, from chronic appendicitis with gastric symptoms, and from a gastric neurosis with hyperacidity. When one of these cases is observed for a sufficient period, tenderness over the gall bladder may be detected or after a mild attack of pain, bile may be found in the urine. In these chronic cases, it is very important to make frequent tests of the urine for bile pigment. This simple procedure has been of service to the writer in many doubtful cases. Gastric analysis, either simple or fractional, as a rule is not of great value. A study of the duodenal residues according to the Meltzer-Lyon method, sometimes gives important diagnostic data by showing the presence of mucus, pus, crystals and excessive debris. During the past two years there has been too great a tendency to discredit this method both because too much had been expected of it and because too many faulty conclusions had been drawn by those who had used it.

The X-ray often gives either direct or indirect evidence of gall bladder disease. Direct evidence which consists in the presence of the shadows of gall stones, in cases in which their existence has afterwards been proved by operation may be obtained by the present methods of examina-

tion in from 40 to 50 per cent of the cases. Indirect evidence is presented in some cases by a displacement of the pyloric end of the stomach to the right and upwards as the result of distortion of the duodenal cap by adhesions; or by the presence of a characteristic deformity of the duodenum produced by an enlarged gall bladder. The roentgenogram may also present evidence of adhesions between the hepatic flexure of the colon and the gall bladder. The proper interpretation of the roentgenographic and fluoroscopic findings requires the judgment of a skilled roentgenologist.

Graham's method of visualization of the gall bladder by means of the intravenous injection of tetrabromphenolphthalein presents interesting possibilities but it is too early to form any judgment as to its diagnostic value.

Even after an exhaustive study by all the methods at our command it may still be impossible in certain cases to decide whether or not the gall bladder is diseased. The importance of observation of the patient over a period of time cannot be over estimated, and he should be urged to present himself promptly for re-examination if at any time there occurs an exacerbation of the epigastric distress or other symptoms. Sometimes a tenderness over McBurney's point will be found, suggesting that chronic appendicitis is the cause of the patient's symptoms. However, it must be remembered that chronic inflammation of the appendix and gall bladder disease co-exist in about 25 per cent of the cases.

Differentiation from duodenal ulcer may be established by remembering that in the latter the tenderness is situated slightly above and to the right of the umbilicus and is accompanied by some rigidity of the related segment of the rectus muscle; and that the pain produced by a duodenal ulcer is not referred to the back and shoulder as in cases of gall bladder disease.

Biliary Colic: In biliary colic the pain, which is very severe, is due to the engagement of the stone in the cystic duct. The attack may be induced by horseback or automobile riding or by eating a heavy meal when in a state of worry or fatigue. I have seen a number of patients whose first attacks occurred late in pregnancy or within a few weeks after delivery. The occurrence of a mild cholecystitis seems to be a factor in the precipitation of an attack. In severe cases the pain is one of the worst that may afflict humanity.

Women often state that it is worse than labor pains. It may be so intense as to cause epileptiform convulsions and patients have been known to die during an attack. The pain radiates towards the umbilicus, towards the back to the right of the tenth to the twelfth dorsal vertebrae, and to the neck and right shoulder. In rare instances, as in two patients whom I have seen recently, the pain was referred to the left hypochondrium and costal margin. Occasionally, the pain may be referred to the precordium, simulating an angina pectoris. The attacks may follow each other so frequently as almost to produce one continuous paroxysm, or an interval of months or years may intervene between successive attacks. The pain is associated with nausea and vomiting or in some cases with the belching of gas, which seems to give some measure of relief. Following the attack there is usually a sensation of soreness in the region of the gall bladder and in 30 or 40 per cent

of the cases, the urine contains a trace of bile.

In examining the abdomen after an attack of gall stone colic, it is important to have the patient in a good light, and to have the head and shoulders slightly elevated and the knees flexed and supported with a pillow so that the abdominal muscles will be relaxed as much as possible. Inspection may show a slight fullness in the region of the gall bladder, due either to its distension or to a tenseness of the related segment of the rectus muscle. The examiner should place the left hand on the upper portion of the right lumbar region and apply at first gentle and later firm palpation over the gall bladder while the patient takes a deep breath. Vertical percussion as described by the late J. B. Murphy may be useful. A sudden pressure on the ribs or striking the region over the gall bladder with the ulnar portion of the hand will elicit pain and tenderness as compared to like manipulation on the opposite side. If there have been previous attacks of pain, the gall bladder may be considerably distended and covered by a Riedel's lobe so that it can be readily seen and palpated.

In the differential diagnosis of gall bladder disease many conditions must be considered. Among these may be mentioned: 1, renal colic; 2, floating kidney with Dietl's crisis; 3, acute appendicitis; 4, acute pancreatitis; 5, gastric crisis of tabes; 6, diaphragmatic pleurisy; 7, angina pectoris; 8, angina abdominalis from arteriosclerosis of the abdominal blood vessels; 9, rupture of descending thoracic aorta; 10, pericarditis; 11, epigastric hernia; 12, lead colic; 13, acute indigestion and gastric and duodenal ulcer.

In renal colic the pain starts in the back at a point somewhat lower than in gall stone colic; as the stone passes down the ureter the pain is felt in the abdomen well towards the flank and is referred to the genitalia or to the leg. If the urine is examined after the attack red blood cells will be found. A roentgenogram of the kidneys, ureters and bladder will demonstrate the presence of a stone. Shadows from calcified glands may be found along the line of the ureter but these can be ruled out by taking a pyelogram.

A floating kidney may give rise to severe pain simulating biliary colic but the distribution of the pain is the same as that described as present in renal colic. It must be remembered, however, that a floating kidney may compress the bile duct and cause jaundice and biliary colic.

The distribution of the pain in cases of Dietl's crises is the same as that in renal colic and the attack is often followed by the passage of a large quantity of urine. The physical examination will reveal the presence of a palpable or floating kidney and a pyelogram taken after the attack will often reveal abnormalities of the ureter.

Pyelitis also may cause very acute pain situated high up on the right side of the abdomen, but in these cases, the pain is accompanied by constitutional symptoms such as chills and fever and by frequency of urination, the urine containing pus.

Acute appendicitis, especially if the appendix is situated retrocaecally, or if its tip turns upward so that it lies near the gall bladder may be difficult to differentiate from gall stone colic as in the following case:

A young woman, thirty-two years of age, was very suddenly siezed one

morning with a very severe pain in the upper right side of the abdomen. When I saw her shortly afterwards, she had no elevation of temperature, there was no rigidity of the abdomen and as her pain was so agonizing I concluded that she had an attack of gall stone colic and gave her a hypodermic injection of morphin. She remained very comfortable for about eight hours when her pain returned though it was not so severe as at first. Her temperature at that time was 101, her pulse 90. There was some rigidity of the abdomen above and to the right of the umbilicus and extending towards the right flank. A blood count showed a leucocytosis of 18,000. These latter observations led me to consider that this was a case of appendicitis rather than of gall stones and I accordingly advised operation. At operation the surgeon found that the appendix was turned upward so that its tip which was gangrenous, lay almost beneath the gall bladder.

In acute pancreatitis the onset of pain in the upper abdomen is very sudden and severe and in its early stages may simulate gall stone colic. The patient, however, appears extremely ill, the temperature rises quickly and the tenderness, which is situated above the umbilicus and extends to the left of the median line, is accompanied by increasing distention.

The gastric crisis of tabes, because of the severe pain in the epigastrium, are often mistaken for gall stone colic. The vomiting, however, is more persistent and the presence of fixed pupils, the absence of reflexes and the other neurological signs characteristic of tabes make the diagnosis certain. However, it is important to remember that a tabetic patient may also have gall stones.

In diaphragmatic pleurisy on the right side the pain is often referred to the abdomen, but it is increased by deep breathing, is relieved rather than aggravated by pressure and the condition is usually accompanied by an elevation of temperature. Examination of the chest will often show an interference with the expansion of the lower portion of the chest on the affected side and a pleural friction rub may be heard along the line of the attachment of the diaphragm. As this condition often accompanies pneumonia, signs of consolidation may be detected.

Patients with angina pectoris often complain of severe pain in the epigastrium so that the differentiation from gall stone colic may be difficult. This is particularly true in those cases in which there is considerable sclerosis of the abdominal arteries. It is often difficult to make the differentiation during the attack, as in one case that I saw recently in which I could not be certain as to the diagnosis until I found bile in the urine two days after the attack. In cases of angina pectoris, however, a history of shortness of breath or of previous attacks of precordial pain on exertion will assist in establishing the diagnosis. I have seen a number of cases in which the diagnosis of angina pectoris has been made which have been entirely relieved of the attacks of pain by the removal of gall stones.

One patient whom I have seen with rupture of the descending thoracic aorta complained only of pain in the epigastrium, but his condition was so alarming, and his pulse was so weak and rapid that one could not help feeling that he had some conditions

more serious than gall stone colic. He died two hours later.

Occasionally in pericarditis the pain is referred to the region of the gall bladder. However, the finding of a pericardial friction rub, the presence of shortness of breath, accompanied by a characteristic cough, and in many cases the presence of acute rheumatic fever will lead to the correct diagnosis.

Epigastric hernia sometimes may occasion such severe pain that the patient may be operated upon for gall bladder disease. A few years ago, I saw a patient with epigastric pain accompanied by indigestion, who had had two operations by different surgeons in different cities without relief from either, one an operation for gall stones and the other an appendectomy. As soon as the epigastric hernia was cured, this patient was entirely relieved from his symptoms. Epigastric herniae are not uncommon; in one year I observed 42 cases.

Lead colic is not infrequently diagnosed as gall bladder disease and the patients operated upon. The history of an occupation which involves exposure to lead, the presence of the lead line on the gums and of an anaemia with basophilic stippling of the red corpuscles and sometimes nucleated red cells will establish the diagnosis of lead poisoning.

The greatest difficulty encountered by the physician is the differentiation between chronic disease of the gall bladder and gastric and duodenal ulcer. Here the history, the physical examination and especially the X-ray findings are of special importance. The majority of gastric and duodenal ulcers can be detected by X-ray examination, which also, either by the direct or indirect evidence described above, gives the proper clue to the presence of gall bladder disease.

It is not the intention of the writer to enter into a discussion of the medical or surgical treatment of disease of the gall bladder but it is well to mention that the internist sees many patients who have been operated upon but still complain of many of the symptoms that they had previous to operation. I believe one is justified in saying that operation for gall stones or for other diseases of the gall bladder with the exception of malignancy are successful in only about 75 per cent of the cases. Some of the causes of failure may be laid at the door of the internist, particularly in those cases in which he had allowed too long a time to elapse before he has referred his patient to the surgeon. Because of this delay, the inflammation of the gall bladder may have extended to the bile ducts, with resultant secondary inflammation of the liver and pancreas or in other cases adhesions may have formed between the gall bladder and neighboring organs, or in rare cases fistulae may have formed. Incorrect diagnoses also play a prominent part in the continuance of symptoms after operation. In many of these cases in which an operation on the gall bladder is performed because of a mistaken diagnosis the true condition may be a chronic inflammation of the appendix, a gastric or a duodenal ulcer, or it may be a psychoneurosis associated with visceroptosis and malnutrition. Patients suffering from these last cited conditions are more often the victims of mistaken surgery than those in any other group so that they suffer from what might be termed "surgeon's disease."

Among the other causes of failure of gall bladder operations is the fail-

ure to remove every stone from the common bile duct. It might be said that after removal of the gall bladder the common duct dilates so widely that stones are more likely to form here than in the normal duct, but there is no evidence that there is any concentration of bile in this dilated common duct so that when stones are subsequently found there, they were in all probability overlooked at the primary operation. Trauma of the duct with subsequent stricture may be another cause of failure.

After operations on the gall bladder, adhesions often give rise to symptoms of pain and tenderness in the region of the scar with nausea, vomiting and slight jaundice. Cases in which there has been a chronic pancreatitis suffer for a prolonged period with weakness, loss of appetite and malnutrition.

The above failures occur not only in cases in which the gall bladder has been drained but also in cases in which the gall bladder has been removed. The responsibility for preventing these failures rests not only on the surgeon but also on the internist. It is important for the internist to make sure that a correct diagnosis is established before he refers his patient to the surgeon. This does not mean that every patient who has had one attack of gall stone colic or of cholecystitis should be operated upon but in cases of persistent gall bladder disease, an operation should be performed before there has been time for the formation of extensive adhesions or fistulae or for the development of chronic inflammations of the pancreas and liver.

On the surgeon rests the responsibility for improving the technique of his operations that he may secure better results. After operation he should refer these patients back to the internist so that they can be kept on a proper dietary and hygienic regimen instead of saying to the patient as is so often done, "the cause of your trouble has been removed, you can eat anything you wish."

ETHICAL SILENCE VS. RATIONAL PUBLICITY AS A COMMON SENSE MEDICAL POLICY.

By J. R. SCHULTZ, M. D.,
Charleston, W. Va.

Read at Fifty-Eighth Annual Meeting of West Virginia Medical Association, Bluefield, June, 1925.

The author was prompted in this article by a conscientious conviction, that the thought expressed will be of mutual benefit to all members of the orthodox medical profession. It is not his opinion that in it lies any panacea but he believes that in carrying out the suggested ideas, lies the solution of cult practice. This is a business and commercial age and in my opinion if we wish to play our part of life and health preservation in life's drama successfully, we must adopt business and commercial principles. I do not believe the adoption of business principles will detract any from the honor, dignity or efficiency of the physician but in contrast I believe that it will elevate him to a footing of equal rank with other professional and business men. It is no secret that we do not occupy the enviable position of honor, trust and love that the practitioner of a generation ago held. One of the causes for this has been the development of cult practice with all its ostentatious claims and our indiffer-

ent silence amidst their egotistical conceited babble. Silence may be golden sometimes, but to my mind, rational publicity is more advantageous in modern times.

During the pre-revolutionary days, the able orator, true patriot and lion-hearted Patrick Henry recounted to his colleagues the injustices that had been meted out to the colonies by the mother country, and with tones loud enough to vibrate and echo around the world, forceful enough to carry conviction to all who heard, and clear enough to banish doubt of true sincerity, uttered these words which have become immortal in American History when he said, "Gentlemen, we must fight, I repeat it sir, we must fight." Our recent legislature, by an overwhelming majority, passed a bill legalizing cult practice and our governor allowed it to become a law without either his sanction or disapproval. The large majority of these men acted with good intent and did what they thought was to the best interests of their constituents. I wish to indict the medical fraternity with being responsible for the passing of this bill by their lack of dissemination of knowledge to the people. Upon each road for the future, I see the word "Danger" and I would I had the oratory, the force and power of a Patrick Henry, when I say to you "Gentlemen we must fight, I repeat it, sir, fight we must."

The basis of all advertising is to tell the people of the goods or services that one has for sale, the advantages that the particular goods or services have over competitive brands. It it a common advertising axiom that to have value, goods or service must be known to the consumer, that he must know what they are and how they will serve him better than something else he might use. It is also a well known fact in advertising that some producers fail to see the value of advertising, because their immediate friends know their product and its value, hence, they think the entire populace is also well informed. This is a mistake, for in most instances, the public needs and seeks information. Advertising is carried on in two channels uncontrolled and controlled. The uncontrolled we call gossip, and here many erroneous ideas are propagated as was evidenced by a petition of 7000 signers asking for the passage of the chiropractor's bill. Among these 7000 names appeared some of the best citizens of our state. A large percentage of these had gained their knowledge through gossip of what someone told them, that some chiropractor had done for someone. To my mind, it is unnecessary for me to bring further proof that the ideals of medicine can no longer be entrusted in the channels of uncontrolled advertising. The controllable channels for us are represented by the newspapers and magazines. It is a well established fact, that people read and sincerely believe the advertisements in circulation, because statistics prove that 98% of all advertisements are true. When we see the chiropractors untrue advertisements in our newspapers and the libelous claims of Pabst O'Kay Knoxit, etc., in our public lavatories, we are filled with disgust and immediately brand them as unprincipled efforts for financial gain. But we must remember that the great

American people mistake these untruths for truth. We can only combat them with equally conspicuously displayed medical facts. We are very zealous in our efforts to stop all advertising on the part of the medical fraternity. However, if you grant me that improving the memory and informing the mind is the real definition of education then I maintain that advertising is indeed educational, and for the sake of any who may be fastidious about terms from now on in this paper when the term advertising is used, you may substitute the phrase "educational or good will propaganda," if you please.

The early history of medicine shows the healing art was closely allied and in most part carried out by the priests and church officials. Then we find the medicine man and herb doctors and witchcraft. During all this time there was some art and little science in the practice of medicine. Their work was mystic, secretive and uncanny in its application. Perhaps during this age to have allowed the public to view the flimsy fabric of knowledge would have been, to say the least, disconcerting. It is well known that the more elusive any profession is, the less scientific data it has for its foundation.

Times have changed and medicine is now indeed a scientific well from which we can drink all we care to with no fear of exhausting the supply. The backache of a generation ago labeled kidney trouble is now through the microscope, urinalysis and refined unrological and roentgenological examinations diagnosed as spondylitis or myositis and the foci causing it, removed. The stomach trouble of the past by the laboratory and barium plates are the appendicitis and cholecystitis of the present. The locked bowel of even within the writer's memory is now recognized in its incipiency as regional peritonitis and promptly dealt with.

I would not lead you to believe that we can even view the dawn of the millenium in medicine. But I do insist that the advancement in diagnosis and therapeutics has brought us into an era where if one will pay the price he need not camouflage, where he need not guess but may know, and where he can clarify rather than confuse. There is enough to know if we will but put forth sufficient effort. The modern idea of big business is put your cards all upon the table, in other words tell all. System magazine explains all the intricacies of modern business and business principles. Disseminated knowledge has compelled the doors of secrecy to swing open and people now reserve the right to question their religion, their politics, their banker, yea, even their doctor.

Diagnostic efforts have changed, therapeutic procedures have been revolutionized, we make our daily calls not afoot or on horseback as of yore but now in motor conveyances of air, land and water. Our clothes are no longer home spun and home made. The Atlantic is no farther from the Pacific than New York was from Philadelphia a century ago. Yes, Gentlemen, times have greatly changed but our medical ethics and business code remain the same as in the days of Aristotle. From the oath of Hippocrates down to the prescription written in a dead

language, secrecy is now the order of the day as it has been throughout the past. Our ethics and business code remind me of the 8th verse of the 13th chapter of Hebrews which reads as follows: "Jesus Christ, the same yesterday, today and forever." The author is no prophet nor can he elucidate any hand writing on the wall, but he ventures to assert that we must change this mystic, magical and ambiguous method of the past to one of modern business conception, by trying to impress on folks that we are just human beings, that we have no secrets, that we are not one of God's elect but just one of his fellow creatures who has been trained in his respective field of industry and is not afraid of the search light of investigation and public scrutiny; that we achieve illustrious results or disastrous failures by no supernatural powers but by the application of scientific principles by scientifically trained minds to scientific problems.

If the foregoing is not true, then indeed, it is just that we should be torn from the position of dignity we are supposed to occupy and the deception exposed. I reiterate we must make the above changes or our profession is to be relegated to quackery.

Our attitude, towards the public is, in most cases, tell them nothing. We seem to think that the public has sufficient knowledge of physiology, pathology and therapeutics, that they will not fall prey to the pseudomedical man. May I remind you that they have the same amount of knowledge of medicine as the average doctor has of business and business principles. As we all know, each doctor's name is listed on every gold brick list in America. It is common parlance that two pages of lithographic advertising and twenty minutes time will sell the average doctor shares in the Atlantic Ocean and when it comes to buying fake oil leases, worthless mine holdings, alligator farms in Florida and watered shares of watered stock in watered companies, we as physicians draw fur lined bath tub as first prize against all competitors for being easily loosened from our earnings.

Our great financial institutions are constantly admonishing us against the unscrupulous stock salesman and advising us of safe securities and valuable real estate. Why then should we not reciprocate and admonish them of the dangers of cults, isms and psuedo-medicine in general? Granting that they, be they professors or totally unlearned, are equally ignorant of medical facts, do you wonder after seeing in the daily papers the statements of what the cults claim to do for the sick that in desperation they turn to these cults for relief? Drowning men grab at straws. Do they have an opportunity of seeing any of the cults claims contradicted or opposed in any of their reading material? Isn't it true that the only place they can get this enlightenment is while waiting in some doctor's reception room they read the American Medical Journal or Hygeia? Why do we have any objections to the excellent articles and information appearing in Hygeia (which is read by few) appearing in the press read by many? If it is good for a few to read would not the harvest be bigger and richer if the reading

field were multiplied many times? What has this silence done for the medical fraternity except to impress people with the idea that our failure to reply to the thrusts made at us is an admission on our part of our inferiority and the cults superiority? People can not fathom why we should be so careful to avoid all public statements if we have facts to justify our claims and by the same token prove the unworthiness of our parastic would-be doctors.

I personally can not imagine why in this day we should so persistently try to hide our light underneath our bushel. If we believe that our method of combating disease is correct why should we be adverse to saying so and saying so in such a manner that all classes of mankind might know our opinion.

Has any doctor or any layman seen, or will they see in any secular press, any answer to Bernar McFadden's open statement in the May issue of Physical Culture in which he says under the title of, "The peril of the poisonous vaccine pus," vaccination is one of the most absurd and pernicious fallacies of the age. Medical doctors and manufacturing druggists who have waxed wealthy through the sale of the filthy pus claim that it prevents smallpox. Instead, as the evidence clearly shows it spreads all kinds of infectious disease."

Now, gentlemen, let's reason together. Granting you were unfamiliar with the facts and you read an article of this kind and the medical fraternity never answered it or in any manner attempted to defend its position what would your deductions be?

If I openly charge some member of this association with unprofessional conduct and he refuses to answer or make any defense whatsoever, is it not logical then to suppose that he feels I would substantiate my claims, if he offered any opposition. We as individuals would arise in righteous indignation and, if necessary, shed our last drop of blood in defense when untrue personal statements are made about us; but when our profession, for which many have given their life that this noble calling might be elevated, is maliciously and unjustly attacked, we gather our garments closely around us, and with an attitude of I am better than thou, impress the public that we are either too proud or too ignorant to fight.

In my town our local papers often carry the advertisement of one Dr. Henderson, telling of the fountain of youth and the cure of all ills that man is prone to through Abram's diagnostic and therapeutic achievements. To show you how susceptible even the better educated classes are I call your attention to the fact that after he had carried on his advertising propaganda for about one year that he was put on the program of the Kiwanis Club to give them a talk on Abram's prodecures at their weekly luncheon. Let us stop, look and reason. Are his patients idiotic? Were the members of the Kiwanis program committee imbeciles? Put yourself in their place. Had you seen his claims made openly, daily and over a long period of time with no reply having been made by the local, the state or the national medical societies, would you have not been led to believe that this must be of value.

The press throughout the land is constantly in glaring head lines telling the public what the chiropractors, the patent medicine man, the naturopaths and all the other cults and isms claim to do for the unfortunate sick. Does any one see in these periodicals any statements as to what the medical fraternity can and does do, or anything to show the fallacies of the claims of those who prey upon the desires of those who are sick and would be well.

To my mind our duty to the public, as public health protectors, is not fulfilled unless we place this information readily at their command. Cult advertisements force us to educate the public along medical lines. The time was when he who built a better mouse trap might build his hut in the woods and there would be a beaten path to his door way. Gentlemen, that time has gone forever, and if we are wise, we will accept it as a fact and not butt our head against the door of opportunity, for in modern times, there will be no beaten path to that door way, unless the producer of that mouse trap has proclaimed from the house tops in tones loud and long the superiority of his mouse trap over all other competitive brands.

My plan is extremely simple. I have attempted to substantiate my claim that there is a need for publicity. I have tried to show that ethical silence has not and never will have any advantage, while rational publicity has no disadvantage but merit only to commend itself to us .

I should like to see the West Virginia Medical Association in its Fifty-Eighth Session elect a publicity committee, making the lay secretary of this association chairman thereof. The duties of this committee would be to annually outline a weekly campaign of publicity for the coming year and to work out detail of press items. This material or outlined campaign should be placed in the hands of each local society's publicity man. The local publicity man under the supervision of the State Committee would arrange to publish in his vicinity this material each week, in the paper or papers, as his society saw best. In this way throughout the state at the same time our educational, good will copy would be made accessible to practically every one.

I would not advocate individual advertising because at the present time I would be afraid to allow each individual's conscience to dictate the just and ethical bounds of proposed advertising copy, for here natural selfish desire might spring up to outdo his competitors in their publicity campaign.

I am only advocating the proposed collective, cooperative distribution of medical facts that would be of mutual benefit to the public and the legitimate practicioner. Having the entire state using the same copy at the same time would even wipe out the danger of regional antagonism.

The cost of this campaign would be met by each local society. The amount of space, number of times carried and the number of papers used would be decided by the members of each society, virtually all of the county societies in West Virginia are in a flourishing condition financially. This is particularly true of the societies which embrace the

center of population, and have daily newspapers. Their combined circulation reaches into virtually every nook and corner of our state and visits practically every fire-side.

Further I would suggest that beginning with the coming year, our executive secretary be authorized to issue a suitable plaque for each member's office, to be placed in a conspicuous place so that all who call there would know that their doctor was a member of the West Virginia State Medical association. Frankly, there is a necessity for "selling" the West Virginia State Medical association to the people of West Virginia and in my opinion the proposed methods would prove effective.

How much this appeals to you I do not know. The idea has completely sold itself to me. I know that in carrying it out there will be worked no harm, but much good. I am equally positive that had this campaign been inaugurated two years ago not over 10% of our senators and delegates would have voted for the chiropractor's bill. Silence has done nothing for us, hence lets substitute intelligent audibility.

PUERPERAL ECLAMPSIA

By ALBERT G. RUTHERFORD, M. D.,
Welch Hospital No. 1, Welch, W. Va.

Read Before McDowell County Medical Society.

Anyone who seeks literary stimulus in investigation of the subject of eclampsia is likely to experience the embarrassment of riches. So much has been written concerning it, so frequently has it been the source of heated controversy, so varied are the opinions held in regard to its etiology, its pathology and its treatment, that the mind becomes bewildered and gropes about half blinded, being convinced and un-convinced so frequently that it eventually becomes almost incapable of accepting anything. Yet when one withdraws, mentally exhausted and aghast at such a prodigal expenditure of human effort, one very definite impression is retained: In many respects we are little better informed about this pressing therapeutic question than our forefathers were, and we may even entertain the suspicion that were the figures from Hippocrates' clinic available today, we would find his mortality rate from eclampsia was little, if any, higher than our own.

Inasmuch as everything that effects pregnancy and labor strikes at the very source of life and becomes the most active concern of every one of us, it is not surprising that so much should have been said and written concerning the most dreaded complication of those states, yet the overabundance is most eloquent testimony to the uncertainty which invests the subject and the multitude of theories which have been put forward about it, only to be refuted, restated, and eventually superseded by others—equally short-lived. All this effort however, has been by no means fruitless. If we do not yet know what causes eclampsia, we have at least some definite idea of the conditions which tend to produce it, so as to—in some measure—prevent its occurrence by the elimination or amelioration of these conditions. And if there is not yet any standardized and infallible method of treatment, the

labors of chemists and clinicians—especially during the last few years—would seem to have opened up new vistas in this wilderness of uncertainty, through which we may hope to some time make a path to a triumphant solution of the whole matter.

Yet the difficulties which beset our selection of this path are still very great. A recent writer says: "It has been reported from the Royal Maternity Hospital of Edinburgh that in the war years of 1916 to 1919 the occurrence of eclampsia reached a very low level, and here is their statement: 'years in which meat and other proteins were largely diminished.' Not so, according to Werner, who says it was because the diet at that period was rich in calcium; this does not explain it according to another German writer who believes it due entirely to greater activity on the part of the women, with increased metabolism, and hence less opportunity to acquire undue weight; finally, says Mayer, "War diminished the frequency of sexual contact and by so doing, reduced the anaphylaxis caused by repeated introduction of spermatozoa." And the compiler of these observations remarks: "You are at liberty to take your choice." In such a dilemma we can do little but express confidence in the views of those whom we believe to be wiser and more experienced than ourselves, while at the same time we remain open-minded in regard to any new data which may be from time to time presented for our consideration.

It is an attempt to thus steer a middle course between conservatism and this astonishing radicalism so frequently encountered, I have tried to examine recent literature on this subject, and while giving due weight to opinions appearing over names internationally prominent in obstetric affairs, to avoid, if possible, the cut-and-dried "text book stuff" while the most recent efforts to reach a scientific basis for all the manifestations of eclampsia, and the efforts to combat it.

Eclampsia is limited, in our present-day understanding of the term, to "those acute manifestations of toxemia during the latter half of pregnancy, characterized usually by convulsive seizures after or between which there is loss of consciousness." This is Kosmak's definition and he adds that the term is in a sense a misnomer, because we find that in some instances coma and death ensue without previous convulsions. This is of such rare occurrence however, that it does not greatly invalidate the definition.

When we come to consider the frequency of eclampsia we are at once confronted with the wide variation in statement which characterizes every discussion concerning the condition, no matter what the angle from which it is viewed. Kosmak quotes Williams as stating that his service at Johns Hopkins Hospital showed 1 per cent in a series of 11,000 labors, while Ross MacPherson says that "Williams in his text-book, considers that an eclampsia occurs once in 130 cases." Kosmak quotes MacPherson as giving "an occurrence of 890 eclampsias in 120,000 labors at the New York Lying-in Hospital, or a proportion of about 1 to 135 patients, or about 0.84 per cent," while MacPherson himself, addressing the Philadelphia Obstetrical Society in the same month as that in which Kosmak's book was printed, says that "at the New York Lying-in Hospital in 120,000 cases we have 890 eclamp-

sias. This shows that we may expect in hospital practice to see a case of this description once in about 185 patients." This illustrates that even from the same figures equally honest and able men may draw different conclusions. MacPherson adds the interesting observation that the season of the year apparently "has some importance in this connection as the cases are noted more frequently in the early spring than at other times and also greater numbers are seen some years than others. Its occurrence is almost twice as common in primiparae as in multiparae (64.4 per cent respectively), and as might be expected much more frequent in antepartum than in postpartum or intrapartum patients. The greatest number of cases are noted between the ages of 20 and 25 years, which is in accord with the statement that the greater number occur in primiparae." Statistics have also been published which tended to demonstrate that the disease is more prevalent in urban than in rural districts, but that the rural death rate is higher, owing most likely to the relative scarcity of proper medical attention, or of appreciation of its necessity.

As to mortality, all writers agree that it is very high and that the death rate shows no noticeable decrease despite all the work which has been done to make it smaller, Stroganoff gives some figures for Europe in 1913, the year before the outbreak of the World War, which estimate that in about fourteen million confinements 5,600 mothers died, while at least 8,400 infants perished because of eclampsia. He estimated that taking Europe and the United States together, 24,000 lives of mothers and children are lost every year from this cause. But in the consideration of such figures we must not fail to remind ourselves that they must of necessity be largely compiled from hospital material, and that the proportion of eclamptic deaths in hospital practice probably far exceeds that of the general population, inasmuch as desperate cases are most likely to be taken there at the last moment. If the statistics of automobile accidents were figured in the same way, I fear they would be even higher than they are now.

However, the mortality, figured in any way you please, is startling enough to urge every thoughtful practitioner to employ whatever means he may command toward lowering it. And these measures seem just now to be following the same line evident in practically every department of medicine — prevention. We may not know just what causes eclampsia, we may still be uncertain how to handle the cases that come to us, in the very best and wisest way, but at least are we now able to read the handwriting on the wall, and by noting the first remote signs, have time to institute preventive measures which will in many instances, prove adequate to control the situation.

But before taking up the discussion of preventive measures, I will make brief reference to some of the most recent work done in investigation of the causes and prevention of eclampsia. One of the most important of these contributions is that of McQuarrie, who early last year, suggested as an explanation of this condition the accidental transmission of incompatible blood between mother and child, made possible by the accidental occurrence of an opening in the placenta between the maternal

and fetal circulations. In an examination of 180 newborn infants and their mothers it was found that in those instances where maternal and fetal blood were incompatible, toxemia occurred sixteen and a half times more frequently than in compatible cases. Almost three quarters of the toxemia cases of all types occurred in those relatively few instances where mother and child were found to belong to different iso-agglutination groups.

This conception was not wholly a new one last year, as the same idea was put forward by Arthur Dienst, a German obstetrician, as long ago as 1905. Dienst later abandoned his theory, but in the light of McQuarrie's investigations and others more recently published by Reuben Ottenbert, as well as other recent work, there would seem to be a possibility that he was actually close to a discovery of much importance. According to Ottenbert, "the clinical picture of incompatible transfusion and the pathologic findings of intravascular agglutination and hemolysis resemble the toxemia of pregnancy only to a certain degree.

It is evident that the conditions under which the lesions are produced in pregnancy are peculiar. Since the observations of Dienst and of McQuarrie have so conclusively proved that there is some connection between toxemia and the blood incompatibilities of mother and child, it is necessary to find an explanation of the differences observed. It seems most probable that these are due to the fact that mother and child are continuously united and that, an opening once established, there is more or less constant leakage of blood in one direction or the other. If any biologic difference exists at the beginning, it becomes steadily accentuated by the process of immunization." We may here find an analogy to the observation of many plastic surgeons that skin grafts "take" in individuals of the same blood group as the skin-donor, but fail to take when the blood serum of the recipient is agglutinative to the red cells of the skin-donor, which would seem to indicate that group differences apply not alone to red cells, but to other body cells as well. "There has as yet been no demonstration of any effect of iso-antibodies on visceral tissues, but there seems every likelihood that if iso-antibodies are injurious to red cells and to the skin cells, they must also, like hetero-antibodies, have effects upon other body cells. Some of the organ damage in pregnancy toxemia may be due to this direct effect on organ cells, of the increased antibody content which occurs as the result of mutual immunization."

Turning now toward the preventive measures which are now being used, it is the opinion of MacPherson who is at present New York City's most eminent obstetrician, that the "most constant and significant warning of an impending toxemic state in the pregnant woman, is found in the blood pressure. In an otherwise normal patient, a sudden and permanent rise in the blood pressure is to be looked on with alarm and is never of slight importance. * * * Edema of the extremities, or of the body in general, tenderness over the gallbladder, nasal hemorrhage, various digestive disturbances, constipation, and so on, are undoubtedly of importance, and when present should be carefully noted and corrected if possible, but the increase of albumin and

the presence of casts, and possibly the nitrogen coefficient"— though he is somewhat skeptical regarding the value of this —"and the presence of the progressive changes noted by the skilled use of the ophthalmoscope, "are all that the qualified obstetrician needs to put him immediately on his guard for the onset of the eclamptic seizure.

A significant study of these ocular changes was lately made by Lloyd Mills, who believes that the symptoms generally assumed to be pre-eclamptic, the headache, nausea and vomiting, and the epigastric and colonic distress, which not infrequently arise without renal or hepatic disturbance, are due to local intracranial pressure of the hypertrophied pituary, as well as from greatly increased pituitary function. As a result of the physiologic enlargement of the pituitary gland, which causes different degrees of contraction of the visual fields by pressure upon the optic commisure and tracts, the eyes are involved in more than 90 per cent of all pregnancies. The retinal venous stasis shown in the graver cases of toxemia is probably of the same origin. No gross renal, or blood changes can be observed in those women who present a temporary but decided loss of central as well as temporal vision, sometimes mounting to complete blindness, and Mills believes that this represents an acute obstructive retinal stasis and edema, or the direct effect of relatively excessive pressure upon the optic nerve, or possibly a combination of these factors. He advocates a closer study of these phenomena, undertaken co-operatively by obstetrician and ophthalmologist, and the separation of symptoms hitherto considered as pre-eclamptic, into those of pituitary origin and those arising out of a genuine toxemia of pregnancy.

Once the existence of pre-eclamptic symptoms has been noted, all effort should be concentrated upon the prevention of the occurrence of convulsions. MacPherson lays great stress upon the danger of the seizures themselves, because he "firmly believes that practically all of these cases die of brain hemorrhage due to rupture of the cerebral blood vessels, and while it is not universally true that the higher pressure during the convulsion is the causative factor in the rupture of the vessel, it is undoubtedly the main one." The same consideration influences the prophylactic treatment of Stroganoff, the latest exposition of which came to us last year through the diligent efforts of the editor of *The Journal of Obstetrics and Gynecology of the British Empire.* In England, where recuperation from the frightful losses of the war has centered attention upon increasing the number of live births, it was felt that the doctrines of this eminent Russian obstetrician should have a wider hearing, and after months of striving, it was found that the Soviet had spared the life of the scientist, and that he was willing and anxious to give the non-Bolshevik world the benefit of his wisdom and experience. In the translation of his article which appeared last year, he takes the position that eclampsia is the result of the reciprocal action of two factors: 1, the appearance of toxins in the blood of the pregnant woman which act on the nervous system, and 2, the reaction to them by the nervous system. We must, therefore, try to lessen the amount of toxins entering the mother's organism,

or else remove them altogether. Thus we must try to stop the fits, since they are the cause of a great increase in the amount of toxins in the blood. Destruction of toxins is very difficult because of the asphyxia and spasm of the blood vessels. Stopping the convulsions enables the maternal organism to defend itself and eliminate the poisons. The fundamental principle of Stroganoff's method is to prevent the recurrence of the convulsions at all costs. Another important point is the combined administration of morphia and chloral-hydrate. "Experience shows that by preventing the fits the patient improves every hour and approaches the normal, and we can thus conclude that such a treatment removes the cause of the disease or at any rate decreases its influence. The administration of the drugs just named calms the patient and leads to sleep, and at the same time prevents the spasm of the blood vessels. By such means we diminish the formation of toxins, and owing to the more normal circulation of the blood in the liver, kidneys and brain, as well as in other organs, the splitting up of toxins is helped." As the concentration of the toxins is of such great import, measures to lessen it—such as venesection and the ingestion of liquid in quantity—will be of benefit. Milk is especially recommended.

All sources of irritation must be eliminated, the patient's room darkened, all noises within and without suppressed, and manipulation and examination of the patient avoided as much as possible. If absolutely necessary they should be done under light or nitrous oxid anesthesia. Delivery may be hastened "by careful operations such as the use of forceps or turning in order to extract by the breech, when such methods are not too dangerous for mother or child." Internal version in a primigravida, Stroganoff holds, is often a very serious operation for the mother, and more so for the child, and he employs it only in exceptionally serious cases. He considers the de Ribes bag harmful, but recommends early rupture of the membranes when the os is dilated six centimeters in a primigravida, or five in a multipara. However, he claims that his practice of using narcotics to stop the convulsions has proved so effectual in most cases that after these have ceased, delivery usually takes place normally, induction of labor is seldom required.

Such extensive use of narcotics as this Russian obstetrician advocates has not as yet found much favor with us. The prevailing mode of treating eclampsia here is well summed up by Baughman in recent communications to several southern medical journals. At the first indications of pre-eclampsia or nephritis the diet is reduced to bread and milk, and cream of tartar "lemonade" and digitalis are administered. If no improvement follows 20 per cent glucose is given intravenously—other authors advocate the rectal drip method. If the blood pressure reaches 180, blood to the amount of 600 to 1000 c.c. is withdrawn. If there is still no improvement, labor is induced, delivery being accomplished under ether anesthesia — never use chlorform, occasionally gas. In eclampsia, or nephritis with convulsions, morphine sulphate is given to control the convulsions; the patient digitalized, a mouth-gag used to prevent biting the tongue; artificial respiration and oxygen used if needed; high colonic irrigations with

enemas of glucose and bicarbonate of soda are given; and venesection and glucose injection used as previously described. If the patient does badly, with increasing convulsions and edema of the lungs, delivery is done in the way that will cause the least shock.

There is a steady tendency away from the employment of Caesarean section as a means of delivery in eclamptic patients, observable in all recent writings, and the same might be said of other obstetric operations. "Rough manual dilation followed by internal podalic version, with its resultant laceration and marked shock, vaginal hysterectomy, abdominal hysterectomy, have all been exploited and freely tried, and so firmly fixed are these maneuvers in the minds of most obstetricians that until comparatively recently they have been practically universally employed." But "when we consider that accouchment force gives a maternal mortality of about 30.8 per cent with an accompanying fetal mortality of 30 to 35 per cent and that Caesarean section gives a higher percentage of dead mothers with only a slightly improved fetal mortality, it makes one wonder whether or not these means of delivery are after all so efficacious as they would seem." This is the recently expressed sentiment of one of America's leading obstetricians, and may be taken as fairly representative of the opinion prevailing among practitioners of that specialty throughout the country today.

To recapitulate this brief review of recent work upon the ever-present problem of pregnancy toxemia; we should urge upon every practitioner of medicine better pre-natal care, and more frequent observation of every pregnant woman, so that the first vague indications of a beginning toxemia may be observed and understood; we should try to disseminate among the laity a more general knowledge of this need and an intelligent understanding of the gravity of these early signs, just as has been done in the campaigns against tuberculosis and cancer; and lastly, once eclampsia has occurred, conservative measures should be given a fair trial and operation relied upon only as a last desperate resort. This would seem to be the logical programme to be followed, if we hope to reduce the incidence of this dreaded condition, or to lower the mortality which attends its occurrence.

A study of twenty-one cases of eclampsia which we have had in this hospital during the past three years, a review of which I have tabulated, on page 362.

I will, if you will permit, outline in brief form the line of treatment we have been and are now using in this hospital. Our maternal mortality under this routine was 25 per cent. Our infant mortality was 35 per cent. Strange as it may be, our maternal mortality on Caesarean sections was only 25 per cent in contradistinction to the prevailing belief now that Caesarean section should be performed only in the fulminating cases of eclampsia and then only after suitable pre-operative treatment has been instigated.

Our routine as carried on in Welch Hospital No. 1 is as follows:

1. Patient is hospitalized in a quiet darkened room under constant observation. Examinations reduced to a minimum.

JULY 1, 1921 TO JULY 1, 1924

Name	Age	Diagnosis	Treatment	Material Result	Infant	Days in Hosp.
F.M.W.	17	Eclamptic convulsions, post partum	Non-operative	Expired		17 days
B.K.	18	Post partum, eclampsia, 1 day after delivery	Non-operative	Discharged	Living	11 days
H.E.H.	19	Eclamptic convulsions, pre-partum	Dilatation versior	Discharged	Living	11 days
A.B.	14	Eclampsia	Caesarean	Discharged	Expired	16 days
I.L.	14	Fulminating eclampsia	Caesarean	Expired	Expired	1 day
C.C.	20	Post partum eclampsia	Non-operative	Expired		4 days
B.F.	16	Pre-partum eclampsia	Dilatation extraction	Discharged	Expired	9 days
M.C.	17	Fulminating eclampsia	Caesearean	Discharged	Living	30 days
I.H.	38	Pre-partum eclampsia	Dilatation extraction	Discharged	Living	13 days
K.W.	29	Pre-eclamptic toxemia	Non-operative	Discharged	Living	10 days
K.S.	27	Pre-eclamptic toxemia	Non-operative	Discharged	Living	9 days
B.T.D.	22	Post-partum eclampsia	Non-operative	Expired	Expired	1 hour
A.L.	18	Pre-eclamptic toxemia	Non-operative	Discharged		6 days
N.W.	35	Fulminating eclampsia	Caesarean	Discharged	Expired	28 days
L.D.	32	Eclampsia	Caesarean	Expired	Expired	1 day
E.P.	18	Fulminating eclampsia	Caesarean	Discharged	Discharged	20 days
W.P.	17	Post-partum eclampsia	Non-operative	Discharged		9 days
C.F.	15	Eclampsia	Caesarean	Discharged	Living	30 days
W.I.	25	Eclampsia	Caesarean	Discharged	Living	22 days
D.S.	28	Eclampsia	Delivery	Discharged	Living	7 days
T.L.	17	Pre-eclamptic toxemia	Non-operative	Discharged	Living	9 days

2. Morphine and chloral ¼ grain, morphine alternating in one hour with 30 grains chloral per rectum and if necessary repeated in three hours. The chloral is given in sweet milk when administered per rectum.

3. If narcotics and sedatives do not control convulsions, use small amounts of ether. Never use chloroform under any circumstances as it has a destructive effect on liver, kidneys and heart. Nitrous oxide oxy-

gen can be used, but the safest and most reliable is ether.

4. As a routine in all eclamptic, immediate venesection removing no less than 600 c.c. and maximum 1000 c.c. of blood. Re-introducing into the patient's circulation 300 c.c. of a 5 per cent glucose solution. The glucose gives to the patient immediate food for nourishment, and at the same time acts as a powerful diuretic. We are now giving the glucose in preference to the normal saline as we feel that the salt solution acts as an irritant to the kidneys—causing a piling up of salts.

5. Gastric lavage with sodium bicarbonate solution leaving 2 oz. of mag. sulph. in the stomach.

6. Hot colonic irrigation with 2 per cent sodium bicarbonate B. D.

7. Last of all, if patient's B. P. does not drop, convulsions cease and general condition improve, then empty the uterus in the quickest way with the least amount of shock.

Caesarean section, in my opinion, should always be done in fulminuating eclampsia, and in primipara where dilatation of cervix would be difficult and exert considerable shock on the patient. In all other cases delivery should be accomplished by dilation and extraction or leave patient go to term. All operative procedures should be done under ether, occasionally if possible under gas and novocain. Never under chloroform.

In closing, let me say that as long as the etiology of eclampsia is unsettled, difference of opinion as to the treatment is certain to exist. Day by day the leading obstetricians of the country are falling in line in adopting the conservative treatment in eclampsia in preference to the heretofore plan of radicalism.

THE HYPER-CALCIUM-SATURATION THERAPY OF TUBERCULOSIS.

By CHARLES HOMER HALL, M. D.
from the
DAVIS MEMORIAL HOSPITAL CLINICS, Elkins, W. Va.

Read at Fifty-Eighth Annual Meeting of West Virginia Medical Association, Bluefield, June, 1925.

The work and studies of which this paper is a preliminary report were carried out conjointly by Drs. B. I. Golden; W. S. Magill and the author; all of the Staff of the Davis Memorial Hospital, where all cases have been treated.

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At the last November meeting of the Barbour - Randolph - Tucker Medical Society, at Elkins, the members present will recall the address then delivered by Dr. Magill of the Davis Memorial Hospital Staff, on "The Prevention and Cure of Tuberculosis" and how deeply we were impressed with it: presenting as it did for the first time in this country, a fully endorsed method of effective vaccination against this disease (Calmette's) as also the three lines of therapeutic endeavor, which our speaker, from his unusually extensive observation and experience, insisted were really effective in bringing about a complete arrest and lasting cure of many cases and forms of tuberculosis.

Let me recall to you, that these three lines urged upon us, as promising such complete results, were the use of Cod Liver Oil, Utlra-violet Rays, and this Hyper-Calcium-Saturation of the organism and the

united efficiency of two or all three of these in indicated cases.

This Hyper-Calcium-Saturation Therapy of Tuberculosis was entirely unknown to me and I find in fact was unknown in the medical literature of this country.

The subject was of such intense interest that I at once secured all possible details of the treatment from Dr. Magill, as also his promise of full cooperation for the clinical study and experimentation of such therapy.

The available literature of this matter is exceedingly limited, and actually consists of two long reviews, (published in the "Presse Medicale" issues of Sept. 20th and 27th of 1924) by Dr. L. Cheinisse of the exhaustive book on this subject published by Dr. L. A. Rosen, professor at the University of Moscow, Russia; in the Russian language, and therefore only available to me through Dr. Magill's knowledge of Russian, and to him I am also indebted for the translations of the two articles of Dr. Cheinisse which are in French.

Dr. Rosen is the pioneer and advocate of this system of hypercalcium saturation of the organism to bring about an arrest of tubercular processes and even eventual cure of tubercular disease in any form of its clinical manifestation.

His experimental work dates back many years previous to the war and was carried out at the Institute of Experimental Pathology of Moscow.

His clinical results are of his personal cases, over 200 in number treated at the Municipal Hospital Pirogov of Moscow and subsequently carried out on a much larger scale; but with less scientific precision and control in the Military Hospitals of Kiev and similar establishments under his charge during the last war.

Dr. Magill saw personally about 40 of these cases while under treatment by Dr. Rosen, and as far as possible controlled the results.

This system of treament is not to be confounded with other uses of Calcium salts in more or less concentrated solutions but limited dosage, which are found recently in medical literature, for the treatment of the various symptoms: diarrhoea, profuse sweating, hemoptysis, etc, of tubercular subjects. The idea here is to use Calcium in super-saturation of the entire human organism, as a Pure Systemic Treatment of this disease.

I have not the time here to enter upon Dr. Rosen's and Dr. Magill's theories of the reactions involved which are exceedingly seducing, but I confine myself solely to the facts as I have observed them in my own cases.

This Calcium saturation is accomplished by intravenous administration of very large amounts (about 300 cubic centimeters) of a pure water solution of chemically pure Calcium Chloride (crystals) within limits of 1 to 1.6% of the salt in such solution. Unusually pure water and calcium chloride must be used and the solution freshly made and sterilized—and if need be sterile filtered to be absolutely clear at the moment of use.

These intravenous injections never cause any marked reactions nor complications. Care must be taken that the reaction of the solu-

tions after sterilization remains perfectly neutral. Just before use, the solution is warmed to about body temperature or slightly above and kept thus warmed throughout its injection. If administered too warm the patient rapidly feels a sensation of unbearable heat, nausea, intrathoracic and pre-cardial oppression and a profuse sweating breaks out. If used too cool the solution chills the patient quickly and the attacks of chills may be repeated and prolonged more than is observed in the usual reaction.

The solution at the proper temperature is passed into the vein very slowly (at a rate of about ten to fifteen cubic centimeters per minute) with the least possible pressure to effect that rate of delivery with steadiness and regularity.

We use the veins of the inner surface of the arm, at the elbow, and the usual technique of insertion and maintenance of a needle in such vein.

The first injections are much more likely to cause undesirable reactions than are subsequent treatments. The tolerance of the patient increases with each administration of the medicine, and in proportion to a general improvement of his condition which starts usually the day following the third or fourth injection.

The desirable rate of injection varies with the idiosyncracy of each patient. It should be as rapid as is commensurate with the introduction of this considerable volume of liquid without provoking undesirable symptoms.

Reaction sequence is as follows: The solution flows into the vein and if of proper temperature, the patient soon feels a general warmth all over the body. There is soon noted a taste of salt in the mouth which the patient at first recognizes very slowly, but with each repetition of the injection, learns to detect very rapidly. This becomes an excellent criterion as to whether one is really injecting into the vein, if there be any doubt in the matter.

Some minutes after the commencement of the injection, the pulse rate slows a little, (for instance, from a beat of 110 to 90 per minute, or possibly 80) and then continues at this rate without further slowing until that which decides the arrest of further injection at which time the rate drops quite rapidly to about 60 per minute, to return to normal a few mniutes after the cessation of the injection.

As the injection proceeds (150 to 200 cubic centimeters having been injected for instance—the susceptibility varying in each patient)—many subjects note then a precordial oppression and a sensation of constriction of the chest and a tightening at the throat and menace of nausea.

This is a signal to slow the rate of injection which permits the subsidance of these symptoms quite rapidly.

At this same point of the injections, t w o patients — one each — complained of blurred or lost vision for a short moment. It is usually easy to recognize the onset of the above symptoms at this stage by the quickened breathing, rapid swallowing of saliva, etc.

With care to regulate the rate of flow to the endurance of the patient, the amount of 275 to 300

cubic centimeters of solution is injected in about twenty minutes and without causing any marked distress, nausea or vomiting, and particularly is this true when the solution is maintained, neither too cool nor too hot throughout the period of its administration.

As the maximum dosage is reached, according to the tolerance of each individual (which seems to depend largely upon the body-weight and state of general nutrition) the paleness of the face becomes more manifest, nausea more threatening, both symptoms generally preceded in about ten seconds by a fall of pulse rate from 90 or so to 70 and then perhaps very rapidly to 60 beats per minute. This is the moment to terminate the operation, which is done instantly by the immediate extraction of the needle from the vein and a moment's compression of the wound, thus terminating the day's treatment.

Within a few moments the pulse rate returns to a good normal and the patient is generally no longer nauseated. In some however, one or two further efforts of vomiting come on and then cease entirely. On this account we always give injections on an empty stomach, and usually within half an hour after the completion of the treatment, the patient eats a good meal with good appetite and a good digestion.

A number of patients, some hours after the first injection—and to a lessening degree as the number of injections given increases—show a considerable rise of temperature, often surpassing the usual height of their temperature curve (even of those who show a marked hectic afternoon or evening rise). This increase of temperature may or may not be accompanied with one or more chills, and these are rarely severe. Such manifestations of systemic reaction cease after a few hours. They seldom reappear on the following day, and have never induced any retardation of our serial treaments.

As treament progresses — the number of accomplished injections increases and in proportion to their number, the systemic reactions fail to appear, and all temperature elevations cease to be appreciable.

For our study of this medication, we have accepted every case of pulmonary tuberculosis with demonstrable bacilli of the disease in the sputa, no matter how severe nor how advanced such affection might be:

Mrs. V. entered the Hospital in such moribund condition that three members of the staff feared that she would not live to the next morning even to receive her first injection.

Mrs. L. entered with uncontrolled cachectic diarrhoea and in stage of final exhaustion, with little respiratory area to be discovered in her thorax, long wasted by denutrition, due partly to bad home conditions.

We are now treating a patient with rapidly developed and now extreme emaciation and weakness caused by a pulmonary tuberculosis following influenza two years ago and now complicated by renal conditions on entrance to the Hospital, showing 7% of albumen in the urine, and this amount undiminished by an absolute milk diet. She is, however, taking this super-saturation treatment thus far with

marked lessening of her renal symptoms.

Mrs. P. makes up a total of four moribund patients with only a very short apparent survival before them (we mean a survival of days) in which we have nevertheless resorted to this treatment. In some of these the circulation was so lost that we were obliged to proceed very slowly and did not carry out our program of injections every other day. In these, three or four days went by between injections—a procedure which we feel is not fair to the trial of this method—but we were feeling our way to learn what we could and should do.

In none of these four cases has our medication shown the slightest harmful symptom. On the contrary it is the full conviction of all the members of our Hospital staff who controlled these cases with us and never failed to assist at each injection and examination of all of our subjects (never less than three and sometimes as many as five together). It is the full conviction of all of us that every one of these in extremis patients were improved at least temporarily by this medication. Their appetite was increased and there was in each instance a gain of weight.

Thus far we have given treatment in series of six intravenous injections—one every other day—and have then allowed the patients to go home.

Where the progress they made at home was unsatisfactory we have recalled them for a second series of six or more injections.

In such procedure we have not followed that recommended by Dr. Rosen, who uses a first series of every other day injections up to fifteen treatments and then after giving his patients ten days rest follows with a second similar series of fifteen more injections and is ready to give further series to each of his patients as do not show a satisfactory state and maintenance of their improvement.

Dr. Rosen also recommends that at least two years later, no matter how improved and solid the patient of such medication may appear, that a further series of this hypercalcium therapy be given, on the ground that this is a case of already proven susceptibility to decalcification and therefore should be hypercalcified at suitable periods as a prophylactic at least.

We have not yet given such long series of injections, as it is difficult to find means to provide for sufficiently long hospitalization of our patients. We have neither research nor hospital funds to meet such expense for those who cannot pay their own expenses and there is a limit to what we can personally contribute.

We, however, intend to use the long extended and repeated series of treatments in such cases as we find are not sufficiently responsive, and of our fifteen cases thus far treated, we have one for which we are recommending that her second series shall be of fifteen injections, and we have a man who has completed a second series of six injections about two months ago showing slow although decided improvement, but in his case we are considering the advisability of a long series of fifteen injections now to

make a more sure and rapid progress for his complete restoration to health.

Dr. Rosen states and we confirm that in cases, not markedly advanced, of pulmonary tuberculosis —second stage—with demonstrable tuberculosis bacilli in the sputa on entrance such bacilli often disappear rapidly and entirely from the sputum, and often with the diminution and complete cessation of all expectoration.

The complete disappearance of the specific bacilli has occurred in our cases usually before the termination of the first series of injections, and in others very soon after the termination of this first series.

This has been the case in nine out of ten of our patients of this class.

All subjects in this group have also shown good and sometimes remarkable gains in their weight and within a very short time after the end of their first series of injections. In such cases also, even before the end of the first series the usual evening rise of temperature of the tubercular case begins to lessen, and many of the temperature charts of such cases show a remarkable flattening of the line to a close line to the normal.

Dr. Rosen does not claim that accomplished tubercular lesions involving a loss of tissue are repaired by this medication. He states that often the Roentgen as well as physical examination of such patients does not show marked change other than arrested infection and irritation activities. Our own experience is of too short duration to permit us an opinion on this subject and we do not venture other than to give Dr. Rosen's statement on his cases which cover periods as far back as 1914 or longer The outline of the fifteen cases are here included, but are too long to be read now.

Of these fifteen, ten are personal cases (one of them placed in my care by Dr. Lyons of Parsons) and I am indebted to my staff colleagues, Drs. Moore, Pierce, Dunham and Michaels, for the privilege of observing their cases with them and the study of the clinical details here.

11 are women, 4 men:

4 were treated for periods—about 1 year ago—at the State Sanitarium.

For brief consideration, we divide these into four groups:

Group 1. Cases of very rapid development of tuberculosis apparently an immediate sequence of acute pulmonary infection (Influenza 3 cases; Pneumonia 1 case).

Group 2. Health fairly good, the bacilli of tuberculosis only recently found in the sputum, and a noted loss of weight: 5 cases.

Group 3. Cases previously treated at State Sanitarium for a year or so previously. 4 cases.

Group 4. Moribund (in extremis) on entrance to hospital. 2 cases.

Of the four cases of our first group: all are women, the first Mrs. G.— was so ill after an acute pneumonia that her life was despaired of when this treatment was commenced. Almost immediately after the first two injections there was a most remarkable change in her condition and with the further injections a most remarkable recovery, such that the tubercle bacilli that were repeatedly found in her sputum up to the beginning of this

treatment disappeared before the completion of the first six injections. Sputum examinations of last Dec 6th, 8th, and up to the 28th always showed the bacilli of tuberculosis, but the examination of Dec. 28th, Jan. 19th, Mar. 5th and May 9th, were uniformly negative. In this case all expectoration has now stopped and no further sputum is raised. The woman has immediately gained remarkably in strength and weight, and is today a very strong and well woman, except for an old thyroid condition.

Mrs. A.— (a patient observed through the courtesy of Dr. Pierce), offered a very interesting condition. She was abnormally tall and large boned, a mulatto 28 years of age, extremely and rapidly emaciated, very anemic and with a positive Wassermann reaction. She had had several severe pulmonary hemorrhages and was very exhausted and weak. Almost immediately (after the second injection) she developed a good appetite, and began to sleep throughout the night and with each injection her improvement was manifest. The nature of her sputum changed markedly after the fourth injection. On Feb. 9th, examination still found the bacilli, but from that date up to the examination on the day of her discharge no further bacilli of tuberculosis could be found in her sputum. She gained markedly in weight, her hectic evening temperature, almost daily passing 102 ceased rapidly on the fifth injection to just pass 100 F. at the time of her discharge from treatment. In this case treatment for the positive Wassermann reaction was now proposed but so positively refused that the patient has not further reported for our observation, but we learn indirectly, however, that she is much improved in health.

Miss W.— on arrival was weak and apathetic without appetite and manifestly weakening in general condition. Her response to injections was very remarkable. Even before the third she showed a good appetite, remarkably revived spirits and remarked especially that she was sleeping well at nights and not troubled by coughing at night. Before the end of her serial injections, the sputum which until then was persistently positive for tubercle bacilli, became negative—on May 8th.—and no longer shows any bacilli of tuberculosis. She gained in weight before leaving the hospital and is reported still gaining, by her physician.

The fourth case of this group— Mrs. P.— arrived in such weak state that it was not believed that she could live many days. Her emaciation and apathy were extreme, her sputum massive and purulent and of very offensive odor showing the bacilli of tuberculosis en masse. At the third and fourth injections she began to respond, became cheerful and had a good appetite, sleeping better and the sputum much diminished and not so offensive. Her improvement was marked but not such as would be secured by a longer series of injections, but she was a mother of very young children and developed such severe homesickness that it was decided to allow her to go home for a short period.

On leaving the hospital she was much stronger and was gaining weight. We have desired her to re-

turn promptly for a long series of further injections but she is long over due and we fear that she will not hold her former improvement if further continuation of saturation is so long delayed.

Of Group 1. 4 cases.—Three apparently well; 1 not sufficiently treated.

Group 2 consists of five cases, all between the ages of 20 and 30 years —1 male, 4 females—in which a recent loss of weight and ill-defined weakness ,caused the medical examination which revealed the pulmonary tuberculosis, with positive tubercle bacilli in the sputum. These cases were promptly submitted to this hyper-calcification and showed quick response. All show no further bacilli of tuberculosis in the sputum. All have gained considerable weight. All report themselves as well and feeling better than they have for some years. In four the bacilli disappeared entirely before they had terminated their six injections and the remaining case showed no further bacilli six weeks after her treatment, nor on repeated examinations since that time.

Group 3 comprises four cases—1 female, 3 male. All were in fair physical condition except H.— but all showed constantly, in spite of all their continued care at the State Sanitarium, and since, the presence of tubercle bacilli in their sputum. Two had had recent pulmonary hemorrhages. A series of six injections, even before its termination, caused the disappearance of the bacilli from the sputum of L.— and shortly after from that of P.—

A second series of six injections was given after a rest of two weeks to H.— and R.— both of whom had had recent pulmonary hemorrhages.

Before the termination of the second series, the sputum of R.— failed to show any more tubercle baccili and remains negative still. In the case of H.— however it was noted that although he took his treatments very well and was very confident that he felt better, that of all of our cases of determinable improvement, his was the least rapid in commencement and slowest of progress. Since Jan. 1st, 1925 his sputum examinations of the 22nd, 24th, still showed the bacilli, the examination of the 24th and 25th, showed atpyical forms only, but typical bacilli in numbers again on Jan. 26th; atypical only on the 27th. On Feb. 2nd, no tubercle bacilli could be found, but reappeared again on the 5th, continuing manifest the 14th, 23rd, 28th, at which date the sputum showed blood streaks. Examinations on April 1st to 10th still showed the presence of the bacilli, but those of April 20th to May 20th did not find any tubercle bacilli. Examinations of May 19th and again on May 29th revealed a few bacilli in the sputa. Throughout this period the physical condition has steadily but slowly improved. He has gained some weight and appears much more rugged with good color. He states that he is feeling remarkably well and is at work for the first time since tuberculosis began. We advise here however a further long series of 15 injections as we have said previously in this paper.

Group 4 includes two cases: Mrs. V.— previously mentioned who responded to her first injections with

very manifest improvement. From moribund she passed to a condition of eating and sleeping well and gained weight. She became strong enough to sit up for long periods and to go about her house and in general was so much improved that her further treatment as recommended by us was too long postponed.

In a well meant but ill advised effort to help her with alcohol, a supply of illicit product was given her in large dose and produced very toxic effects with violent diarrhoea and such extreme prostration that about two months after her treatment she again reached the hospital in extreme prostration. A further treatment of several injections was given her evidently with good effect, but we were unable to restore her to her former good reactive condition. The patient became discouraged by proximity to an exceedingly bad case in the next bed and insisted upon leaving the hospital before completion of her treatment as we wished to have it done. She was surely benefitted and her life prolonged some months by this medication, but she did not survive long enough for us to see whether such care in similar cases can effect any lasting improvement.

The last case of this group, Mrs. L.— came to us even more grave than Mrs. V.— with extreme cachexia and its uncontrolled diarrhoea scarcely able to speak aloud and extremely prostrated mentally as well as physically. By the injections the diarrhoea was rapidly stopped, and the patient ate with appetite and gained strength and animation, and also a little weight. We were unwilling to have her cease her treatment at the hospital at the end of six injections as we knew that she would be without suitable care at her home, but she insisted on returning home with this slight benefit and so did. Urged to return very soon for further care she delayed this as long as her temporarily improved condition gave her strength —perhaps two months — and then again in extremis returned to us, but so discouraged that she did not remain to complete the series we then commenced. She did not long survive her return home. We cannot consider this case in any way a trial of this treatment.

CONCLUSIONS

(1) This is a Systemic Treatment (for all forms) of tuberculosis.

(2) There is no difficulty and not much danger in its use for any case.

(3) Its results are rapid and perfectly demonstratable and positive.

(4) In our series it shows the elimination of all bacilli of tuberculosis from the sputum in 84% of non-selected cases, and a gain of weight and strength in 100%.

ETHYLENE IN POOR RISK CASES

By JOHN E. CANNADAY, M. D.

Read at May, 1924, Meeting of West Virginia Medical Association, Wheeling, W. Va.

Since October, 1923, we have been using Ethylene anesthesia particularly in our poor risk surgical cases and have found it so satisfactory that I wish to make a few comments concerning its advantages.

The quick anesthesia, the patient being unconscious in 30 seconds usu-

ally after its initial administration, though not fully relaxed until a few minutes afterwards.

The absence of sweating and cyanosis. The absence of irritating affects on the lungs or the kidneys—the absence of blood pressure rise, give it obvious advantages in a certain class of cases in which we have previously tried to struggle along with local anesthesia and nitrous oxide.

It has certain disadvantages such as: Not the complete relaxation seen with ether or chloroform. Also inflammability and explosiveness under certain conditions. Like nitrous oxide, it necessitates the services of a skillful anesthetist.

Our observations are that in point of ideal and practical anesthesia, that it comes midway between nitrous-oxide and ether and as such displaces nitrous for all practical purposes.

I want to call your attention to its marked advantages in cases complicated by tuberculosis, diabetes, nephritis, hypertension, toxic states, also bad cases of empyema, etc. The coagulation time of the blood remains unchanged. There often seems to be more oozing at the operative site however, than with other anesthetics. It does not act as an irritant to the respiratory tract so that the increase in mucous and saliva is very slight. Pulmonary complications should therefore be reduced to a minimum with its use. Since the danger from explosion has not yet been definitely determined, we have refrained from the use of the cautery, free flame or any source of electric discharge.

The chief drawback is a certain amount of muscular rigidity which seems to be characteristic of this anesthetic. In this respect, it is probably intermediate between nitrous-oxide and ether. A surgeon who for years has been accustomed to the freedom of manipulation and the ease of closure which ether affords may find it impracticable to operate under ethylene-oxygen. We have found it necessary to use ether or local anesthesia, and often both in order to secure sufficient relaxation for abdominal operations. When a sufficient quantity of ether is added at the proper time, the resulting anesthesia is of an excellent quality, and it seems likely that such a combined anesthesia offers a greater margin of safety to the poor risk patient than a straight ether anesthesia.

Up to May 1, 1924, we had used ethylene anesthesia in the following cases:

810 ethylene anesthetics (220 inductions) ages 17 day to 75 years. Duration two minutes to two hours.

Pyloroplasty, Horsley	1
Hysterectomy	8
Gallbladder	26
Laparotomy	212
Hernia	24
Chest Cases	13
Prostatectomy	3
Enterostomy	14
Gun shot abdomen	3
Nephrectomy	3
Vaginal operations, Watkins, Perr. and Trach.	8
Caesarean section	3
Mastoids	5
Tonsils and adenoids	26
Spina bifida	1

Remainder were lacerations, dislocations, abscesses, D. & C. hemorrhoids, extraction of teeth, examinations, etc.

Case 1. Mrs. D. Patient suffering from acute obstruction of the common duct probably for six weeks extreme jaundice, nausea. Patient 65 years of age, emaciated, pulse very weak, 120 prone position.

Operation: Right upper abdominal section. Findings: Very hard induration head of pancreas, highly suggestive of carcinoma. Gall bladder palpated, no stones found. Unable

to palpate any stones in common duct.

What was done: Cholecyst-gastrostomy with small Murphy button. Patient returned in state of shock. Reacted well however, and jaundice disappeared to a great extent within ten days. Patient made rapid improvement, gained in weight and has been living in a fair state of comfort for three months since.

Case 2. Mrs. I. Large empyema left side, history of three years' duration. Previous attempt at drainage about two years ago. Patient had bronchial fistula, part of pus is discharged through sinus in back, larger portion coughed up. Patient has been in bed since last December, emaciated, pulse 110 or higher all the time, night sweats, constant cough.

Operation: Resection of from four to six inches of five ribs, scapula turned up over shoulder, cavity extends almost to apex of chest, nearly a quart of thick pus in cavity, mediastinal wall flapping in cavity. Patient returned to bed apparently in fair condition, developed profound shock that afternoon but reacted fairly well, improved very rapidly, wound treated by Dakinization, patient began sitting up in chair week after operation and sent to her home in city eleven days after operation. Pulse last three days before leaving hospital, 84 to 92, temperature does not exceed 99½ degrees.

Case 3. S. H. Boy 12 years old sent to hospital. Diagnosis, acute valvular disease of heart, chronic nephritis, empyema of six weeks' duration, average pulse rate 140, respiration rate 28 to 32. Empyema diagnosis confirmed by X-ray and by aspiration. Thick pus aspirated. Small rubber tube inserted between ribs.

Six other cases of empyema, some of them children, others adults, have been operated on under ethylene anesthesia, all seriously ill. Chest drainage done without shock, suffering or chest irritation.

Two recent cases of acute hyperthyroidism with resection of thyroid tissue, patients reacted well and satisfactory recoveries followed, pulse rate previous to operation 130 to 140. Within week after operation dropped below 100.

Two cases of Caesarean section, one for placenta previa. The other, a severe case of eclampsia, in which delivery had been attempted but failed. Both made good recoveries.

Six or more cases of intestinal obstruction, some of them in extremely poor condition treated by enterostomy either single or multiple with fair results.

We have made extensive use of ethylene anesthesia in cases of compound fracture of the legs, profound shock, also in various cases in which patient's condition was complicated with pulmonary tuberculosis, etc.

I quote from the following:

Lewis:[1] "At the present time we have had about 2400 ethylene anesthetics at the Presbyterian Hospital. It has been very satisfactory indeed and I think it has had its greatest advantages in poor risk surgical cases. I have used it in tuberculosis of the lungs and the patient got along beautifully. I also used it in cases in which there has been a low hemoglobin count. We have found no contraindications to this anesthetic up to the present time but I suppose some contraindications will arise at any time. I believe that the general condition of the patient is much better after this than after any general anesthetic now in use."

Trout:[2] "Very briefly my views are that ethylene has probably come to take the place of nitrous-oxide-oxygen. I do not think it will ever take the place of ether. There is one class of cases in which I am convinced ethylene is of a great deal of value and that is in the diabetic, for Lockhart has shown that ethylene reduces the blood sugar even in normal individuals, while our experience has demonstrated very clearly to us that there is a marked reduction of blood sugar due to ethylene in the diabetics on whom we have operated. Of course, some of this has been due to insulin."

Heaney:[3] "I find ethylene very well suited to major gynecologic and obstetric procedures during delivery, examination, etc. I have been making frequent use of ethylene for pelvic examinations in office and dispensary patients and find it very satisfactory for this purpose. My observations are similar somewhat to those of other observers, in that I consider ethylene anesthesia to rank mid-way between nitrous oxide and ether. The patient is usually ready to return home in from ten to thirty minutes after ethylene has been given for the purpose of relaxation during pelvic examination. I have made extensive use of this anesthetic agent in conjunction with simple forceps deliveries, also in difficult forceps cases.

I wish to call attention to the advantage of ethylene anesthesia in that it does not cause any perceptible rise of the blood pressure. The inflammability of ethylene corresponds to that of ether oxygen."

Brown:[4] "It would take more than six hours continuous anesthesia in a tightly closed room entirely free from ventilation to bring about an explosive mixture with the room atmosphere. My experiments show that a 5 to 107 degree mixture of ethylene with air is explosive. The maximum explosiveness is reached when three parts of oxygen to one of ethylene are used. There is no danger of an explosion of the gas when compressed and in a pure state. The combination of nitrous-oxide-ethylene mixture often used for anesthetic purposes is quite as explosive as ethylene, it has been proven."

Lundy:[5] "Ethylene is being used most extensively in Chicago, Toronto, New York, Baltimore, Rochester, Minn.; St. Louis, San Francisco, Los Angeles, Seattle, Tacoma and many other cities throughout the country. Ethylene is especially valuable in the case of the weak patient and the poor risk case owing to the slight physical depression that this anesthetic causes. Ethylene is also exceedingly valuable in cases of chronic hypertension owing to the well established fact that it has very little effect on the blood pressure while nitrous oxide and ether both raise the blood pressure to a very marked extent. In those cases ethylene temporarily lowers the blood pressure to a very marked extent.

Ethylene is particularly advantageous in bad heart cases, cases of acidosis, diabetes, and nephritis."

There is a very large gap between nitrous oxide and ether, and ethylene divides this half-way.

Judd:[6] "We began the use of ethylene-oxygen anesthesia last August and since then have used it in upwards of 2500 cases covering fairly thoroughly the entire field of general surgery. Thus far our experience indicates that it is an exceedingly safe anesthetic agent. It is agreeable to take, quick in action, and

affords prompt recovery with a minimum of unpleasant and harmful after effects."

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2. Dr. Hugh Trout, Jefferson Hospital, Roanoke, Va., personal communication.
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4. Dr. W. Easson Brown, Journal A. M. A., Vol. 82, March 29, 1924, page 1039.
5. Dr. John S. Lundy, Northwest Medicine, March, 1924.
6. Dr. E. S. Judd, Mayo Clinic, personal communication.

ANNOUNCEMENTS AND COMMUNICATIONS

WEST VIRGINIA STATE MEDICAL ASSOCIATION

Office of Executive Secretary
Box 111, Charleston, W. Va.

June 23, 1925

Dear Doctor:-

We are compelled by postal regulations to discontinue your Medical Journal until such time as your state association dues are received by this office. We are sorry to take this step but the law relates that members in arrears after April 1 must be dropped from the mailing list.

However, we are ordering the usual number of copies for July and we will be in a position to forward you your copy immediately upon the receipt of your remittance from your secretary. It may be that some of you have paid but the remittance has not reached us. If so, please ask your secretary to send the required amount to us at once.

More than 930 members have paid up to date. We hope to reach 1100 this year to retain our two delegates to the A. M. A. We are only 170 shy of that number now. There were some who opposed the increase in state dues from 5 to $10 but we feel positive that those who were opposed really have the same deep-seated love for the organization and will continue to support it as in the past. At least, that is our sincere hope.

This office has been founded upon the theory of personal service to each and every individual member. Already we have handled workmen's compensation claims, disputes with the veterans' bureau and other like duties. Possibly we can serve you in the same manner. At least, give us the opportunity.

Sincerely,

Sterrett O. Neale.
Executive Secretary.

UNIVERSITY OF PENNSYLVANIA

Graduate School of Medicine
Fellowships in Neuropsychiatry.

Five fellowships in neuropsychiatry are available in the Graduate School of Medicine of the University of Pennsylvania. These fellowships have been established for the period of three years from October 12, 1925 by the Commonwealth Fund of New York.

No definite fellowship stipend has been fixed; but it will in each case approximate $2200 per annum. The practice stipend will in each case be designated by the fellowship committee.

The minimal qualifications for applicants are: (a) age, from 25 years to 35 years inclusive; (b) graduate of a Class A medical school; (c) one year's approved internship; (d) satisfactory reference; (e) approval of personal and professional status.

Applications are invited for these fellowships and should be addressed to "Dean, Graduate School of Medicine, University of Pennsyl-

vania, Philadelphia."

A synopsis of the plan of study, etc., under the fellowship follows.

GENERAL

Each fellowship is upon the basis of three years' (36 months) work—one year fundamental, one year practical, one year investigative.

SPECIAL

1. Begin in mid-October and continue until mid-June with:

(a) Laboratory studies of comparative anatomy, human embryology, neuroanatomy, neurophysiology, neuropathology and autopsies—two-thirds of scheduled time for period;

(b) French or/and German and psychology (psychometric; vocational) — one-sixth of scheduled time for period;

(c) Selected neurologic and psychiatric and child guidance clinics, instruction in the latter to include method and theory of social case work—one-sixth of scheduled time for period;

(d) Unscheduled work in pertinent medical literature, meetings of neurologic and psychiatric societies and study—two hundred to four hundred unscheduled hours for period.

2. Continue until mid-October as resident in psychiatric hospital—full time for period.

3. Continue until mid-June with:

(a) Laboratory studies of biochemistry, serology, and neuropathology with special reference to psychiatric problems; three-eighths of scheduled time for period.

(b) Handling of patients is psychiatric, child guidance and neurologic clinics and wards—three-eighths of scheduled time for period;

(c) Preparation of a text or monograph upon an assigned pertinent subject and/or original paper for publication—one quarter of the scheduled time for period;

(d) Duplicate of 1 (d).

4. Duplicate of 2.

5. Continue until mid-June with:

(a) Research and preparation of publication thereon in field of child guidance from the standpoint of the specially trained psychiatrist—one-half to three-quarters of scheduled time for period;

(b) Child guidance clinic work—one-quarter to one-half of scheduled time for period;

(c) Triplicate of 1 (d).

6. Triplicate of 2.

7. The herein fellows shall be candidates for the degree of Doctor of Medical Science (Sc. D. Med.) for graduate work in neuropsychiatry, said degree conferrable in mid-February following the completion of the 36 months' candidacy as above; but the candidate is not expected to remain in University attendance in the period from mid-October to mid-February. During the candidacy the fellow must comply with customary academic regulations. The most important of these is that if the work of the fellow is unsatisfactory the fellowship, etc., must terminate. Appraisals of work will usually occur at the termini of the six periods mentioned above. For example, the candidate would be unsatisfactory if the monograph presented by h i m showed him to be unfitted properly to consult medical literature and make a creditable critical review thereof. Et cetera.

8. Physicians who can present the minimal qualifications and who

can in addition present qualifications paralleling certain of those intended for him to acquire during his candidacy, will be given appropriate time and subject credits; but the maximum time credit would be 24 months and no subject credit could exclude the research requirement.

9. The fellowships shall be administered by a joint committee composed of the following persons: Dr. G. H. Meeker, Dean, Graduate School of Medicine, University of Pennsylvania; Dr. T. H. Weisenburg and Dr. Edward A. Strecker of the Graduate School of Medicine; Miss Mildred C. Scoville, The Commonwealth Fund; Dr. Frankwood E. Williams, Medical Director, the National Committee for Mental Hygiene; Dr. Ralph P. Truitt, Director, Division on Prevention of Delinquency, The National Committee for Mental Hygiene.

The Functions of the fellowship committee shall be as follows:

(a) The selection of fellows;

(b) Determination of the amounts of fellowship awards;

(c) Specification of time assigned to subjects within the group-time allotments;

(d) Termination of fellowship awards.

(e) To rule as necessary upon points within the felloships.

(f) To make such changes in the plan as may be found to be desirable.

NEW COMMANDMENTS FOR THE COMMON DOCTOR

Thou shalt have no favorites in newspaper correspondents in order to see thy name in print.

Thou shalt not bow down to graft nor to the image of gold.

Thou shalt hold thou tongue when sued for malpractice; remembering silence is golden and that thy adversary is after thy gold and will get it if thou art not discrete.

Remember the Sabbath day and keep it holy; six days shalt thou labor and the seventh also, if thou hast an opportunity to do good or the prospect of a good fee.

Honor thy fathers of thy profesSon, that thy days may be long upon the land and thy usefulness lengthened, through the example and achievements of thy fathers.

Thou shalt not sanction adultery nor produce an abortion.

Thou shalt not steal thy brother's patients nor forgive him when he steals thine.

Thou shalt not kill thy brother's opportunity for earning a living nor murder his chance of usefulness. He, probably, is thy superior.

Thou shalt not bear false witness against thy neighbor, nor speak evil of his good name. His reputation may be better than thine.

Thou shalt not covet the specialists fee, nor dispute even a division. Let him have all the money; he may think he earned it. Thou must be content with glory.

Shenandoah Junction, W. Va.
Dr. W. W. Brown,

THE JOHN HORSLEY MEMORIAL PRIZE

University of Virginia

This prize was established in February, 1925, by Dr. J. Shelton Horsley of Richmond, Virginia, a distinguished alumnus, as a memorial to his father, Mr. John Horsley of Nelson County, Virginia.

The prize consists of two years' interest on $10,000 in 5 per cent

bonds and will therefore be presumptively $1,000. It is to be awarded every two years by a committee of the Medical Faculty of the University of Virginia for a thesis upon some subject in general surgery. The term "general surgery" is used in a broad way and includes the specialties commonly associated with general surgery such as orthopedic surgery, urology and gynecology but not the specialties of the surgery of the eye, ear, nose and throat which have developed along lines which differentiate them markedly from general surgery.

The object of the prize is to stimulate an interest in the scientific aspects of surgery. In the past there has been some tendency to glorify the mechanical technic of surgery, and perhaps some neglect of its underlying scientific features. The donor wishes particularly to stimulate an interest in the underlying biologic principles with the hope that surgeons may not become mere operators but be imbued with a scientific spirit which will contribute to the advancement of surgical knowledge.

With this in view the essay should be on a surgical problem, the solution of which depends solely or in large part upon research work, (preferably original research) in some branch of pathology, bacteriology, physiology, biochemistry or embryology.

All graduates of the Medical Department of the University of Virginia of not more than fifteen years standing are eligible for this prize and are invited to submit theses. In the discretion of the committee the prize may be awarded for work done by a medical graduate of the University of Virginia in collaboration with a non-alumnus of this institution but in such case the award will be given to the Virginia graduate alone.

The prize is to be awarded biennially at the first exercises of the University of Virginia by a committee consisting of the Dean of the Medical School of the University of Virginia, the professor of surgery, the professor of pathology, the professor of physiology, the professor of biochemistry and the professor of histology and embryology. The decision will be made by a majority vote. In no instance shall a thesis be awarded a prize unless it contains work that is deemed worthy. If no essay is considered worthy the prize shall not be awarded and the accumulated interest will be added to the principal. After two years theses will again be examined for an award but it is not at present intended that the prize shall exceed one thousand dollars.

The theses must be submitted to the committee in typewritten form and work that has not been previously published will be preferred. If the work has been previously published it must be presented in a new form. The committee will make suitable arrangements for the publication of the thesis.

All theses entered in this competition must be in the hands of the committee on February 1st., of the year in which the prize is to be awarded. They should be addressed to the Dean of the Medical School of the University of Virginia.

The prize is to be awarded for the first time in June, 1927, therefore the theses should be presented not later than February 1st of that year.

THE WEST VIRGINIA MEDICAL JOURNAL

JAS. R. BLOSS - - - - - - - - - - - - - *Editor*

WALTER E. VEST, Huntington
C. A. RAY, Charleston } - - - - - - - - *Associate Editors*
HARRY M. HALL, Wheeling

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All original articles for The Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all parts of the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

Advertising forms will go to press not later than the tenth of each month.

All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

Should be made by check, draft, money order, express order or registered letter to Sterrett O. Neale, Executive Secretary, 211 Smallridge Bldg., Charleston, W. Va.

Editorial Office: 804 Lincoln Place, Huntington, W. Va.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

THE 58TH ANNUAL MEETING

The meeting at Bluefield was all that we expected it to be. Knowing the profession of Mercer and McDowell Counties as well as we do there was no question but that the social features of the meeting would be exceptionally pleasant. We felt sure that our friends of the "Flat Top" region would make our visit among them more than pleasant. Their hospitality far exceeded our expectations. We do not recall that any annual meeting has been so marked by pleasant social functions as was the recent one.

The printed program which was published gave us an idea of what the scientific feast would be—but was only a forerunner of what it really was. We have been attending the annual meetings for nineteen years, and we do not recall that there was ever a program so filled with real scientific work all the way through, as was this one. The high class of material presented by our West Virginia physicians was a revelation, although we knew this talent was among us. It only goes to prove what we have maintained all the time, that is that in the Mountain State of West Virginia, are physicians with the ability and scientific attainments of those to be found anywhere in our country. It gives us great pleasure to have them begin to write of their work and of their observations. In the past we fear that they have been a little too timid to do this, feeling that they were "mountain doctors" as it were—and that their opinions and their work did not measure up to that of other states and of the larger cities.

Our visitors from out of our borders came with most excellent addresses and papers for us — ones which were not over our heads. To them the Association extends a most hearty appreciation for this feature of our program's scientific sections.

At Bluefield this year there was a spirit of earnestness about the members which bodes much good for the future of our organization. It seemed to us that each man came with the determination to exert himself not only to make this a most excellent meeting, but to carefully consider the work for the future of the organization.

The 58th Annual Session will go down into the history of our organization as one which accomplished some great achievements for organization work. Last year we felt that some medical history had been made when the House of Delegates voted to employ a full tine Executive Secretary. This year the House passed a resolution forming a new standing committee, the Professional Relations Committee. This action was taken at the request of President Jeffers. At first glance one may not feel that this means very much, and yet when we come to understand just what the functions of this committee are, and what it is hoped to accomplish through it, it is a momentous thing. It will be through this committee that the organized profession of West Virginia will take up the campaign for education along medical lines through the lay press. Through it will come articles published for the laymen of an educational type.

The House of Delegates discussed very fully and freely the question of periodic health examination, and the question of addressing laymen on professional subjects in an ethical and professional way.

There is a realization that our profession must become more a part of the economic affairs of the state than it has been in the past. President Jeffers points this out clearly in his Presidential Address, and we are glad to say that the Association is pleased to stand with him in this particular.

Last year a number of men made objections to the establishment of a full time officer with headquarters

at Charleston, and prophesied all manner of dire calamities to our membership. The Executive Secretary's report for the first five months of 1925 shows conclusively that the physicians in West Virginia do not intend to lay down. At this time the paid up membership was less than twenty short of that for the same period last year, and several societies had not reported in full their paid up members. The Secretary's report shows that in five months quite a great deal of organization work has been done, and gives us assurance that when he has worked out the details of his office and gets it to functioning we will reap great rewards from it. One thing taken up at his suggestion and adopted by the House of Delegates, was the matter of automobile insurance of all types for physicians. This in itself is going to save for every physician who drives an automobile as much, or more than his whole state dues will be each year in premiums.

This is but one of the things which our association will be able to accomplish by closer organization. As time passes and we see new problems arising we will be able to effect far greater things than we could expect to do under other conditions.

No member who was at Bluefield could help feeling far more enthusiastic toward the individual physicians work and that of the State Association — to come away feeling a greater pride in their life's calling.

The final meeting of the House of Delegates on Friday morning was primarily first, the election of officers, and secondly a discussion of the policies of the organization toward the matters of the Public Health Council. The various delegates from the component societies will give their reports to the local bodies on the discussions of the latter.

The following officers and committee members were elected for the coming year:

President, Jas. R. Bloss, M. D., Huntington, W. Va.

First Vice President, R. O. Rogers, M. D., Bluefield, W. Va.

Second Vice President, H. C. Scaggs, M. D., Montgomery, W. Va.

Third Vice President and Scientific Secretary, D. A. MacGregor, M. D., Wheeling, W. Va.

Treasurer, H. G. Nicholson, M. D., Charleston, W. Va.

Councilors, 1st Dist. G. C. Morgan, M. D., Moundsville, W. Va.; 2nd Dist. C. H. Hall, M. D., Elkins, W. Va.; 3rd Dist. C. R. Ogden, M. D., Clarksburg, W. Va.; 4th Dist. W. E. Vest, M. D., Huntington, W. Va.; 5th Dist. H. G. Steele, M. D., Bluefield, W. Va.; 6th Dist. C. A. Ray, M. D., Charleston, W. Va.

Delegate A. M. A. 1926-1927, H. P. Linsz, Wheeling, W. Va.

Alternate, Robt. A. Ashworth, Moundsville, W. Va.

Professional Relations Committee, H. R. Johnson, M. D., Fairmont, W. Va.; H. G. Nicholson, M. D., Charleston, W. Va.; J. R. Schultz, M. D., Charleston, W. Va.; Wm. Goff, M. D., Parkersburg, W. Va.; A. G. Rutherford, M. D., Welch, W. Va.

Publication Committee, elected by council, Chairman, J. Howard Anderson, M. D., Marytown, W. Va.; H. M. Hall, M. D., Wheeling, W. Va.; C. A. Ray, M. D., Charleston, W. Va.; W. E. Vest, M. D.,

Huntington, W. Va.; Chas. W. Waddell, M. D., Fairmont, W. Va.

Morgantown was selected as the place of meeting next year.

The attention of the members of the State Association is called to the fact that the House of Delegates elected the members of the various standing committees. According to the Constitution and By-laws the membership of all standing committees is elective and not apointed by the President. Some misunderstanding in this respect has resulted in the past. Let us all resolve that this year we will try harder than ever to make a greater effort for the State Association.

THE WISDOM OF THE PRESS

During the Atlantic City Session of the American Medical Association there arrived on the scene one Leonard L. Landis of New York, who it was reported, is "Chairman" of the "American Association of Independent Physicians." Landis is the individual who is at present conducting a medical institute in New York City under the euphemistic title, "House of Health." The New York papers at different times have recorded Landis' arrest both by federal and by local authorities in connection with unsavory medical activities. Apparently, after looking about hither and thither, Landis issued a statement to the press informing the public that he was departing from Atlantic City with some of his colleagues thoroughly disgusted with the indifference of the American Medical Association toward questions of vital importance. He announced his extreme displeasure with medical ethics and condemned all serums and vaccines, including smallpox vaccination. Unfortunately for Landis, his press communications came into the hands of intelligent representatives of the press, including men sent to Atlantic City by the New York Times, the New York World, the New York Herald-Tribune, the Philadelphia Inquirer, the Associated Press, the Standard News Service, Science Service and local newspapers. Not one of these men sent the statement to his newspaper; instead, every one of them communicated with an official of the American Medical Association, inquiring as to the authenticity of the statement and as to the reliability of Dr. Landis. The result was that the official statement of this renegade physician appeared only in a periodical published in New York City, owned and edited by Mr. Bernarr Macfadden, some time called the "bare torso king." The incident is cited merely as another evidence of the high repute in which scientific medicine is held by the American press at this time. It is a position won by a wide-open policy of education of the public. For many years it has been the principle of the American Medical Association that what benefits the public benefits the physician and that the interest of the public is invariably first. —Jour. A. M. A., June 13, 1925.

TESTIMONIALS

We "see by the papers" as Mr. Dooley would say, that Mrs. Alice Roosevelt Longworth has consented to the use of her photograph as an advertisement "for a certain well known beauty cream." We learn further that Mrs. Longworth thus joins a notable gallery made up of

"such well known beauties and social leaders as Queen Marie of Roumania, Lady Diana Manners, and Mrs. Reggie Vanderbilt." Possibly we are in for a renaissance of the testimonial epoch; perhaps the giving of testimonials for nostrums is again to become respectable. During the last few years such endorsements as have appeared have been credited, in the main, to bucolic individuals from remote hamlets that could be located by the average person only in a post-office guide. True, within recent times there have been a few instances of "patent medicine" testimonials of "class." There was, for example, the inspiring testimony of the late William E. Mason, formerly United States Senator, who vouched for the virtues of Nuxated Iron. Then, when Sanatogen's star was in the ascension, the public press carried testimonials for this esoteric form of cottage cheese from such well known persons as "Marse" Henry Watterson, John Burroughs, Father Bernard Vaughan, and the Hon. William E. Chandler. These, however, were mild compared with the testimonials of twenty years ago. At the time that Peruna was at its palmiest, with a maximum amount of alcohol and a minimum amount of any other drug of importance, the public press was filled with testimonials from noted men and women, commending the medical virtues of this thinly disguised cocktail. A few among the notable galleries of celebrities that Peruna ran were Julia Marlowe, Admiral Schley and Rear Admiral Hichborn. Paine's Celery Compound, an alcoholic nostrum that died with prohibition, had almost as distinguished a group of endorsers as did Peruna, one of the best being that given by Sarah Bernhardt. The Divine Sarah was somewhat addicted to the testimonial habit, having appeared in that capacity not only for the Paine product but also for Duffy's Malt Whiskey, Pinelyptus Pastilles and other preparations of equal therapeutic unimportance. One also calls to mind the testimonial of the Hon. Champ. Clark, who was impressed with the value of Electric Bitters, and also Madam Schumann-Heink's assurance that Fahrney's Blood Vitalizer was a "great help" and a "good medicine." Possibly the testimonial is coming back. "Things are in the saddle." With royalty and the aristocracy of Europe vying with democracy's famous, who knows but the time may come when we shall read a flowery panegyric on some contemporary pick-me-up in which Herr Wilhelm Hohenzollern will recommend the product as an invaluable remedy for that "all gone" feeling?—Jour. A. M. A., June 13, 1925.

STATE AND GENERAL NEWS

It is, perhaps, the Chicago of West Virginia. That was this writer's thought on viewing the general activity of Bluefield. It seems to have that swing — that confidence — that boosting of values. Here a doctor owns a skyscraper, himself. In this building some dentists have a whole floor, which they designed, that is reputed to be as complete as any in the whole country. An especially fine hotel for a city of its size looms up to greet you. You talk to these Bluefielders and they have that final air

about them like Chicagoans, as if to say, "Yes, yes, New York City, but what's that to us?"

We were much impressed with their president, Dr. Rogers. He is our impression of a real delightful, cultured man, and so it is no wonder that his society managed to have as good a meeting as any we have ever seen. Having had some recent experience we are all too ready to bow down our heads and say, here truly was a meeting creditable in every way.

Riding up in the train we all reflected that Dr. Jeffers had kept his schedule running right up to the mark, and has every reason to deem himself successful. Dr. MacGregor had as usual provided a fine program. Coming from the same town as him it is not expected we should agree on everything, but we will agree with anybody else that he knows what is good with an almost uncanny judgment.

Politics as usual ran as a silver thread among the gold. Sometimes this silver thread is too much in evidence not only in our meetings but in the A.M.A. as well. It is so silvery at times it reminds you of a cloud obscuring the sun. It is, however, we suppose a necessary evil.

The papers were of a high order, and we have told those who thought it too far to go that they missed a fine assembly.

While the manufacturing houses did not have a large exhibit, this is no essential part of a program anyway.

The social side was the last word, and it will be difficult to surpass it. It was a good banquet, but what we were sorry for was that so few Wheelingites were there to see the zest of the evening. Everybody entered into the spirit of the thing. The dance was a spirited affair too, and the women gorgeous in their gowns, and beautiful as the locality of the bluefields and bluegrass requires in song and history.

The entertainment surpassed many a high grade Keith Circuit we have paid dearly to see. The singing by the ladies was exceptionally good. Our stout friend and his "victrola needle" joke will hardly be forgotten and if we were him we would either go in "the movies" or give Will Rogers a run.

The Rotary Quartette made this Rotarian writer's bosom swell with pride. It looks awfully simple to get up and do what they did, as a matter of fact it is a particularly difficult undertaking. A doctor of this society of Mercer County was not in the least embarrassed to get up and show he was not a one-track man, by playing on the cello with two others as a trio. We have not heard recently music played any more beautifully, by amateurs. But as we have told our Wheeling friends there is one thing that we heard down there that is worth going to Bluefield any time to hear. This is no reflection on the other excellent things. If that colored quartette is surpassed anywhere we have not been there. We said they ought to sing before the Victrola or in New York City. Someone said "just a little more training." We hope they never get it. We've seen and heard a whole lot of trained ones. Singing without anything to aid them, their manner, the harmony of their singing, their delightful freedom from vanity made them one of the most entertaining features we have ever heard.

Dr. W. S. Fulton is suffering from a severe illness which as we understand it began with an injury to his eye. Dr. Fulton's activities are so wide and so numerous that his absence from among us is a matter of deep regret.

Dr. Arthur K. Hoge is the father of a new boy baby. If there is a doctor anywhere in the state who finds himself the father of a new girl baby and feels he already has enough, he might correspond with the firm of Drs. Fawcett, Hoge & Zuback. So far the various incidents of the advent of a child to all their homes has been characterized by the doctor calling down the corridor, "It's a boy!"

Quite a number of men from here attended the annual meeting of the A.M.A. Perhaps Wheeling was as well represented this time as it has been for many years. So many attended that it interfered possibly with their attendance at Bluefield.

Dr. H. F. Spillers was appointed new superintendent of the Ohio Valley General Hospital to succeed Dr. Chas. Wilkins, deceased. Dr. Spillers was formerly with Parke, Davis & Co., and is noted as an especially good executive.

New officers of the Ohio County Medical Society are:

Dr. John Marchner, president.

Dr. Chas. Clovis, vice-president.

Dr. J. G. Thoner, secretary.

Dr. A. L. Jones, treasurer.

Board of Censors: Drs. Sammons, Bippus and Morris.

Formerly elections were looked forward to as a fair sized imitation of a prize fight. They are more like an awarding of diplomas at high school commencement now. So quiet, so pleasant, so harmonious have they become.

Dr. Harry Silver is about to leave us here and move to Cleveland. We are sorry that Dr. Silver feels that Cleveland is a better town than Wheeling. Had he been at the meeting he might have changed his mind and gone to Bluefield.

At the last meeting of the medical society of this county, it was decided to meet every other Friday night instead of every week. With monthly clinical meetings at the hospitals it has become to mean a good many nights taken up and very little time for other duties and obligations.

It was also decided to form a committee to see about taking every Thursday afternoon off and leaving several men on duty. We predict this will happen in 1930, maybe.

We wish the women, the wives of the men up here, would take the interest in medical matters they do in other towns in the state. Maybe we'll do that too in 1930.

Dr. C. T. Taylor of Huntington, has just returned from a motor trip to Flint, Mich.

Dr. Jas. S. Klumpp of Huntington, has been away on a ten days vacation trip.

Dr. C. M. Hawes of Huntington has returned from New York. He accompanied his son James, who sailed for a tour of Europe.

Dr. W. E. Neal was elected mayor of Huntington at the last municipal election.

The following is a partial list of the West Virginia physicians registered at Atlantic City, attending the meeting of the American Medical As-

sociation, May 26-27-28-29, 1925: A. O. Albin, Charles Town; C. C. Ballard, Gap Mills; Jas. R. Bloss, Huntington; A. P. Butt, Elkins; Orva Conley, Elizabeth; W. G. Drinkwater, Gormania; Robt. W. Fisher, Morgantown; F. D. Fortney, Newburg; John A. Grier, Sistersville; J. A. Guthrie, Huntington; W. W. Harloe, Matoaka; O. P. Hodge, Matewan; Emmett W. Horton, Bluefield; Edmund L. Jones, Wheeling; Harry M. Hall, Wheeling; T. Jud McBee, Morgantown; W. C. Moser, Morgantown; A. F. Lawson, Weston; Roy B. Miller, Parkersburg; Chester R. Ogden, Clarksburg; H. C. Powell, Morgantown; Chas. B. Rohr, Alum Bridge; Barrick S. Rankin, Tunnelton; F. T. Scanlan, Morgantown; C. M. Scott, Bluefield; Benj. Mortimer Scott, Morgantown; Kyle Swisher, Young; J. M. Trach, Fairmont; S. S. Wade, Morgantown; E. E. Watson, Albright; Robt. J. Wilkinson, Huntington; R. A. Ashworth, Moundsville; C. G. Morgan, Moundsville.

BOOK REVIEWS

THE CRIPLED HAND AND ARM

A monograph on the various types of deformities of the hand and arm, as a result of abnormal development, injuries and disease, for the use of the general practitioner and surgeon. Containing the original methods of the author not heretofore published, enriched by his 35 years of experience in plastic surgery, and stressing the reconstruction, particularly for purpose of restoration of function. With 303 illustrations showing the exact surgical procedures and results. Practically a much needed book. Beck, $7.00. J. B. Lippincott Co., Philadelphia.

DIAGNOSIS OF CHILDREN'S DISEASES

This is the first English edition of a work of at least three editions in three years, and has been translated into French, Spanish and Italian. Professor Feer is recognized throughout the world as an authority on Pediatrics. His methods of presentation are unique, his powers of observation extraordinary, and the material extremely complete, with a large number of excellent illustrations taken from his own cases. The work confines itself entirely to diagnosis of disease in children, with special attention to the ills of the newly born and of infancy. It gives innumerable fine points of diagnosis that are not even mentioned in other text-books, and all the most recent diagnostic aids are elaborated. A unique feature is the list of illustrations arranged according to diseases. Feer, $7.00. J. B. Lippincott Co., Philadelphia.

ORGANIC SUBSTANCES, SERA AND VACCINES IN PHYSIOLOGICAL THERAPEUTICS

A concise and practical presentation of the present knowledge of organo-therapy and vaccine and serum therapy. You will be delighted with the way the world's knowledge is presented for immediate use, without annoying search or extended reading necessary in order to secure the point or points you desire. Jones, $5.00. J. B. Lippincott Co., Philadelphia.

FRACTURES AND DISLOCATIONS

By Philip D. Wilson, Instructor in Surgery, Harvard Medical School and one of the associates of Jeol E. Goldthwait, of Boston and William A Cochrane, who is associated with Sir Harold Stiles, of Edinburgh.

The strongest feature of this book is its practicability, unusually well illustrated by photographs of actual cases, and drawings which show what you want to know, and the best ways of handling every condition that arises in the treatment and the after-care of all fractures and dislocations, particularly stressing the restoration of function. Wilson and Cochrane, $10. J. B. Lippincitt Co., Philadelphia.

ROENTGEN RAY DIAGNOSIS AND THERAPY

This book furnishes the practitioner with a concise account of the essentials for the practice of Roentgenology. It is a practical guide, presenting the facts so simply, and in such order the beginner should find it easy to acquire a knowledge of the essentials of Roentengology Diagnosis and Therapy. Christie, $6.00. J. B. Lippincott Co., Philadelphia.

THE HUMAN TESTIS

This is the only complete work on this subject in any language. It stresses the facts of the testicular secretions on the organism. The study of the endocrinology of the testis presents all the facts from the literature of the world, and the most recent results of strictly scientific investigation, with the author's own findings as a result of his personal investigations, details of his technique and results. Thorek, $8.00. J. B. Lippincott Co., Philadelphia.

APPLIED ANATOMY

The new 7th edition, revised by Dr. George Mueller, University of Pennsylvania, bringing this book strictly up to date. General practitioners and surgeons throughout the world eagerly turn to this work for information on the application of anatomical facts and the explanation of normal functions. It is a classic whose usefulness will be greatly increased by this revision. Davis, $9.00. J. B. Lippincott Co., Philadelphia.

GENECOLOGY

This 2nd edition on Genecology by Dr. Brooke M. Anspach retains all the splendid features on surgical and medical genecology that have been placed in the front rank of books on this subject. Every advantage has been taken of the opportunity to improve and bring up to date this revision. Anspach, $9.00. J. B. Lippincott Co., Philadelphia.

OBSTETRICS

The 4th edition, revised by Philip F. Williams, Instructor in Obstetrics University of Pennsylvania, retains all of Dr. Shears' originality, both of view-point and methods. It is well known this book is practical rather than academic. It is filled with common sense hints not usually met in works of this kind, which are of inestimable value for the welfare and comfort of the patient. Its readable and lucid style has made it the practitioner's continual companion. Shears, $8.00. J. B. Lippincott Co., Philadelphia.

INFECTION, IMMUNITY AND INFLAMATION

A history of the Phenomena of Hypersensitiveness and Tolerance, and their Relationship to the Clinical Study, Prophylaxis, and Treatment of Disease. By Fraser B. Gurd, B. A., M. D., C. M., F. A. C. S., Montreal, St. Louis. C. V. Mosby. Price $5.00

TECHNIC OF LOCAL ANESTHESIA

By Arthur E Hertzler, A. M., M. D., Ph. D., L. L. D., F. A. C. S. Third Edition with 140 illustrations. St. Louis. C. V. Mosby. Price $5.50.

ANESTHESIA FOR NURSES

By Colonel William Webster, D. S. O., M. D., C. M., illustrated. C. V. Mosby, St. Louis. Price $2.00.

PHYSICAL DIAGNOSIS

By W. D. Rose, M. D. Lecturer on Physical Diagnosis and Associate Professor of Medicine in the University of Arkansas—Visiting Physician Little Rock City Hospital, Baptist Hospital and St. Vincent's Infirmary, Little Rock, Ark. Fourth Edition—300 illustrations. C. V. Mosby, St. Louis. Price $8.50.

ORGANOTHERAPY IN GENERAL PRACTICE

By G. W. Carnick Co., 417-421 Canal street, New York City. Price $2.00.

FUNDAMENTALS IN HUMAN Physiology

By R. G. Pearce, B. A., M. D., and J. J. R. Macleod, M. B., D. Sc., F. R. S., Assisted in Third Edition by Dr. Norman B. Taylor,— Third Edition, St. Louis. C. V. Mosby. Price $5.00.

GYNECOLOGY AND OBSTETRICS

This volume is one of a series of eight year books, issued at various intervals during each year. They cover the entire field of recent medicine and surgery, and each volume is complete on the subject of which it treats for the year prior to the time of its publication. Watkins and DeLee. Price of this volume $2.00, Price of the series of eight volumes $15.00. Practical Medicine Series. The Year Book Publishers, 304 South Dearborn Street, Chicago.

SAFEGUARDING CHILDREN'S NERVES

A handbook of Mental Health by James J. Walsh, M. D., and John A. Foote, M. D. With a foreword by Herbert Hoover. J. B. Lippincott Company. Price $2.00.

AN AFRICAN HOLIDAY

By Richard L. Sutton, M. D.

Many books on Africa have been written, but few authors have presented the subject in so graphic and concise a manner as Dr. Sutton. A writer of wide experience and a scientist of international reputation, he has grasped the sailent points and emphasized the important features in a way that is bound to appeal to every educated reader.

From the foreword to the final chapter, the story is absorbingly interesting, and, withal, so simply and admirably set down, that children as well as adults will enjoy its every detail. C. V. Mosby Co., 508 North Grand Blvd., St. Louis, Mo. Price $2.25.

MEDICINE AND SURGERY

ABSTRACT OF PAPER ON "UNPERFORATED ULCERS OF THE TERMINAL ILEUM, SYMPTOMATICALLY SIMULATING APPENDICITIS."

Read at the meeting of the American Medical Association, before the Section on Surgery, General and Abdominal, at Atlantic City, N. J., May 27, 1925, by J. Shelton Horsley, M. D., Richmond, Va.

The symptoms of appendicitis are discussed. The appendix has a wide range of locality. When in its normal position the inflamed appendix gives the typical symptoms of pain beginning in the epigastrium or around the navel, with subsequent pain, tenderness and muscle spasm in the right iliac fossa. When abnormally placed it may cause pain and tenderness in the median line, the pubic region, along the iliac crest or around the gall bladder. On the other hand, any one of many other diseases may give the symptoms of appendicitis and must be differentiated. Symptoms however, which are due to a lesion in the intestinal tract near the appendix may closely simulate those of appendicitis and are more difficult to distinguish. The importance of bearing in mind such lesions is emphasized. Operations for appendicitis are sometimes undertaken without due regard for the possibilities of other lesions of the gastro-intestinal tract, and the surgeon should be competent to deal with any other surgical condition that may be present.

Three cases are reported with symptoms of appendicitis having tenderness and muscle spasm in the right iliac fossa. A diagnosis of appendicitis was made in each case. In two, at operation a solitary tuberculous ulcer was found in the ileum, and a resection of the terminal ileum with appendectomy was done. The third patient, a boy ten years of age, was admitted to the hospital with a diagnosis of acute appendicitis. At operation the appendix was found to be moderately congested and was removed. The terminal ileum was greatly enlarged and congested. About nine inches of the ileum and the cecum and part of the ascending colon was resected. Grossly the lesion appeared to be tuberculous, but careful microscopic study showed the tissue to be simple inflammatory. All three cases made a satisfactory recovery.

The technic of resection of the terminal ileum is discussed. The method to be used depends largely upon the local conditions. The active peristalsis and the small amount of bacteria in the upper jejunum demand different methods of procedure from those indicated in the more slowly acting ileum whose contents are filled with bacteria. Thus, in the lower ileum it is important to use a technic which will prevent contamination, even though it gives a smaller lumen of the bowel, while in the upper jejunum with fewer bacteria the importance of an ample caliber dominates the situation. The technic of Kerr is excellent in many of these cases of resection of the lower ileum, but when there is much fat a lateral anastomosis should be done. If there has been obstruction or if the cecum and colon are included in the resection, an enterostomy with a soft rubber catheter seems indicated.

MECHANISM OF FORMATION OF SARCOMA

The mechanism of the formation of a tar sarcoma is explained by Alexis Carrel, New York (Jr. A. M.

A., June 13, 1925), in the following manner: When coal tar, or a principle resulting from the action of tar on some constituents of the tumors or tissues, affects cells in the process of division, such as embryonic cells or macrophages, a substance is formed which is analogous to that described by Rous. This substance, like the lytic principle of Twort, has the power of determining a special disease and eventually the death of certain cells, and at the same time of reproducing itself. Possibly there is no other relation than an analogy between the two phenomenon. But like bacteriophage, the filtered extract of either Rous or tar sarcoma determines within the cells of a phenomenon that reproduces itself indefinitely. Tar sarcoma appears to be a self-perpetuating disturbance of the metabolism created by the action on embryonic cells of a substance related directly or indirectly to coal tar. A similar phenomenon may bring about the formation of other tumors. It is possible that certain substances produced by bacteria and helminths, or resulting from roentgen-ray burns, determine in macrophages and other cells, as does coal tar, a disturbance that afterward propagates itself indefinitely. By a similar mechanism, the toxic substances normally present in the blood during adult life and old age might act on the dividing cells of an irritated area as does the serum of tar-injected chickens on embryonic pulp. This simple process might be responsible for the spontaneous production within the organism of malignant tumors.

CHEMOTHERAPEUTIC STUDIES IN RABIES

The studies made by Malcolm J. Harkins, Philadelphia (Jr. A.M.A., June 13, 1925), were conceived with the idea that possibly the use of some of the more recently used chemotherapeutic compounds might have an effect on the virus of rabies and also divulge a lead to the successful treatment of other diseases, the etiology of which is classified as an ultramicroscopic virus. Experiments were conducted on rabbits, fixed virus (rabbit medulla) being used for infection. All injections were made intracranially. When fixed rabies virus is suspended in a 1:200 dilution of sulpharsphenamin, 1:500 and 1:1,000 dilution of flumerin, and a 1:1,000 dilution of sodium-oxymercury-orthonitrophenolate, no germicidal effect was exerted within thirty minutes at 38 C., as evidenced by the production of symptoms and death when inoculated intracranially into rabbits. If the virus was influenced at all, it was not sufficient to prolong the incubation period, which was the same in the control and treated animals. No effect was observed following the injection of gentian violet, neo-arsphenamin, potassium bismuth tartrate, ethylhydrocuprein hydrochlorid, quinin and urea hydrochlorid or mercurochrome-220 soluble, either preventive or curative. No prolongation of the incubation period was noted even when some of the compounds were injected as early as from two to four hours after infection, and continued daily until death.

HIGH BLOOD SUGAR WITH ABSENCE OF SUGAR IN URINE

Ralph H. Major and Robert C. Davis, Kansas City, Kan. (Jr. A.M.A. June 13, 1925), have seen several patients who showed high values for blood sugar but nevertheless had no sugar in the urine. On several oc-

casions an attempt was made to lower the blood sugar by increasing the dose of insulin, with the result that they had a mild insulin shock. In treating these patients, the high blood sugar values have been ignored and the diet and dosage of insulin have been based entirely on the urinary findings. Such management has proved satisfactory, although several of the patients worry when their blood sugar is elevated, though they have no sugar in the urine. Two explanations of this condition are suggested. It is possible that in these patients there was an abnormally high renal threshold, this term being used in its present accepted sense. Another possibility is that through the action of the insulin the normal blood sugar is changed into some other substance not readily excreted, but which gives the same copper value as blood sugar. The practical lesson learned from the study of these patients is that the estimations of the urinary sugar have been a safer guide to therapy in this group of patients than the blood sugar determinations.

RUPTURE OF MUSCLES AND TENDONS

Edgar L. Gilcreest, San Francisco (Jr. A.M.A., June 13, 1925) says that a review of the literature reveals that comparatively little has been written in English on the important subject of rupture of muscles and tendons. He is convinced that these accidents occur more frequently than is generally supposed and that the condition is usually undiagnosed or diagnosed incorrect, resulting in valuable loss of time before operation. The order of frequency of rupture of muscles and tendons he believes to be: Achilles tendon, extensor quadriceps; biceps, and triceps of the arm; rectus abdominis, suprapinatus and the adductors of the thigh, trapezius, pectoralis major and minor. The etiology and mechanism that produces a rupture of a muscle or tendon is discussed. Many cases treated under the caption of sacro-iliac sprain or lumbago, Gilcreest believes, are really partial rupture of some of the deep back muscles or their fascia. The treatment is surgical, and if taken in time the prognosis is good.

SIGNIFICANCE OF HEMOPTYSIC ONSET IN TUBERCULOSIS

Two hundred and forty-five, or 8 per cent of the total number of patients admitted to the Trudea Sanatorium during a period of twelve years gave a history of hemoptysic onset, as reported by F. B. Trudea, Saranac Lake, N. Y., (Jr. A.M.A., June 13, 1925). The sputum was positive in 119, or 48.57 per cent. of these cases, while tubercle bacilli had been found in the sputum of thirty more patients reported, before they entered the institution. Counting in these thirty cases, 149, or 60.81 per cent of the 245 cases had positive sputum. In 171, or 69.83 per cent, of this series of hemoptysic onset cases, a confirmatory diagnosis was made in the roentgen-ray laboratory. Rales usually moderately coarse in character, situated in the upper half of either chest, and not clearing after cough, were present in 196, or 80 per vent of the cases of this series. Ten, or 4.08 per cent had had at some time a pleurisy with effusion which could not be explained by any cause other than tuberculosis. In following these 245 patients from one to twelve years after leaving the sanatorium and classifying them under

the headings of "well," meaning well and working for at least two years, "living" meaning either that they are still continuing their treatment or else that nothing more is known about them other than the fact that they are still living, "dead" and "unknown" it was learned that 114 are well; sixty-three are living; forty-seven are dead, and twenty-one were not heard from. The prognosis in this type of case is no better or worse than in any other mode of onset of this disease.

SOME EXPERIENCES WITH GAS INSUFFLATION OF FALLOPIAN TUBES

Of ninety-four patients on whom 115 carbon dioxid insufflations of the tubes (Rubin tests) were made by G. L. Moench, New York (Jr. A.M.A. June 13, 1925), up to four on the same patient, the result was that twenty-nine women were found to have closed tubes and sixty-five open tubes. Of the ninety-four patients, eighty-eight underwent insufflation more than three months ago; of these eighty-eight, thirty-three had closed tubes and fifty-five open tubes, and of the latter, seven later became pregnant. Not a single instance of pregnancy occurred in those patients who, according to tests, had closed tubes. Moench concludes that the carbon dioxid insufflation of the fallopian tubes is a valuable and safe test when properly carried out. The therapeutic value of the Rubin test is small, but real beyond a doubt, as shown by the fact that the tubes, after several carbon dioxid insufflations, often become more patent than before.

TWO DEATHS FROM ADMINISTRATION OF BARIUM SALTS

In a review of the literature from 1910, twelve deaths from barium carbonate, six deaths from barium chlorid and four deaths from barium sulphid poisoning were found by W. D. McNally, Chicago (Jr. A.M.A., June 13, 1925). He adds two cases of barium sulphid and barium carbonate deaths. Barium poisoning manifests itself by great weakness, salivation and nausea. Vomiting and diarrhea follow. The purging is very violent, and causes severe abdominal pains. At this stage, usually, the victim becomes very cold. There is a catarrhal affection of the conjunctiva, the mucous membrane of the respiratory tract and the nose. Paralysis of the extremities and finally of the trunk are succeeding developments. The muscles of speech become very weak early in the poisoning, and swallowing very difficult. Consciousness always remains to the end. Treatment usually consists of ingestion of magnesium or sodium sulphate, stomach lavage, hot bags around the abdomen and spine, stimulation with aromatic spirit of ammonia and strychnin injection. McNally urges that the barium sulphate given to patients for roentgen-ray examination should be only a chemically pure grade and be given by the person who is to make the examination. Each lot of barium sulphate should be tested for soluble barium compounds. In this way faulty prescriptions of physicians and careless dispensing by pharmacists would be avoided.

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Walter E. Vest, Huntington
C. A. Ray, Charleston
Harry M. Hall, Wheeling
} Associate Editors

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MINUTES OF COUNCIL MEETING

June 8, 1925

The meeting of the Council of the West Virginia State Medical Association was called to order by Chairman Linsz in room 101 of the West Virginian Hotel at 9:30 p. m. Members present: Drs. Linsz, Dunn, Ray, Vest, Ogden, Anderson, Maxwell, Steele; ex-officio, Drs. Jeffers, Nicholson, MacQueen, Bloss.

Dr. Bloss was appointed Acting Secretary by the chairman.

Chairman Linsz called for reports from the councillors of the various districts. Dr. Linsz reported for the First District, reporting this district in a very flourishing condition. Dr. Maxwell reported for the Second District, reported that the district had this year prospered. Dr. Ogden reported for the Third District, stating that this had been the most successful year in the history of the medical profession in his district. Some of the rural counties have not been organized. Dr. Vest reported for the southern section of the Fourth District, with a favorable report. Dr. Anderson reported for the Fifth District, with the exception of Mercer county. He reports that the profession is working harmoniously, and that the past year has been a successful one. Dr. Steele reported for Mercer county, in the Fifth District, and that the work had been prospering in this section. Dr. R. H. Dunn reported for the Sixth District, reporting his district in good shape.

Dr. Nicholson moved that Dr. Ray, chairman of the Committee on Public Policy and Legislation, read his report to the House of Delegates rather than to the Council, because of its importance and the length of the report. Seconded by Dr. Steele. Motion carried.

Dr. Ray as chairman of the committee to select an Executive Secretary, gave his report on the action taken by his committee.

To the Council of the West Virginia State Medical Association.

Your committee appointed to select, employ and install an executive secretary desires to report that after considerable correspondence with applicants for the position, we held a meeting in Huntington, September 1, 1924, at which all of the members of the committee were present. Mr. Sterrett O. Neale was employed at a salary of $250.00 per month, $100.00 per month allowed for a stenographer, an office was secured at 1013 Quarrier Street, at $25.00 per month and for office furniture, fixtures, filing cabinet, a typewriter, etc., approximately $600.00 was expended.

The Secretary's report will show what has been accomplished. This work was all new to Mr. Neale, and what has been done is all of his own initiative.

In order to promote greater efficiency in this office, your committee would recommend that sufficient funds be appropriated to permit Mr. Neale to visit Columbus for a period of two weeks to study the operation of the Ohio Medical Association under the direction of Mr. Don K. Martin, lay executive secretary, who has expressed his willingness to advise us of all the workings of his office.

Respectfully,

C. A. Ray, M.D., chairman.
J. Howard Anderson, M.D.
J. E. Rader, M.D.
J. R. Bloss, M.D.

Committee.

Dr. Dunn moved that the committee's report be accepted and that the committee be discharged with thanks. Seconded by Dr. Steele and carried.

Dr. Dunn moved that the Executive Committee of the Council be empowered to authorize such visits to other executve secretaries by the Secretary of the West Virginia Medical Association as might seem expedient for the best interests of his office. Seconded by Dr. Vest and carried.

Dr. Nicholson read the Treasurer's report for 1924. Chairman Linsz referred this report to the Auditing Committee for examination. The Auditing Committee appointed by Chairman Linsz: Drs. Ray, Ogden, Maxwell.

Dr. Bloss then presented his report as editor of the Journal for 1924. Dr. Dunn moved that the editor's financial report be referred to the Auditing Committee for examination. Seconded and carried.

Secretary Neale gave his report as Executive Secretary for the first five months of 1925, including a summary of the report of Dr. MacGregor for 1924. Chairman Linsz appointed a committee to report upon Secretary Neale's report, as follows: Dr. Vest, chairman, Drs. Steele, Dunn, Anderson and Ray.

As there was no further business to present to the council Dr. Ray moved that it adjourn, to meet at the call of the president. Seconded by Dr. Steele and carried.

EDITOR'S REPORT

Gentlemen:

The report of your Editor for the year 1924, is practically a repetition of those which have gone before.

It has been a very successful year for the State Association, and we feel that your Journal has been a better journal than ever in the past.

My financial report is attached. You will note that the Journal received from advertising and other sources $3570.90. This together with

a balance of $16.39, carried over from 1923, gives us $3587.30. The cost of publishing the Journal for the year 1924 was $3685.47, so you will see that during 1924, we had to call on the treasury for a little over $100 of the Journal's funds. This was necessitated by the increased cost of printing and binding of the Journal, and the fact that advertising fell off a little in volume.

You will note that the balance on hand after all the expenses of the Journal's activities for the year 1924 were paid, amounts to $301.83. This is covered by the Journal's check No. 179, of March 7, 1925, to Treasurer H. G. Nicholson, for this balance.

Your editor feels that this deficit will be changed into a surplus during 1925, as the new executive secretary devoting all of his time to the business affairs of the Journal has been already able to secure quite a volume of additional advertising. It is the hope of your editor that in 1926, we will be able to enlarge the Journal to a 6x9 page, and probably be able to increase it to a 75 or 80 page reading matter publication. This of course all depends upon the amount of funds available. If the individual members of the Association will put their shoulders to the wheel, West Virginia will have their Journal second to none. This, however, depends upon the individual efforts of our membership, and your Editor and business manager cannot do it unaided.

For the staunch support of the Council and House of Delegates, and the aid of you gentlemen in the years past, during my editorship, I wish to take this opportunity of thanking you.

For twenty years the welfare of the West Virginia Medical Association has been my earnest wish and effort. At the end of this period I feel that we are on the threshold of greater things in our organization.

I shall continue as in the past to respond with the best that is in me for our beloved association.

I must request of the Council that this year, when the time comes for you to select the editorial head of the Journal, that you please shall not consider my name. For ten years I have accepted your will that I should try to edit the Journal. I have proven to you I hope, and certainly to my own satisfaction, that the Journal can be published as an ethical one, and that it can be made one of the best of the state journals.

The time has come when my private practice has reached that point where it takes all of my time, and I find that in order to get the Journal out I must work after I reach home, frequently until two and three o'clock in the morning, before I am able to have the material in shape.

I wish to thank the members of the Council for their earnest and loyal support to me in my efforts for our Journal during the past ten years. It has been a labor of love on my part and I only wish that it were possible for me to find the time to devote to the work which the importance of the Journal of the West Virginia Medical Association demands.

I feel sure that you, as members of the Council, can appreciate my position, but I must reiterate my request that you do not in any way consider me as the editorial head of the publication for next year.

Respectfully submitted,

Jas. R. Bloss, M.D.,
Editor.

EDITOR'S FINANCIAL REPORT

WEST VIRGINIA MEDICAL JOURNAL

January 1, 1924, to December 31, 1924.

Balance carried over	$16.39	
Received from advertising and cash receipts outside subscriptions to Journal, extra copies, etc.	$3570.00	
Received from Treasurer	400.00	$3987.30

Ck. No.	1924 Date	1924 Issue	Printing Journal	Postage	Indexes	Supplies	
153	2-15	Jan.	$293.65	$6.42	$9.75		
154	2-15					$4.25	
155	2-17			5.00			
156	3- 3	Feb.	300.82	6.02			
157	4- 9	Mar.	297.82	6.04			
158	5- 5					1.70	
159	5- 5			5.00			
160	5-16	Apr.	301.78	6.14			
161	6- 6			5.00			
162	6-17	May	311.58	6.01			
163	7-15	June	294.12	5.91			
164	7-15					4.75	
165	8-15	July	287.45	6.10			
166	8-15					4.75	
167	9-22	Aug.	287.45	4.80			
168	9-22					4.25	
169	9-22	Sept.	287.50	5.84			
170	10- 3			5.00			
171	10-21	Oct.	285.00	5.89			
172	11-24			5.00			
173	12- 8	Nov.	286.23	4.22			
Total 1924			$3233.40	$88.39	$9.75	$19.70	
1925—							
174	1- 2			5.00			
175	1-16					6.50	
176	1-16				9.75		
177	1-16	Dec.	296.88	6.10			
178	1-16			10.00			
Total			$3530.28	$109.49	$19.50	$26.20	$3685.47
		BALANCE					301.83
179	3- 7	Check to Treasurer covering balance in bank account of Journal					$301.83

REPORT OF EXECUTIVE SECRETARY

January to May, inclusive

To the Members of the West Virginia State Medical Association:

Your Executive Secretary submits herewith a brief report covering the first five months of operation of the state office in Charleston.

Appended hereto are financial statements setting forth the condition of the state membership, the amount of money received from the State Treasurer and how it was expended.

Also attached is a statement setting forth the paid-up membership in 1924. Last year there were 1064 members in good standing on December 31. At the last state convention 935 members were reported paid.

This year at the increased dues of $10, a total of 915 members have paid up, this total being as of Saturday, June 6.

Acting under authority given Dr. C. A. Ray, chairman of the committee to install the secretary, an office was opened in Charleston the first week in January. The equipment was purchased with a view of taking care of the future and except for small additions as the scope of the association's activities is broadened, the present furnishings should last for years to come.

The financial statement will give some idea as to the volume of busi-

ness transacted in these five months. The postage alone totaled more than $159 and nearly all of this sum was devoted to the purchase of 2-cent stamps.

The designation of a layman as executive secretary has attracted attention in other states. Information relating to the work has been forwarded to Oklahoma and Minnesota.

Your secretary's office has co-operated with the secretaries of other state medical associations, with the officials of the A. M. A. and the Southern Medical Association.

Possibly blunders were made at the outset that would not have happened if your secretary had been more familiar with the office routine. However, we are intent upon reducing mistakes to a minimum. We have had the whole-hearted support of all members of the profession, all have been anxious to co-operate with us and especially is this true of the secretaries of component societies. The present condition of the membership is due entirely to the efficiency with which the secretaries have made their report to state offices.

The state office has been founded on the basis of personal service to every member. Already we have handled many requests covering many items ranging from investigation of workmen's compensation claim disputes to information as to how doctors may obtain alcohol withdrawal permits.

We hope to have more and more of these requests made because, after all, your secretary is the servant of the individual member and it is his duty to meet every request or to perform any service that may reasonably be demanded.

Respectfully submitted,
Sterrett O. Neale,
Executive Secretary.

FINANCIAL STATEMENT

Executive Secretary's Office
January 1 to May 1, inclusive.

RECEIPTS

January	$786.07
February	655.37
March	739.08
April	543.75
May	450 00
Total	$3,174.27
Balance May 31, 1925	29.70
Total expenditures	$3,144.57

DISBURSEMENTS

Salary Executive Secy, (five months at $250)	$1,250.00
Salary Stenographer	465.00
Office equipment	602.50
Rent	125.00
Postage	159.70
Printing	146.65
Telephone	77.08
Miscellaneous	67.65
Mimeographing	31.10
Telegraph	15.52
Total	$2,940.20
Traveling expenses	182.50
Incidental expenses	21.87
Total disbursements	$3,144.57

Respectfully submitted,
Sterrett O. Neale,
Executive Secy.

*Stenographer's salary item includes $100 a month for four months to Miss Ida MacQueen, who resigned; $15 for eight days part time work, Miss Mary Elizabeth Thayer; $50 for one-half month Miss Vondea Hamilton.

FUNDS RECEIVED AND FORWARDED TO STATE TREASURER

June 2, 1925.

Date	No. Members	Amount
February 2	61	$605.00
February 20	131	1317.00
March 3	48	480.00
March 25	137	1368.00
April 13	73	731.00
April 22	194	1946.00
May 1	157	1582.00
May 29	63	625.00
June 5	48	483.00
Total	912	$9137.00

EXPLANATION

Nine hundred and twelve members at the normal fee of $10 would have paid in $9,120.00. However, two members had paid $5.00 each in advance and 28 did not pay the medical defense fund fee of $1 each. Thus $38 is subtracted from $9,120.00, leaving a total of $8,082.00.

Added to this sum is $55.00, representing the dues of 11 delinquent members at $5 each, giving the above total of $9,137.00.

MEMBERSHIP STATUS

West Virginia State Medical Association, as of June 6, 1925.

Total number paid-up members	913
Reported to State Treasurer	912
Amount	$9,137.00

MEMBERSHIPS BY COMPONENT SOCIETIES

	No.	Delinquents
B.-R.-T.	34	10
Brooke	10	4
Cabell	82	7
Doddridge	4	4
Eastern Panhandle	19	12
Fayette	37	19
G.-H.-H.-M.	26	2
Greenbrier Valley	21	2
Hancock	12	2
Harrison	76	3
Kanawha	86	31*
Lewis	17	3
Little Kanawha & Ohio Val.	48	9
Logan	25	2
Marion	56	1
Marshall	29	10**
McDowell	40	12
Mercer	46	12
Mingo	23	3
Monongalia	43	3
Ohio	96	8?
Preston	9	8
Raleigh	31	11
Ritchie	12	0
Taylor	13	2
Summers	13	0
Upshur	5	3
Webster-Nicholas	3	8
Total	916	190

*Includes honorary members of county society.

**Includes honorary members of county society.

?Includes honorary members of county society.

MINUTES OF THE COUNCIL

Friday, June 12, 1925

A special meeting of the Council was called by the President, Dr. H. P. Linsz. At the meeting Dr. Linsz was re-elected president of the Council, and was thereby made chairman of the Executive Committee of the Council.

Two reports were submitted from special committees of which Dr. W. E. Vest was chairman.

The reports read:

"Your committee wishes to report that the accounts of the Executive Secretary have been audited and found correct.

Respectfully submitted,
WALTER E. VEST, chairman.
J. HOWARD ANDERSON,
RAYMOND H. DUNN,
HARRY G. STEELE,
C. A. RAY,
Committee.

"Your committee wishes to commend the Executive Secretary on his work and report for the first five months of his incumbency.

Taking into consideration his suggestions and those of the editor, we recommend the following changes relative to the Journal:

1. That the size of the printed page be increased to the standard size, that is 6x9 inches, effective January 1, 1926.

2. That the Publication Committee be increased to five members and that the scientific material to be published be submitted to each member until a majority of the committee has approved each article offered for publication.

3. That the chairman of the Publication Committee be ex-officio editor of the Journal; and the remaining members be associate editors.

4. We would especially urge that the component societies exercise more diligent efforts to have the proceedings of their regular meetings more fully reported promptly, as this is one of the chief functions of a State Journal and is productive of sustained interest on the part of the individual members in the Journal and the State Association.

5. We would further urge that the individual members submit for news notes all clippings relative to members of the association and of interest to the profession in general.

Respectfully submitted,
WALTER E. VEST, chairman.
C. A. RAY,
J. HOWARD ANDERSON,
RAYMOND H. DUNN,
HARRY G. STEELE,
Committee."

The Council then adjourned sine die.

MINUTES OF THE HOUSE OF DELEGATES, WEST VIRGINIA MEDICAL ASSOCIATION

Fifty-eighth Annual Session at Bluefield, W. Va., June 9-12, 1925.

The annual session of the House of Delegates convened Monday night, June 8, in the West Virginian Hotel at the conclusion of a meeting of the council, with the president, Dr. G. D. Jeffers, of Parkersburg, presiding. Upon motion of Dr. C. A. Ray of Charleston the session was adjourned to re-assemble June 9, at the close of the scientific program of the afternoon session.

Tuesday Afternoon, June 9

The House of Delegates met in the assembly room of the West Virginian Hotel at 5 p.m. with President Jeffers presiding. The roll was called by the executive secretary. The report of the committee on scientific work was called for by the president and Dr. D. A. MacGregor of Wheeling, scientific secretary, presented the program as his committee's report.

The report of the committee on publication was read by Dr. J. R. Bloss of Huntington, editor of the West Virginia Medical Journal, and was received on motion of Dr. H. P. Linsz of Wheeling.

Dr. C. A. Ray presented the report of the committee on public policy and legislation which was accepted.

The report of the executive secretary, Sterrett O. Neale of Charleston, covering the first five months of 1925 was then read. No action was taken because this report already had been referred to a special committee of the Council of which Dr. Walter E. Vest of Huntington was chairman.

The treasurer's report was presented by Dr. H. G. Nicholson of Charleston and accepted.

The treasurer's report was the cause of a suggestion from Dr. C. O. Henry of Fairmont, that the members who do not attend the meeting should be informed through the Journal as to the value of the Medical Defense Fund and the Indigent Fund. Dr. Bloss stated that the treasurer's report in full, has been printed in the Journal each year for the last ten years.

The secretary then read the following recommendations to the House of Delegates from President Jeffers:

"It is commonly accepted that a medical society should educate its members by scientific papers and discussion; that it should care for the interests of its membership in respect to medical legislation; that it should be active in matters concerning public health; that it should, in greater or less degree, interest itself in the economic welfare of its members. This is as far as most medical societies have attempted to go and to this extent these activities have been of notable benefit both to the profession and to the public. In spite of this, there has been and now is a great gap between the profession, individually and collectively, and the public and public agencies that needs to be bridged.

"In few societies is there a committee whose duties it is to care for that contact of general nature which might be called 'professional relations' between the members of the society and the various civic and welfare organizations, the hospital, the courts, the corporations, the municipal and state governments, the industrial bodies and commissions and the score of lesser institutions, agencies and individuals whose contact with the profession needs such clarifica-

tion, direction, advice, and support as only an official committee can give. Points of ethics, of privilege and of law are continually coming up that need the careful consideration of such a committee. The co-operation brought about in such matters lights the way for both sides, promotes a feeling of interest and authority pleasing to all concerned and gives a standing to the profession that we are earnestly desirous of obtaining. Such a committee will have a tendency to keep in the straight and narrow path the membership of the society and is a court to which members may refer their doubts and ethical troubles with the confidence of receiving sympathetic, wise and authoritative advice.

"The membership of such a committee, it goes without saying, should be such that its motives, actions and activities will carry respect and influence. It should be composed of men old enough to have had experience, of a judicial temperament, without a connection that might be questionable, of a constructive disposition and with sufficient rigidity of spine to follow the dictates of their judgment. There is no place on the committee for a lazy man, a four-flusher, a player to the galleries or a radical.

"Such a committee, starting out probably as simply a "grievance committee' will rapidly see the openings for constructive work of the utmost importance to the organization. The opportunity is everywhere present for such a committee to become one of the most important and influential operating units of the society. Properly established and functioning, with an over-lapping of personnel from year to year to insure a continuity of policy, acquaintance with organizations and familiarity with problems the 'Professional Relations Committee' will, as it already has where instituted, fill a vacant place in our organizations, and the bridge between the profession and the laity will be a much traveled and trusted thoroughfare not to be abandoned.

"Let us have a committee on professional relations composed of five members, each serving terms of five years overlapping as I have suggested.

"Let each component society have a similar committee composed of three members, each serving overlapping terms in like manner of three years.

"It will be the duty of the local society's committee to function with the parent committee.

"Let these various committees assist the public policy and legislative committee in every way possible.

"We have noted for several years that constructive medical bills, although energetically pushed in the legislature, have so far been defeated. It seems to us that the causes of failure are these:

"The physicians themselves have not had the unity of purpose which makes for success. This, it seems, could be brought about by sustained, systematic and concise presentation through our state journal.

"The public has not been taken sufficiently into the confidence of the medical profession. This could be accomplished by well-selected newspaper articles throughout the state, repeated in idea from time to time.

"In the midst of confusion our legislators have been suddenly asked to vote for a bill the actual text of which they probably never have studied, and as to the reasonableness and purport of which they have only vague

ideas. They should therefore be in possession of a copy of the ideal bill long before the legislature meets.

"The various campaigns have not been started far enough ahead. Time for education in such campaigns is a valuable factor. Plenty of commendable energy has been employed but it has been concentrated upon the immediate period that the legislature is in session.

"In order that these things may be accomplished it would seem better to plan a campaign commencing far ahead of the convening of the 1927 legislature, proceeding by definitely calculated steps of co-operation and education.

"We suggest that the October 1925, number of our State Journal carry an article by our state public policy and legislative committee, this article to set forth (a) that the committee is preparing a bill for the next legislature; (b) that this bill is being framed unhurriedly and with great care; (c) that those interested should write to the chairman of the state public policy and legislative committee so that all ideas of merit can thus come to a central source and receive proper recognition.

"This and subsequent articles in January, April and July issues would accomplish more if accorded a prominent place in the Journal and printed in the usual large type. Let this continue until after the next session of our legislature convenes.

"By October 1926, we will know just what we desire along this line. Immediately following the general elections in November 1926, send to each senator and member of the house of delegates elected a full report of our findings. Continue sending our educational program every ten days until the legislature convenes in January, 1927.

"In the meantime our committee on professional relations will have ample time to investigate the many un-professional acts that are continually going on in our ranks. If the members refuse to walk the straight and narrow path and continue to be un-ethical and a disgrace to our profession, they should be forever banished from our society.

"Before each annual meeting of our state association a complete report must be made by every local society committee to the parent committee and then at the state meeting, the parent committee will make a full report to the council."

Dr. Bloss moved that these recommendations be referred to the committee of the council which is to consider the executive secretary's report of which Dr. Vest is chairman. This motion was carried.

Dr. C. A. Ray introduced the following resolution, stating that another member was to have introduced it but was absent. It reads:

"Whereas, the West Virginia State Medical association is assembled in its 58th annual session in Bluefield, and,

Whereas, the recent session of the West Virginia legislature passed a law licensing a cult known as chiropractors to treat the sick and afflicted men, women and children of West Virginia, and,

Whereas, the governor of West Virginia allowed this bill to become a law as the result of his refusal to disapprove the same, and,

Whereas, we physicians know that the above named cult is an unscientific, untrained and unsound aggregation of commercialists, and,

Whereas, we know that this or any other untrained cult that proposes to treat the sick human body upon any

other than a proven, scientific basis to be a distinctly dangerous menace to the public health, and,

Whereas, the profession of West Virginia left no reasonable thing undone to inform both our legislature and our governor that to license the above cult was an outstanding menace to the public health, and especially to that class of our citizens that have no voice in the selection of medical aid themselves; therefore in view of the above mentioned facts and many unmentioned,

Be It Resolved, that the House of Delegates of the West Virginia State Medical Association now in session does go on record with all of the emphasis at our command condemning the actions of our state government, both legislative and executive, for the part that each played in inflicting this ignorant and incompetent cult upon the sick people of West Virginia under our state government's stamp of approval. We recognize in our state legislature a body of men, the majority of whom have been false to the trust of their constituency, with their health and lives their greatest treasure. If these men were not false they were most assuredly unpardonably ignorant, too thick-headed to be taught, inconsistent and ungrateful. Past experience has taught us not to be surprised at finding all manner and kind of bipeds in our legislative menagerie.

We did however, believe that there is a safety valve between this menace and the health of the sleeping, slumbering public, in the person of our governor. We trusted him as an educated, conscientious man, who, at least had as much interest in the health and lives of the citizens of West Virginia as he had in the live stock of West Virginia. As a last resort we appealed to him to save the people of West Virginia from its legislature, using the same implements of protection in behalf of the public health as he used to prevent black eyes when he vetoed the boxing bill. We regret very much that we cannot give our governor credit for being fair with the medical profession of West Virginia in this matter. It is a more serious thing, however, for us to be forced to believe him to be unmindful of the public health.

We understand that the governor of West Virginia is primarily a farmer, and much interested in the promotion of the live stock industry in West Virginia. We believe if he wished to be entirely consistent that he would have recommended in his message to the legislature a chiropractic department in the veterinary school of the West Virginia University. Without fear of being called we venture the assertion that he has not recommended chiropractic treatment to the farmers of West Virginia for hog cholera, black leg in cattle, or pneumonia in horses. At the same time by his inaction he has permitted the state stamp of approval to be placed upon this method of treatment for the farmers' children with Diptheria, scarlet fever, typhoid fever, appendicitis and every other human ailment that the chiropractic cult has learned the name of.

Consistency thou art a virtue conspicuous by your absence in our present state government. As for our state health department we are indeed sorry to note that there is quite a wide-spread and general feeling among the doctors of West Virginia that the public health council, and especially Secretary Henshaw showed a disposition either to do nothing to prevent this legislation or quietly assisted in its passage. We particularly deplore that this feeling exists with the medical profession of the state toward our state health department. It is the West Virginia Medical Association, not the state legislature, nor the present state health department, that is primarily responsible for the building up of the health department of West Virginia to compare favorably with that of other states. This association has for many years spent a great deal of time and hard work trying to place our profession and our state health department on the high plane that it should occupy. It is a distinct loss to the

state and to the state health department to have anything happen that would tend toward breaking down the most co-operative spirit possible between the medical profession of the state and the state health department. Lost confidence being one of the greatest barriers to successful co-operation, we trust that any lost confidence between our state health department and the medical profession of the state may be rapidly restored."

Dr. Ray moved adoption of the resolution.

The resolution was discussed by Drs. J. Howard Anderson, John Thames, William Goff, A. G. Rutherford, and C. H. Maxwell. On motion of Dr. Thames, the resolution was then tabled.

The secretary read a letter from Dr. Wm. C. Woodward of the American Medical Association referring to the chiropractic bill, and also a letter from Dr. Woodward in regard to tax reductions. These were referred to the committee on public policy and legislation.

On motion of Dr. Bloss, the House of Delegates adjourned, to meet after the evening session.

NIGHT SESSION

Tuesday, June 9, 1925

The House of Delegates met in the assembly room of the West Virginia Hotel at 11 p.m. after the adjournment of the evening session, and was called to order by the president.

Dr. Vest read the report of the committee which had been instructed to consider the recommendations of the president, and then reported that this committee recommended the printing of the constitution and by-laws so that each member might be furnished with a copy.

The two reports read:

"Your committee on the recommendations of the president to the House of Delegates with reference to authorizing the constitution of a standing committee on professional relations would recommend the following:

1. That such a standing committee be authorized in accordance with the president's recommendation.
2. That this committee be chosen as provided for standing committees by the constitution and by-laws of this association.
3. That the first committee be elected by the 1925 House of Delegates to begin functioning January 1, 1926, one member to serve one year, one member to serve two years, one member three years, one member four years, and one member five years, the term of each to be determined by lot.
4. That we recommend to the component societies that a like committee of three be constituted for each local society in accordance with the president's recommendation.

Respectfully submitted,
WALTER E. VEST, chairman.
J. HOWARD ANDERSON,
C. A. RAY,
HARRY G. STEELE,
RAYMOND H. DUNN,
Committee."

Your committee would recommend that a new edition of the constitution and by-laws with all amendments thereof be published and a copy furnished each member of the state association; that every member may inform himself concerning the rules and regulations governing the association.

Respectfully submitted,
WALTER E. VEST, chairman.
J. HOWARD ANDERSON,
C. A. RAY,
RAYMOND H. DUNN,
HARRY G. STEELE,
Committee."

Dr. Vest stated that the same committee had been appointed by the council to consider the State Medical

Journal, and that the committee felt that the House of Delegates should be informed as to this matter. For this reason he read the report which is to be presented to the council, as information. The report recommended that the size of the Journal be increased from a 5x8 type page to a 6x9 type page, this recommendation being in line with the suggestions of the editor, Dr. Bloss, as contained in his annual report and also the statement of the executive secretary covering his first five months as business manager of the Journal. On motion of Dr. Thames, the report of the committee was received and their recommendation adopted, with thanks to the committee for submitting, as information, the report to the council.

Mr. M. W. Dickey of Pittsburgh, representing the Lumbermen's Mutual Casualty Company of Chicago, Ill., was introduced by the secretary. Mr. Dickey explained the system by which automobile insurance carried by the members of the medical society of Virginia is written through the secretary of that state medical society, and presented a proposition for similar insurance for the members of the West Virginia Medical Association. Mr. Dickey spoke as follows:

"Our company, on account of the good experience they have had with the medical profession, has been able to refund to the doctors of the state of Virginia between 25 and 30 per cent of their premiums for automobile insurance. In addition, we have been paying the state secretary ten per cent of the gross receipts for his work in corresponding with the doctors, etc., in arranging for this insurance. My understanding is that if this proposition is accepted by your association, the business in West Virginia will be combined with that in Virginia, and as soon as the volume of business warrants it—say perhaps $50,000—the company will refund to the members of the association the dividends earned. The policies will cover fire, theft, property damage, public liability and collision insurance. The rates depend largely upon the population in the place where the car is operated, the rates for a large town, of course, being higher than those in rural districts."

Mr. Neale stated that the members would pay the same rate they now pay for their automobile insurance, these rates being uniform in all companies, but at the end of the year the dividend warranted would be applied on the premium for the next year or paid in whatever form desired. In addition, the company would pay ten per cent to the association (ten per cent of the gross premium receipts) which would be used to pay for the additional equipment and office help needed for carrying on the work of arranging for this service to members. Mr. Dickey explained, in answer to a question by Dr. Ray, that this ten per cent would be turned over to the secretary's office, probably monthly, as the premiums are paid in.

In answer to a question as to how soon after application this insurance could be obtained, Mr. Dickey said that Mr. Neale would be constituted an agent of the company and could furnish, upon application, a letter which would guarantee coverage from date desired.

Dr. Bloss moved that a committee of three be appointed to consider this matter, of which Dr. Nicholson and Dr. MacQueen be two members. This

motion carried, and the president appointed Dr. Vest as the third member.

After a few moments consultation with the other members, Dr. Nicholson reported that the members of the committee had previously given the matter considerable study, and that Dr. Vest had already been carrying this insurance as a member of the Medical Society of Virginia. The committee recommended that the proposition be accepted, and that in renewing their automobile insurance the members of the association take it out in the Lumbermen's Mutual Casualty Company through the executive secretary's office.

The report of the committee was accepted, on motion of Dr. Vest.

The House of Delegates then adjourned to meet at the call of the president.

Friday, June 12, 1925.

A meeting of the House of Delegates of the West Virginia Medical Association was called to order at 8:00 a.m. in assembly room No. 1, West Virginian Hotel, the president, Dr. G. D. Jeffers, presiding. In the absence of the executive secretary, Dr. W. E. Vest was named temporary secretary of the meeting. The roll call of the component societies showed a quorum present. The first order of business was the election of officers.

Dr. R. A. Ashworth nominated Dr. James R. Bloss of Huntington, for president. The nomination was seconded by Dr. Wm. H. Wallingford. Dr. G. A. MacQueen moved to close the nominations and make the election of Dr. Bloss unanimous. This was duly seconded and carried, and Dr. Bloss was declared president-elect of the association.

Dr. Raymond H. Dunn nominated Dr. R. O. Rogers of Bluefield, for first vice-president. The nomination was seconded by Dr. D. M. Ryan. On motion of Dr. C. O. Henry, duly seconded the election of Dr. Rogers was made unanimous.

Dr. A. P. Butt nominated Dr. H. C. Skaggs of Montgomery for second vice-president. This was seconded by Dr. G. A. MacQueen. On motion duly seconded, Dr. Skaggs was unanimously elected.

For third vice-president and scientific secretary, Dr. D. A. MacGregor of Wheeling was nominated by Dr. W. E. Vest. The nomination was seconded by Dr. Harry M. Hall, and on motion, duly seconded and carried Dr. MacGregor was unanimously elected.

Dr. Hugh G. Nicholson of Charleston was nominated by Dr. H. P. Linsz for treasurer. The nomination was seconded by Dr. R. A. Ashworth. On motion duly seconded Dr. Nicholson was elected by a unanimous vote.

The following councilmen were unanimously elected:

First District: Dr. C. G. Morgan upon nomination of Dr. H. M. Hall.

Second District: Dr. C. H. Hall upon nomination of Dr. J. A. Arbuckle.

Third District: Dr. C. R. Ogden upon nomination of Dr. H. P. Linsz.

Fourth District: Dr. W. E. Vest upon nomination of Dr. R. B. Miller.

Fifth District: Dr. Harry G. Steele upon nomination of Dr. H. P. Linsz.

Sixth District: Dr. C. A. Ray upon nomination of Dr. G. A. MacQueen.

The only other nomination for the council was Dr. C. W. Post, who was nominated for the vacancy in the Third District, but under the consti-

tution and by-laws his name could not come before the House of Delegates as he was not present at this meeting of the association.

Upon nomination of Dr. C. R. Ogden, Dr. H. P. Linsz was elected delegate to the A. M. A. and Dr. R. A. Ashworth was named as alternate.

Dr. John N. Simpson invited the association to meet in Morgantown in 1926. Dr. A. P. Butt extended an invitation on behalf of White Sulphur Springs. After considerable discussion a standing vote was taken and the result was that twenty-three delegates voted for the meeting to be held in Morgantown and seventeen in White Sulphur.

The committee on professional relations was then elected, consisting of Dr. H. R. Johnson, Dr. Hugh G. Nicholson, Dr. J. R. Shultz, Dr. Wm. Goff and Dr. A. G. Rutherford. Lots were cast and by this method Dr. Nicholson was allowed the one-year term, Dr. Johnson the two-year term, Dr. Shultz the three-year term, Dr. Rutherford the four-year term and Dr. Goff the five-year term.

Upon motion from the floor, Dr. James McClung was added to the committee on public policy and legislation.

The following were elected to honorary membership and the executive secretary was instructed to notify each of his election: Dr. W. S. Grimm, St. Marys; Dr. A. N. Frame, Parkersburg; Dr. Sidney Staunton, Charleston; Dr. J. M. McConihay, Charleston; Dr. I. C. Carlisle, Charleston; Dr. P. H. Killey, Vivian; Dr. J. W. Rickey, Moundsville; Dr. M. A. Dowler, Glendale; Dr. W. C. Kelly, Morgantown; Dr. A. H. Carr, Bluefield; Dr. Thos. M. Calvert, Mannington.

Dr. J. H. Anderson, chairman of the committee appointed to consider the paper presented by Dr. J. R. Shultz, presented the following resolution:

"We, the committee, to whom was referred the paper on Ethical Silence vs. Rational Publicity, presented by Dr. J. R. Shultz, do hereby heartily endorse it as one of exceptional merit and emphatically sanction the sentiments expressed therein.

After careful review of same and deliberation over its contents, we wish to submit the following recommendations:

First: That a publicity committee of three be appointed by our president, the executive secretary of the association being chairman of said committee.

Second: That each one of the component societies of the State Association elect a local publicity secretary who shall co-operate with above named committee.

Third: That the chairman of this committee shall call upon the local publicity secretaries monthly, for suitable material of both local and general interest to be used by this committee.

Fourth: That said publicity committee be empowered to assemble, edit, censor and add to the material thus obtained, and the executive secretary shall release the same, at weekly intervals for publication in the various newspapers throughout the state.

Fifth: That in this manner a series of educational health articles be released by the publicity committee over the signature of the West Virginia State Medical Association, and that the expenses incident thereto, not to exceed $1,000 the first year, be authorized to be drawn from the general funds of the association.

Sixth: That a detailed report of the activities of this committee and clippings of the material thus published be submitted by the executive

secretary to the House of Delegates of our association at our next annual meeting.

We further recommend that the executive secretary be empowered to issue a larger and more ornate certificate of membership, so designed that it will be suitable for framing and that each member be requested to frame and display this certificate in his office, thereby permitting the public to know said individual is a "bona fide" member in good standing in the West Virginia State Medical Association.

Respectfully submitted,
J. HOWARD ANDERSON,
chairman.
H. R. JOHNSON,
D. A. MACGREGOR,
Committee."

This resolution was discussed at length by Drs. C. H. Maxwell, W. E. Vest, H. G. Steele and James R. Bloss.

Dr. Bloss moved that the report of the committee to report on Dr. J. R. Shultz's paper be accepted and that it be referred to the Committee on Professional Relations; and that the latter committee be empowered to expend a sum not to exceed $1,000 for the first year, for the purpose of providing material for use in an educational campaign in the newspapers in West Virginia during the year 1926.

This motion was seconded by Dr. G. A. MacQueen and was carried unanimously.

Dr. H. P. Linsz offered a resolution providing that anyone having a paper on the program and not appearing, not sending his paper or not offering sufficient excuse should not be allowed to appear on the program for a period of two years. Carried.

Dr. Linsz offered a resolution endorsing the Gorgas Memorial which was unanimously adopted. A necrology committee was appointed consisting of Dr. H. G. Steele, Dr. C. R. Ogden and Dr. H. M. Hall.

Dr. R. A. Ashworth presented the following resolution on the president's address:

"To the Council and House of Delegates:

The committee on the president's address begs to report as follows:

We heartily concur and agree in all of the suggestions and recommendations contained in the president's address and advise that the association take the necessary steps and do all the other things required in progress toward the goal as indicated in the keynote message. Especially do we favor the early recognition by this association of the fact that humanity and human welfare will still be its chief concern and that it must broaden its field of activities to include the market places, the halls of legislation, the direction of education and the union of all endeavors and efforts for the ideals of human happiness.

Respectfully,
R. A. ASHWORTH, chairman.
C. R. OGDEN,
Committee."

This resolution was unanimously adopted.

Dr. Roy Ben Miller, chairman said that the committee on hospitals had no report to make.

Dr. A. P. Butt moved that the executive secretary be instructed to extend to the drug stores, the newspapers, the hotel management, the country club, Dr. Thomas E. Peery for the roof garden entertainment, all those who assisted in the entertainments on the program, and especially the Mercer and McDowell County Medical Societies for the entertainment so generously provided, the thanks of the association. Carried.

Dr. S. B. Lawson of Logan, introduced the following resolution (in regard to examining chiropractors):

"Whereas, the state legislature in recent session has seen fit to admit the chiropractors to our board of health council,

Therefore Be It Resolved, that such action lowers the standing of our profession in the eyes of other medical associations and state examining boards, and,

Therefore Be It Further Resolved, That it is the sense of this association that no member of the W. Va. S. M. A. shall accept a position or act in the capacity of an examiner for the license to practice chiropractic in West Virginia."

Dr. C. A. Ray moved its adoption. Motion seconded. This motion was discussed by Dr. R. C. Hood, who read sections from the chiropractic bill, and by Dr. H. G. Steele. The motion was then tabled (one vote against tabling.)

Dr. Ray spoke as follows: "I simply get up to express my sentiments. When any man appointed to this position by the governor stands up and says he will not prosecute a violator of the law, I am against him. If Henshaw were here I should tell him so. (Applause.)

Dr. Steele: "Some men are accusing Henshaw of having something to do with the bill. I asked him the other night, and he said he had not a thing to do with it. There is something wrong somewhere. Don't let's lose our heads; don't let's get hotheaded. If you want to, appoint a committee to investigate it."

Dr. Ray: "You could not have heard the report of the committee on public policy and legislation."

Dr. MacQueen: "We have made more noise during this meeting than there was any reason or sense for making, and have gotten nowhere, and have done nothing and said nothing. We get out and talk to each other, but when it comes to speaking out about the way we feel about this thing, and assuming the responsibility for what we say, we are a bunch of pussyfooters. We were a bunch of pussyfooters during this whole chiropractic fight, or else the thing would not be up here. I want to say that I believe Dr. V. T. Churchman and myself are responsible for Dr. Henshaw's being president of the State Health Council. I said in my presidential address in 1922 that we ought to be thankful for having an old rock-ribbed Abe Lincoln type of man like him for president of our state board of health, and I meant it and I felt that way. I am a democrat, and Dr. Henshaw is a republican, so politics do not enter in. Dr. Henshaw did not stand behind the organized profession in their fight against this bill. I was at the meeting before the senate committee on health and sanitation, and I remember very well his attitude, and what he said and what he did. I feel kindly personally toward Dr. Henshaw, and have no fight in the world against him. Now, we are either going to make a fight or quit. Which is it? ("Fight.") Dr. Steele got up and said he knows something. Now, if you know anything about this matter get up and speak it out. Don't infer that you have some inside information unless you are willing to come out with it. I do feel that the association has a grievance. I do not know how Dr. Henshaw is going to square himself and his action with the association. I hope he can do it. I feel that it is a deplorable thing for the state if we have dissention between our public health council and its executive officer and the medical profession of the state, because there can be no organized health effort in the state that will be successful with-

out the co-operation of all three. If there is trouble, if there is a misunderstanding, if there is a wrong, or if it is rotten somewhere, let's get the rotten out, but if it is a mistake let's correct the misake and let our people have the benefit of having this big, strong body of medical men standing behind the health council and supporting it. I don't want to jump to conclusions; I don't want to accuse a man wrongly. Let's step out in the open and call a hoe a hoe and a spade a spade. Now, how can any self-respecting doctor accept a position or sit on the public health council, under the laws of West Virginia as they are written today, with a couple of chiropractors on the council? I should like to see inside the soul of the man who could do it. I have gone to twenty out of the last twenty-one meetings of this state association, and I tell you I don't want to sit in this association again, and I will not, with a man who will sit on the public health council with two chiropractors.

Dr. Bloss: "George, it is Dr. Henshaw you are after, isn't it? Dr. Henshaw has not enforced it and says he will not. Would you offer a resolution that the governor see to the literal execution of the provisions of this law, and if the present secretary of the state health council will not enforce that law, the governor ask for his resignation?"

Dr. MacQueen: "Yes, I will. But let me correct myself before this meeting. It was before this chiropractic law passed, when we were in the fight, that Henshaw told me he would not attempt to enforce the law against these chiropractors that were then practicing medicine in violation of the law, in accordance with the decision of the supreme court of West Virginia. He did not tell me that he would not attempt to enforce this new law but I should infer that if an officer would not enforce one law in the line of his duty, he would not enforce another."

Dr. Bloss offered the following resolution, and moved its adoption:

We, the West Virginia Medical Association, in 58th annual session in Bluefield, W. Va., June 12, 1925, offer the following resolution:

Whereas, a bill licensing the practice of chiropractic has been passed by the state legislature; therefore,

Be It Resolved, that we, the West Virginia Medical Association, respectfully request the governor of West Virginia to see to the enforcement of the literal execution of all of the provisions of this bill, and,

Be It Further Resolved, that we request the governor to ask for the resignation of the present state health officer if that be necessary in order to accomplish this end.

The motion for the adoption of the above resolution was seconded by Dr. Lawson, and carried.

Dr. MacQueen offered the following resolution:

Resolved; That it is the sense of the West Virginia Medical Association that no man in the profession should accept a position on the public health council of the State of West Virginia under the present laws, whereby he will be forced to be put on a level with and associated in that public office with two chiropractors, that we deem it beneath our dignity and a reflection upon an honorable profession, and that we will refuse absolutely to serve in such capacity.

No second to motion to adopt this resolution.

The president announced that the Medical Society of the State of Pennsylvania had extended an invitation to the West Virginia Medical Asso-

ciation to send a delegate to the Diamond Jubilee Meeting of the Pennsylvania State Society at Harrisburg.

Dr. H. P. Linsz was elected as delegate to this meeting.

The House of Delegates then adjourned sine die.

REPORT OF THE COMMITTEE ON LEGISLATION AND PUBLIC POLICY OF THE W. VA. STATE MEDICAL ASSOCIATION.

Submitted at the 58th annual session in Bluefield, W. Va.

Your committee on legislation and public policy regrets very much to report the failure to secure enactment of any laws in the 1925 legislature beneficial to the public health or our profession.

Several bills, written and introduced by members of the profession, were neglected and lost sight of in the effort to defeat the obnoxious chiropractic bill which was passed. Another cult measure failed of passage solely for want of time.

We started early in the campaign last year in an effort to nominate men and women as representatives in the legislature who would take an interest in the welfare and health of the public, but this effort also was utterly futile.

This report is not worth your time for its reading except that you may know the expense incurred thereby in considering your annual reckoning.

First, a copy of measures we proposed to introduce was mailed to every doctor and member of the legislature in West Virginia, with a request to confer with each other before the legislature convened. We are informed that many promises were made only to be broken when the time came for the test.

We were accorded a hearing by the senate committee on medicine and sanitation on senate bill No. 260, at which the cause of the public was presented by a number of Charleston physicians and Drs. Hall, Hoge and Armbrecht, who came from Wheeling for the purpose.

At various times thereafter we communicated with all the doctors of the state by letter, telegrams and telephone calls, and our many requests were fully and promptly complied with by all members of the profession for which we desire to express our thanks and appreciation.

Many delegations of doctors from different parts of the state came at our request to confer with their representatives. Much effective work was done in turning the spotlight of truth on the legislative situation.

Petitions with thousands of names, letters and telegrams by hundreds, but they seemed only to have had the effect of convincing a majority of the members of individuals who should be chastised.

After senate bill No. 260, the chiropractic bill, was passed by the senate by a vote of 18 to 9 on April 1, it was railroaded through the House of Delegates without reference to the committee on medicine and sanitation and was passed by that body by a vote of 51 to 33 on April 14.

Defeated in the legislature apparently because the majority of members of both houses apparently did not want to seek the facts, we then turned to Governor Gore as a last resort, hoping that he would veto it. Governor Gore granted a conference and a delegation of more than fifty doctors, representing virtually every county in West Virginia, and headed by President Jeffers, met him at his office.

Dr. J. N. Simpson of Morgantown, was chosen spokesman for the delegation. He outlined the dangers and fallacies of the bill. Governor Gore talked very nicely to the delegation without commiting himself. He said the bill had not reached his desk and that he had not read it at that time.

However, he said that when the bill did reach him and he had time to consider it, he would like very much to have a committee of four or five doctors chosen to whom he could turn upon short notice to go over the measure with him.

The delegation then and there designated Dr. Ray chairman of this special conference committee and empowered him to select his colleagues. Governor Gore was notified by letter and the chairman and committeemen awaited the call from the governor.

The call never came!

The bill was allowed to become a law without his signature through expiration of the time limit.

We are informed that the governor's reason for refusing to act upon the bill, either to approve or disapprove it, was that he would not veto a bill on which the legislature had spent ten solid days to enact at a cost of $5,000 a day.

It is rather difficult to believe that a member of the West Virginia Public Health Council would sanction such legislation. However, on several occasions, Secretary Henshaw expressed himself as "satisfied" with the measure.

The chairman of this committee had a letter from T. I. Morgan, the chief chiropractor, asking that your chairman meet Dr. Henshaw, Dr. Godbey and himself in a conference at which he was sure the conflicts in opinion could be adjusted. His letter and your chairman's reply follows:

Huntington, W. Va.,
October 18, 1924.

Dr. C. A. Ray,
Charleston, W. Va.

Dear Doctor:—

Having in my possession copies of letters sent out by you to the medical profession, also copies of each issue of the West Virginia Medical Journal, I feel that I am fairly well informed.

Of course, as you seem to know, we are prepared to make a vigorous fight to maintain our rights, and are willing if necessary to engage in another long-drawn-out legislative battle. We feel that our position will be much stronger than it was two years ago. However, you claim that your purpose is to protect the public, if this be so, our aims are identical, and I believe that what differences may exist should, and could, be adjusted so that legislation satisfactory to both sides may be enacted. To this end I would be pleased if a conference may be arranged in Charleston in the immediate future at which Dr. Henshaw, Dr. Godbey, yourself and the writer be present. I am,

Yours very respectfully,
(Signed) T. I. MORGAN, D.C.
Pres. W. Va. Chiropractic Society,
Chairman Legislative Committee.

"Charleston, W. Va.,
October 25, 1924.

T. I. Morgan, D.C.,
Day & Night Bank Bldg.,
Huntington, W. Va.

Dear Sir:—

Replying to yours of October 18, I cannot see where any good would come out of a conference with you. As your letter plainly states, any compromise to be arrived at would be legalizing your profession to practice medicine in the state of West Virginia. I have not consulted the other parties suggested in your letter, and if they are inclined to confer

with you, it is perfectly all right with me, but as long as I am chairman of the legislative committee of the West Virginia Medical Association, I shall use every honorable method within my power to prevent all such cults as yours imposing their theories and practices on the public of the state of West Virginia.

Yours very truly,
(Signed) C. A. RAY, M.D.

The conference was held without Dr. Godbey or your chairman in attendance and the bill was written, introduced and passed. The most deplorable feature of the whole legislative situation is the fact that our public health council now will have two chiropractors on it, and that they will have a voice and vote in the regulation of and administration of the state's public health policies.

And this is not all of the story. Your committee feels certain that had time permitted, at least one other clique or cult of practitioners would have been licensed by this legislature.

Whether you think your committee has been negligent of the duties imposed upon it and entrusted to it, or not, we hope it will be the pleasure of this council or association to make public through the press and Journal the details of these whole proceedings calling names, if necessary, in order that other state associations will not censure the West Virginia State Medcal Association for the disgrace that has been thrust upon us.

We desire to thank the members of the profession in both houses of the legislature: Dr. F. S. Suddarth of Grafton, chairman of the senate committee on medicine and sanitation; Dr. Harriet B. Jones of Glendale, chairman of the house committee on medicine and sanitation; and Dr. S. B. Holroyd of Athens, and Dr. Geo. W. Fox of Ansted, members of the house of delegates. They assisted your committee in many ways.

We also desire to thank those members of the legislature who saw the right and true facts and who unswervingly voted for the protection of the public health.

We further desire to express our deep appreciation to the many members of the profession throughout West Virginia for their valuable assistance and our secretary, Mr. Neale, for his untiring efforts during the legislative session.

Respectfully submitted,
C. A. RAY, chairman.
R. H. WALKER,
J. R. SHULTZ,
R. A. ASHWORTH,
D. A. MACGREGOR,
Comm. on Legislation and Public Policy.

SUPPLEMENTARY REPORT OF THE COMMITTEE ON LEGISLATION AND PUBLIC POLICY, W. VA. STATE MEDICAL ASSN.

Your committee on legislation and public policy desires to report the passage of senate bill No. 292, amending the Workmen's Compensation Act, and of interest to every member of the profession in the state.

As amended, the law now provides that the commissioner in charge of the Workmen's Compensation Fund, shall pay such sums for medical, surgical and hospital treatment as may be reasonably required; not, however to exceed $800. The former maximum figure was $300.

As amended, the law now is modified in its relation to the medical, surgical and hospital contract lists. The contract list section (section 27, subsection C) now has this amendment attached:

"Provided, however, if in the opinion of the commissioner, on advice of the medical examiner, an injured employee needs hospital treatment for an injury sustained under this act, such hospital treatment shall be ordered by the commissioner and paid out of the Workmen's Compensation Fund, not, however, in any case to exceed $800."

The old law made no provision for paying medical, surgical or hospital fees in any case where the injured workman was a subscriber to a medical, surgical or hospital contract list.

It is the opinion of your committee that the enactment of the amendments to the law is a long step toward correcting many of the conditions that have worked hardships upon many members of the profession in West Virginia.

Respectfully submitted,
C. A. RAY, chairman.
R. H. WALKER,
J. R. SHULTZ,
R. A. ASHWORTH,
D. A. MACGREGOR,

AFTER THE BABY COMES

By M. H. MAXWELL, M. D.
Keyser, W. Va.

Read before the G. H. H. M. Medical Society October 23, 1924.

In this paper I wish only to consider the care of the new mother with especial reference to the common injuries of the birth canal and will have nothing to say about the baby.

In a paper read before the West Virginia Medical Association in 1923 Dr. Bloss said, "One has but to be observing in his pelvic examinations and it soon becomes apparent that the majority of physicians giving obstetric service either are ignorant of its importance, indifferent to the outcome, or shamefully careless in their handling of these patients." If this be true it is a most serious charge against us who pride ourselves upon our humanitarianism, and should cause us to take stock of our short-comings, improve our technique, and do better work in the future.

In caring for obstetrical patients we are prone to think that if the baby is born alive and the mother fails to develop childbed fever we have done a good job. We often fail to concern ourselves about after-results, and do not get a vision of the anaemic, tired, complaining mother of weeks, months and years later who dates her ill health from the time her baby was born. Most any woman, given time and a little pituitrin, can give birth to a baby, but none of them can repair the damage to the birth canal, or take steps to control hemorrhage should it occur, or correct a displacement of the womb following child birth, and these are just as truly obstetrical problems as the delivery of the child.

Our first concern after the baby comes is in regard to hemorrhage, to prevent as far as possible, to control as soon as possible and not be satisfied until it has been entirely controlled, because many of these patients not only have to restore the blood lost during delivery, but have to overcome an anaemia that existed before delivery, and at the same time supply nourishment for the growing child, so that every ounce of blood saved to these mothers means much more than we often realize.

Post-partum hemorrhage is usually due to one or more of three causes, viz., retained placenta, atony, or failure of the placental site to properly contract after the placenta has been removed, and lacerations of the genital tract.

As long as the placenta is firmly attached to the uterus there can be no bleeding from the placental site, but as it separates the mouths of the uterine vessels are opened, and if separation is incomplete the womb cannot contract properly, some of the vessels are held open and bleeding will continue until the placenta is removed and the uterus is empty. A very small piece of placenta attached to the womb will keep it bleeding indefinitely.

Occasionally, even though the placenta be delivered intact there will be hemorrhage because the placental site d o e s n't contract quickly. Blood pours from the wide open uterine vessels, the womb dilates and the patient may lose an enormous amount of blood into the uterus before much escapes from the vagina. Usually, however, there is a continuous flow of blood from the vagina that may be so profuse as to cause the death of the patient in a short time.

A hand on the fundus will keep us posted as to the condition of the uterus. If it has a tendency to relax and become soft, either before or after the placenta has been delivered, it should be firmly kneaded until it contracts vigorously and a dose of ergot be given either by mouth or into a muscle, preceded by a C. C. of pituitrin if necessary. We should not depend too much on pituitrin to prevent or control post-partum hemorrhage because it is too uncertain and evanescent in its action; but rather use it as a temporary measure until we get the effect of the more slowly acting ergot.

When the bleeding is very profuse or continues unreasonably long I think one is justified in exploring the inside of the womb with the hand. Retained blood clots and pieces of retained placenta can be removed and, in case of atony, the hand helps stimulate contractions of the muscle. When these measures do not control the hemorrhage quickly it may be necessary to grasp the uterus between the hands, one at the cervix and the other at the fundus, and squeeze it against the pubic bone until the other measures have brought about sufficient contraction to control the hemorrhage. In hospital practice, where conditions can be more nearly ideal, it may be well occasionally, to pack the womb with gauze, but in the average home the danger of infection is too great, unless we have sterile gauze and sufficient time to properly prepare the field of operation. As to putting other objects into the uterus, such as ice, lemons, Monsel's solution, etc., our present knowledge of bacteriology makes it almost criminal to do so.

Copious hemorrhages from lacerations do not occur very often but sometimes quite a large branch of the uterine vessels will be torn and bleed freely. These should be found and ligated. Bleeding points in the vagina and perineum should be clamped and twisted or ligated.

Hemorrhage having been controlled our next care is to repair injuries to the birth canal. It may be possible for some women to give birth to their first baby without be-

ing torn, but when this happens in my practice it is usually when I fail to make a careful examination. An occasional primipara will not show a laceration through the skin or vaginal mucous membrane but there is nearly always, even in multipara, some laceration of the cervix, if not of the perineum, and although we have been taught to disregard them or rather not taught to regard them seriously, I think any considerable laceration of the cervix should be sewed up whether or not there is any bleeding from the laceration. How often we see great, oedematous, gaping, ulcerated cervices, congested and discharging, a gateway to more serious pelvic trouble, and a constant drain upon the woman's strength and vitality, keeping her in poor health until she finally submits to an operation that might have been prevented. It is not very difficult to pull the cervix down with a tenaculum, especially when there is a laceration of the perineum, and put into it a few stitches to hold the torn surfaces together, and thus prevent a chronic vaginal discharge that is so hard to cure with ordinary medical procedures.

Frequently there are extensive lacerations of the sides of the vagina, the tissues being practically stripped from the side of the pelvic wall. This happens most often in occipito posterior presentations and is not fault of the obstetrician. The oncoming head has been forced through a canal that was incapable of dilating sufficiently and the side of the canal having been caught between the spine of the ischium and the baby's head has given way where the pressure was greatest. These tears are usually separate from, and independent of, lacerations involving the perineum, consequently they are not seen unless we look especially for them.

Lacerations of the perineum are easily seen by separating the walls of the vagina. We should not overlook lacerations that go through the mucous membrane and muscle but do not involve the skin. These leave the same relaxed outlet as though the skin had been torn also.

I can realize that in former years, when child-bed fever was prevalent, that the policy of watchful waiting was the ideal obstetrical procedure, but in these days of bacteriology and antiseptics the time has come when we have no excuse for passing these conditions by without at least locating them and making an effort to repair them.

The supervision of an obstetrical case presupposes proper antiseptic precautions. I say "Antiseptic" because I believe aseptic midwifery to be an impossibility in the average American home and under the conditions in which you and I have to work, but we can maintain a degree of cleanliness that will suffice in the majority of our cases.

The vulva is no harder to clean than any other part of the body and the most common germ on that part of the body, the colon bacillus is one of the least virulent and easiest to kill, but when it gets into a wound it forms pus and prevents the wound healing no matter how careful we have been to coapt the torn surfaces.

In doing our repair work let us first put our patient in a favorable position, that is the lithotomy position with the hips at the edge of the

table or bed, then take a little time and use a little energy in cleaning up the field—the thighs, pubes, vulva and vagina, using an antiseptic solution of sufficient strength to kill germs; nor let one washing suffice, but as the repair work proceeds apply the solution frequently to the part on which we are working so that for as long a time as possible the solution may be in contact with any germs that may have been left in the wound. A towel squeezed from the same solution and stretched across the perineum will prevent contamination of instruments and suture material from the rectum and parts below. Instruments should be kept in the solution or on a towel saturated with it, and the hands frequently immersed in it because when we have to do the work without an assistant we are more or less frequently touching unsterile things.

It takes a little time and trouble to do the repair work properly and even then it does not always heal, but we should not be satisfied to let these patients get along as best they may until we have done our best for them. It is no more than right that we do for them as we would want them to do for us if we were having the baby and they waiting on us.

Our responsibility in these cases does not end when the patient is able to be out of bed. Women have been suffering the aches and pains following child-birth for so many centuries that they seem to think them a part of the game, and endure them with remarkable fortitude.

We can prevent and cure many of these aches and pains by a little care at the proper time and frequently give back to her family a healthy, happy wife and mother who would otherwise drag out her life in discomfort.

Several years ago one of my patients complained severely of backache two or three months after her baby was born. Upon examination I found she had a retroverted womb. The womb was put back into place and supported by a pessary. This relieved the backache. The pessary was worn for several months, then removed. Several months later I had occasion to examine the patient again and to my surprise I found the womb in its normal position. Previous to this time I had thought of the pessary only as a means of relief for those who refused to submit to surgery, and had so used it.

In 1922 Dr. F. W. Lynch of San Francisco made a long statistical report of 1230 cases delivered in his wards who showed no signs of infection. Of this number 505, or 41% had retro-displacements of the womb sometime during the year following delivery. 725 were normal controls. Of the 505 who had retro-displacements 161, or 32% returned because of such symptoms as backache, bearing down sensations or feeling of pressure in the pelvis. Of the 725 controls, 75, or 10% returned for the same reason, their symptoms, however, being due to some other cause. Of the 505 who had retro-displacements 224 could not be replaced without an anesthetic to which they would not submit. 281 were corrected and support with pessaries undertaken. Of this 281 the vagina was so re-

laxed in 47 that the pessary would not hold. Thirty-two patients refused to wear them. This left 202 cases in which the pessary was a suitable form of treatment and all of these, or 68% of the 281 that could be replaced were cured—the womb remaining in proper position after the pessary was removed. Of the 161 retro-displacement cases who complained of symptoms, 100 were relieved by the use of the pessary—61 having symptoms due to troubles other than uterine displacement.

To apply these figures to our own work we may expect the following results. Out of every 100 of our confinement cases 41 will have retro-displacements within a year following delivery. Sixteen of these can be easily corrected and will stay in position if supported by a pessary for a while. Nineteen of our patients will suffer with backache, discomfort in the pelvis, etc. Eight of these can be permanently cured by the use of the pessary, while in the other 11 we must look for some other cause, such as flat feet, fatigue, relaxation of the ilio-sacral joint, vertebral arthritis, cystic ovaries, etc.

It may not be practicable for us to examine our patients at certain stated intervals after delivery, but before discharging them we can instruct them as to the possible significance of backache and its possible cure; and later, as occasion permits, to inquire as to their freedom from pelvic symptoms, and when symptoms arise to find the cause as best we may, with the possibility that 8 out of every 100 of our obstetrical cases can be permanently relieved by the temporary use of a pessary who would otherwise have been chronic sufferers.

We have condemned the pessary because it failed to cure our patients, and it failed because we did not use it early enough, before the uterine ligaments had adjusted themselves to the abnormal position of retro-displacement.

One thing more and I am through. A large proportion of these patients, especially those who nurse their babies, will suffer from anaemia. The pallor of the skin and mucous membranes will usually give us the proper clue, but the florid face may belie a haemoglobin content of 70 or less. If upon being questioned the patient admits that she dreams at night, has shortness of breath upon slight exertion, and dizzy spells, we can be almost sure that her haemoglobin is below 85. I have seen so many people who quit dreaming after a course of iron that I have almost come to believe that dreams are the result of a deficiency of iron either in the blood or in the brain itself.

THE IMPORTANCE OF A UROLOGICAL EXAMINATION IN DIFFERENTIAL DIAGNOSIS OF ABDOMINAL CONDITIONS.

By
ALBERT E. GOLDSTEIN, M.D., F.A.C.S.
and
T. JUD McBEE, M.D., Baltimore, Md.

The opening of the abdomen today for obscure abdominal conditions is a frequent procedure; so much so, that some observers claim that 20% of such operations resulted in mistaken diagnosis. Blesh[1] reports that in reviewing 5,000 cases of appendicitis occurring in the practice of other surgeons and himself, 40% were still complaining of the same syndrome

for which the operation was performed.

Such surgeons as the late J. B. Murphy, the present J. B. Deaver and the Mayo's, could in most instances explore the obscure abdomen and pelvis and from their knowledge of gross pathology could perform the necessary surgery if any pahtology was found. We have much evidence that they like others are not infallible and have their cases studied thoroughly before operative procedure is undertaken. The reason for this is self-explanatory when we note in Connor's[2] report that in 10% of all cases admitted to the Mayo clinic it was necessary to make a urological examination. Other large clinics report that between 15% and 20% of their renal and ureteral cases have previously been operated upon for other conditions.

Liek[3] analyzed 1000 cases of chronic appendicitis in which operation had been performed and found among them only 100 definte cases of chronic appendicitis. Hunner[4] observed that ureteral stricture is one of the most common causes of abdominal symptoms in the female, and further states that when unrecognized, it provokes more needless and fruitless surgery than any other pathological condition.

The removal of the appendix will not bring relief as evidenced by a host of sufferers still clamoring for relief who present neat scars over McBurney's point. The more one studies this large and interesting group the more convinced he becomes of the very important role played by pathology of the urinary tract in the production of the symptoms presented. In obscure abdominal conditions when it has been demonstrated that the genito-urinary tract is free from pathology, then, and not until then, is one justified in making an attack upon the intestinal tract. Likewise, as the horizon of our knowledge broadens, fewer and fewer of these cases should be placed in the neurasthenic group.

The most common conditions for which the abdomen is opened and the conditions which necessitate differentiaton from urological conditions, are as follows:

1. Appendicitis, either acute or chronic.
2. Pelvic inflammatory disease, or cystic ovaries, etc.
3. Cholelithiasis.
4. Cholecystitis.

The frequency with which the appendix can locate itself post-caecally or become attached to the kidney, ureter or urinary bladder is a condition that all surgeons encounter. Appendicitis of the above type frequently presents urinary symptoms and red blood cells in the urine. To differentiate the above condition of the appendix from pathologic conditions of the urinary tract is not, as a rule, simple, without a thorough study of the urinary tract. A case of interest in this connection is as follows:

A white male, age 29, referred by a general surgeon, with a complaint of pain in the upper abdomen, at times radiating to McBurney's point. Family and past history were unimportant. Present illness dates back to four days prior to admission into the hospital when he developed a sudden pain in the right upper quadrant. Was awakened in the night on account of this pain which lasted about one hour. During this attack had nausea and vomiting, pain remaining localized just above McBurney's point. Had a slight rise in temper-

ature. Two days following this, had a second attack and the day following the second attack had a third attack. There was no radiation of pain no pain on the left side. No urinary symptoms. Bowels were somewhat irregular. Urological examination: Abdominal examination revealed no palpable tumor mass, neither kidney palpable. Tenderness in the right upper abdominal quadrant underneath the costal border with some tenderness just above McBurney's point. External genitalia revealed no urethral discharge, no testicular or epididymal involvement. Voided specimen of urine showed about 12 R.B.C. and about the same number of W.B.C. to a high field. Cystoscopy, under sacral anesthesia, revealed no residual urine, capacity 400cc., good tone. No intravesicle bulging of the prostate, trigone normal color, no oedema. No evidence of a stone, tumor mass, diverticulum, trabeculation or ulceration seen in the bladder. Both ureteral openings in normal position, of normal shape, size and color. A No. 11 wax bulb passed up the right ureter becoming obstructed about 20cm up in the ureter. X-ray taken with the catheter in place revealed a normal size and shaped kidney. A shadow was observed about the size of a pea above the tip of the catheter which was about 5cm below the ureteropelvic juncture. Urological diagnosis: Right ureteral calculus.

This patient was admitted for an appendectomy, but after a careful study as noted above, the correct diagnosis was made and no open operation was performed.

The importance of reporting the above case was to demonstrate that the presence of red blood cells in the urine was sufficient to warrant a urological examination. While in this and many other cases studied, we have found a similar condition, it is also true that cases with red blood cells in the urine are not always urological cases, as demonstrated by the following case:

White male, age 40, referred by general surgeon for urological study. The complaint was pain in the epigastrium. Family and past history were unimportant. Present complaint: Was well until one year ago when he began to complain of pain in the epigastrium. This was relieved by ice bags. Had no fever at any time. Pain continued at intervals until February 1925, when he began to have a definite dull achy pain in the right lower quadrant. Two days prior to admission to the hospital had no pain. Is always constipated. No urinary symptoms of any kind. No nausea or vomiting. Urological examination: Abdominal examination revealed no palpable tumor mass, neither kidney palpable. No areas of tenderness in the renal or ureteral regions. Some tenderness just above McBurney's point. No hernia. Voided specimen of urine shows a few red blood cells, with an occasional white blood cell to a high field. Albumin and sugar negative. External genitalia revealed no urethral discharge, no testicular or epididymal involvement. Rectal examination revealed the sphincter to be of good tone, no haemorrhoids. The prostate is of normal size and consistency. Cystoscopy, under sacral anesthesia, revealed no residual urine, bladder capacity normal. Trigone normal. No intravesicle bulging of the prostate. Both ureteral openings in normal position, of normal size, shape and color. No evidence of a stone, tumor

mass, diverticulum, trabeculation or ulceration seen in the bladder. A No. 9 wax bulb passed up the right ureter to the renal pelvis without encountering any obstruction. The capacity of the right kidney pelvis was 8cc. Ureteropyelograms revealed a normal size and shaped pelvis, calyces and ureter. No evidence of a stone in the kidney or ureter. Urological diagnosis: No urological disease.

Abdominal operation was advised and performed and a definite retrocaecal appendix was found. At the time of discharge from the hospital his abdomen was no longer tender and no red blood cells were found in his urine.

True enough in discussing the above cases one might say that the plain roentogram in the first case revealed a radiable shadow in the region of the ureter, and finally proved to be a ureteral calculus, while the roentogram in the second case was negative with a final diagnosis of a normal urological tract. One must not lose sight of the fact though, that the roentogram could be negative in the case of the calculus and still a calculus be present in the kidney or ureter. This is best illustrated by the following case:

White male, age 34, complaining of pain in the lower abdomen. Family history unimportant. Past history negative excepting for two slight attacks of a supposed appendicitis in the past two years. Present illness dates back to about 24 hours before admission when he had a sudden sharp pain in the right abdomen. This radiated somewhat down towards the bladder. No radiation to the right renal region. At this time had some desire to urinate, but was unable to. No frequency present at this time. No burning or pain on urination. No vomiting or belching, until he was given a hypodermic of morphia. This seemed to cause some vomiting. Also had a chill and slight rise in temperature. Urological examination: Abdominal examination revealed some tenderness in the lower abdominal region just above the symphysis pubis on the right. No tenderness in the renal or ureteral regions. No palpable tumor masses, neither kidney palpable. External genitalia revealed no urethral discharge, very small penis, very small atrophic testicle each about the size of a small lima bean. Urine examination revealed an occasional R.B.C. to a high field. Roentogram of the urinary tract was negative. Cystoscopy revealed the bladder mucosa to be of normal color. No intravesicle bulging of the prostate. Trigone was reddened and oedematous. No evidence of a stone, tumor mass, diverticulum, trabeculation or ulceration seen in the bladder. Left ureteral orifice was normal. The right ureteral orifice was seen to be occupied by a brownish red mass projecting out from the ureteral orifice. A ureteral catheter with a wax bulb was inserted but would not pass beyond 1cm. There was a discharge of blood from the right ureter with a definite scratch on the wax. The fulgurating wire was inserted into the ureter for this distance and the opening made larger. Urological diagnosis: Right ureteral calculus. After several dilatations of the ureter a small calculus was passed.

That a percentage of urinary calculi are non-radiable is a well recognized fact and is well demonstrated in the above case so that negative roentograms of the urinary tract in cases of chronic or obscure abdominal conditions is not sufficient evidence

to exclude the presence of a urinary calculus. Too much dependence cannot be placed upon the negative X-ray report. A negative report by the roentgenologist frequently is misinterpreted or misconstrued by the surgeon. He fails to make note of the fact that the roentgenologist can only inform him of any radiable shadows that might be present in the urinary tract, gall bladder region, or as to the size of the kidney. He cannot be informed of such conditions as non-radiable calculi, ureteral stricture, kinks of the ureter, ureteral or renal tumors, hydronephrosis, and other conditions. These conditions can only be diagnosed by the urologist with the aid of the roentgenologist. Therefore, the discovery of an unrecognized urological condition in an individual who has had an abdominal exploratory without relief, is an inexcusable error, if the urologist has not been consulted prior to the operation.

Likewise, the unrecognized upper abdominal condition such as gall stones should not be mistaken for kidney calculi if radiable shadows are discovered. Confusion may arise in diagnoses, especially in the misinterpretation of roentograms. The presence of a radiable shadow in the region of the kidney does not necessarily imply a renal calculus, calcified gland, or tuberculous calcification. One should at all times keep in mind, especially on the right side, the possibility of the roentgenogram visualizing a gall stone. This may appear in the region of the kidney and unless a urological examination is made, a needless operation on the kidney may be attempted. We have encountered two such cases and by a urological examination for differentiation a diagnosis of gall bladder shadow was made, thereby avoiding an unnecessary kidney operation.

We do not mean to say, or imply, that in obscure abdominal cases if the urologists were consulted that no errors would be made, but we do feel that there would be fewer incorrect diagnoses. We do think that it is just as important in abdominal conditions to have the urinary tract examined preoperatively as it is the heart and lungs, which is now a universal routine.

To practice medicine cooperatively produces the best results. Internists and general surgeons should make use of the urologist and roentgenologist and vice versa; as no one individual today can employ satisfactorily all the armamentarium that is at his command.

If one will pause for a moment and consider the relationship of one organ to another in the abdomen he will readily understand that it is just as possible to have two independent pathological conditions. We have encountered in our series occasions where individuals have such conditions as ureteral strictures, stones or kinks, as well as inflamed appendices, or other conditions, so that the presence of one does not exclude the presence of another.

A case of extreme interest demonstrating pathology in more than one organ at the same time and necessitating a combined operation is as follows:

White male, age 28, referred for examination complaining of pain in lower right abdomen. Family history unimportant. Had a past his-

tory of pain in right abdomen and back for two years. Had been treated for gastro-intestinal condition and was told that in all probability he had appendicitis. Present illness dates back to two weeks prior to examination when he began having pains in right lower abdomen but of a different character than his former pain. At times this pain radiated around to the right back. Pain was worse if constipated. No burning or frequency of urination, good stream, no dribbling or haematuria. Nothing of any importance in the rest of his history. Urological examination is as follows: Abdominal examination revealed neither kidney to be palpable while patient was lying down or standing up. No pain in renal or ureteral regions. No hernia External genitalia revealed no sore on penis, no urethral discharge, no testicular or epididymal involvement. Voided specimen of urine is clear, negatiave for albumin and sugar, Microscopically the urine shows no W. B. C., R. B. C., casts, organisms, or epithelial cells. Rectal examination revealed the sphincter to be of good tone, no hemorrhoids, the prostate was of normal size and consistency, seminal vesicles normal. Teeth in only fair condition; pyorrhea present. Pupils are equal and react to L. and A. Romberg negative, knee kicks normal. Blood Wassermann gave a negative reaction. Intravenous pthalein gave an output of 62% for 2 hours. Cystoscopy revealed no residual urine, bladder capacity 350 cc, good tone, no intravesicle bulging of the prostate. Trigone normal, no oedema. Both ureteral openings in normal position, of normal shape, size and color. A catheter carrying a no. 9 wax bulb passed up the right ureter to the renal pelvis with ease. No scratch on the wax, no hang on the bulb. Capacity of the right kidney pelvis was 9cc. Plain X-ray plates of the urinary tract were negative. Ureteropyelograms on the right showed a normal size and shaped pelvis and calyces, no evidence of a stone, tumor, infection or hydronephrosis. The right kidney was somewhat lower than normal. No evidence of a stone or dilatation in the right ureter. Opposite the 3rd lumbar vertebra on the right, the ureter makes a right angle turn outward for a distance of 2.5 cm and then proceeds upward to the pelvis. No dilatation of the ureter above the angulation. At the time of injection for the ureteropyelogram the original pain was reproduced, the pain following the course of the ureter, going up the center of the abdomen and then over to the right k i d n e y. Urological diagnosis: Right ureteral kink. Received several ureteral dilatations with some improvement but not entirely relieved. Owing to the gastro-intestinal symptoms together with the indefinite abdominal pain that was not relieved by treatment and the demonstration of a definite kink, a nephropexy and appendectomy was advised and performed. A definite kink of the ureter with adhesions and a definite chronic appendix was found. A follow up on the case reveals complete recovery.

The pathology that one encounters in the female urinary tract is identical with that found in the male, with the exception that there are possibly some added features as

to the cause of some of the conditions. Dannruether[6] in an examination of 600 cases in private practice claims that 20% required a cystoscopic examination and that in 15% of the total number a urological condition was discovered.

The presence of a large hydronephrosis or ptosed kidney causing abdominal discomfort or the presence of a palpable tumor mass with or without urinary symptoms or signs is a common occurance in the female, frequently arising from pressure of a large ovarian cyst, uterine fibroid, pregnancy or stricture of the ureter, etc. Chronic abdomens in the female from pelvic inflammatory diseases, etc., frequently give rise to urinary symptoms and in many instances to definite urinary pathology. The thorough study of such cases by a urological examination will in many instances inform the operator whether the condition is gynecological or urological.

Palpable abdominal tumors giving rise to symptoms are usually ascribed to intra-abdominal conditions. It is always advisable in these cases to differentiate the suspected mass from a renal or retroperitoneal tumor, and on the left, from a splenic tumor. A particular case of this kind is as follows:

White male, age 21, complaining of pain in the upper left abdomen, was referred for a urological study. Family and past history were unimportant. Present complaint, that for the past 3 or 4 weeks has not been feeling up to par. Has lost about fifteen pounds in weight. Pain in the upper left abdomen at times radiating to the left back, not radiating to the lower abdomen or genitalia. No urinary symptoms of any importance. As a matter of fact the entire history was of little importance excepting the loss of weight in the past few weeks. The urological examination was as follows: Abdominal examination revealed a mass in the upper left abdomen extending to the median line and downward to about 4 fingers' breadth below the costal border in the axillary line. The mass is hard, and somewhat nodular. No fluctuataion. Some tenderness on pressure. Does not move with respiration, in other words it is firmly fixed. By pressing anteriorly the mass can be felt posteriorly and vice versa. There is no bulging posteriorly. Kidney on the right is not palpable. There is general glandular enlargement, the glands varying in size from a pea to a lima bean. External genitalia revealed no urethral discharge, no evidence of a sore on the penis, and no testicular or epididymal involvement. Rectal examination revealed the sphincter to be of good tone, no hemorrhoids. The prostate was slightly larger than normal. Median furrow present. No areas of stony hardness, no nodules. No adhesions to the pelvic wall, seminal vesicles normal. Voided specimen of urine was negative for albumin and sugar and microscopically shows an occasional W. B. C. and a few epithelial cells. The impression before cystoscopy was as follows:

1. Sarcoma of the left kidney.
2. Psoas or perinephritic abscess.
3. Hydronephrosis.
4. Retroperitoneal sarcoma.
5. Pancreatic cyst.

Cystoscopic examination revealed no residual urine, bladder capacity 350cc, good tone. Slight intravesicle bulging of the prostate on the left posterolateral region. Trigone normal color, no oedema. No evidence of a stone, tumor mass, diverticulum, trabeculation or ulceration seen in the bladder. Both ureteral openings in normal position, of normal shape, size and color. Clear urine could be seen coming from both kidneys. A No. 6 catheter became obstructed 15 cm. up on the left. This was finally overcome and then passed on up to the kidney pelvis without any difficulty. Urine was highly colored containing an occasional W.B.C., and a few R.B.C. from trauma. A ureteropyelogram was taken with the catheter in place and this showed the left ureter pushed outward for a distance of about 7 cm, beginning at a point opposite the third lumbar vertebra. The bodies and transverse processes appeared normal. A definite mass could be mapped out beginning in front of the transverse process and extending outward to the ureter, upward from a point opposite the 11th dorsal to a point opposite the third lumbar vertebra. A 13.5% solution of sodium iodide was injected into the left kidney pelvis and ureteropyelograms were made with the catheter high up and then the catheter was pulled down opposite the fourth lumbar vertebra. This showed the kidney pulled backward and outward and the pelvis and calyces were of normal size and shape. The kidney had the appearance that it was flattened out in its anterior and posterior diameter. No evidence of a stone. The mass appeared to be separate from the kidney. Impression: No renal condition but a retroperitoneal sarcoma. One week after this examination, under ether anesthesia, the patient was operated upon and a large mass was located posterior to the peritoneum and anterior to the spinal column. This was lying directly on the abdominal aorta. On palpation it was somewhat soft and seemed to fluctuate, but this was due to necrosis that had taken place. It was irregular in shape and measured about 14cm in its longest axis and about 10cm across, definitely encapsuled, not arising from any organ and was not attached to any part of the intestinal tract. Patient died shortly after operation and a postmortem examination showed metastatic nodules in the liver. The left kidney was of normal size but somewhat flattened out as the X-ray had demonstrated. The spleen and testicles appeared normal. Right lung shows some calcified tuberculous peribronchial lymph glands. Final diagnosis from a microscopic section was retroperitoneal tetratoma.

DIAGNOSIS AND DIFFERENTIAL DIAGNOSIS

Differential diagnosis in obscure abdominal conditions is of paramount importance. The mere exploration with the successful removal of observed pathology is no longer considered conservative or good surgery. Operating upon these cases simulates the hit and miss game, in other words traveling along the line of least resistance. If the patient's symptoms are relieved by chance for a while, there is no telling where the patient finally lands or the ultimate outcome.

The application of modern medical examinations by co-operation with all specialists is the only means of satisfactorily determining the proper diagnosis. The microscopic examination of voided and catheterized spe-

cimens of urine should be given more attention. The presence of red blood cells in the voided specimen of urine and of pus cells in the voided specimen of the male and the catheterized specimen in the female should entitle the patient to a cystoscopic examination. The presence of an indefinite pain especially of a chronic type should likewise privilege the patient to a urological examination. In either of the instances mentioned above, plain roentograms should be the next procedure, to be followed by functional tests and finally by a cystoscopic and pyelographic examination. In the course of the procedure a study of the urine from each kidney should be made, cultures taken, inoculations into the guinea pigs if necessary, examinations of the ureters with wax bulbs for the determination of stones, and strictures are essential. Capacity of the kidney pelvis is determined by the injection of water through ureteral catheters. Separate functional tests of each kidney should be determined. In ureteral pyelography serial films should be made; in other words time plates should be taken to determine the presence of stasis of urine. When necessary, as in cases of calcified glands, phlebolith, or tumor masses, no hesitancy should be made in the employment of stereoscopic plates. It is only after all the above methods have been exhausted with no enlightment as to the possible condition that the abdomen should be explored.

Wassermanns of the blood in all cases, to rule out possible infection from spirochetae pallida should be made.

In right abdominal pain one should always bear in mind the possibility of gastric crises of tabes. If the above procedures are carried out, the pathology of the urinary tract can be eliminated and differentiated from that which may occur in the abdominal organs.

COMMENT

It is not our purpose in this paper to give one the impression that every abdominal condition should have a urological examination but it is our intention to urge urological study in obscure cases of the abdomen. In cases that have been operated upon without relief, especially where chronic abdominal pain exists, we feel safe in stating, and not radically so, that a urological consultation should be obtained. We also feel that cases that are not definitely diagnosed should in all probability be referred to the internist and he in turn should refer them to the various specialists. True enough this may be time consuming and at times may tax the finances of the patient, but in the end will give more satisfactory results. The opening of the abdomen without locating the seat of trouble is an inexcusable error if the cases have not been thoroughly studied. Disregarding the return of a patient after long continued treatments or discharging a patient after a wound has healed does not necessarily mean a cure in either case. Patients may wander to other physicians and unless a follow-up record is kept the important information is not obtained.

CONCLUSIONS

1. That all obscure conditions of the abdomen should be investigated by the urologist before operation is attempted.

2. That the absence of urinary symptoms does not exclude a pathological condition of the urinary tract and vice versa; the presence of urin-

ary signs and symptoms does not necessarily signify the presence of a urological condition.

3. That a negative X-ray report does not exclude either a renal or ureteral disease.

4. That urological examinations should be made in all cases of abdominal tumors.

5. That closer co-operation with the urologist will give a higher percentage of positive diagnoses in abdominal conditions.

6. That the establishment of a follow-up system will give correct figures of cures and failures in abdominal conditions.

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THE X-RAY AS AN AID IN THE DIAGNOSIS OF PULMONARY TUBERCULOSIS.

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Read before the Kanawha County Medical Society, March 17, 1925.

INTRODUCTORY

The diagnosis of pulmonary tuberculosis is not new; it was old before Hippocrates wrote. It is still difficult, and the physician who does not know this has failed to check up his work, or has learned most of his knowledge from books.

First I want to impress upon you that I consider a carefully taken history and a thorough physical examination of the utmost value in the diagnosis of pulmonary tuberculosis and further, that I know the X-ray has its limitations.

When in 1761 Avenberger introduced immediate percussion, and in 1819, Laennec gave us the stethoscope, they added the scientific element to the study of the thorax, which had previously consisted simply of a review of the history and observations of clinical symptoms. In the latter part of the nineteenth century these methods were brought to a high degree of accuracy, and were generally used by the profession. Nevertheless the objective findings of a physical examination at times becomes very suggestive, since men are at the mercy, not only of their lack of knowledge, but of their personal physical conditions. It is for this reason that the X-ray was employed and the stereo-roentgenogram of the chest was brought to its present state of perfection.

In order to interpret intelligently and to understand chest stereo-roentgenography it is necessary to review briefly our anatomy, physiology, and pathology as it is seen on the stereoplates. In our physical examinations of the chest we deal with external markings of the surface, such a clavicular, supra-clavicular and infra-clavicular, but a different terminology and different markings of the chest structure must be understood by the roentgenologist, and, also the referring physician before a mutual understanding can be reached.

GROSS ANATOMY

The chest is divided into two compartments known as the right and left chest cavities, which are completely filled by the lung tissue, except that part of the chest known as the mediastinum. This lies between the two lungs and contains the heart, trachea, esophagus and large blood vessels.

If we trace back through the bronchi, trachea and pharnyx we find the lungs are suspended from the base of the skull by the superior constrictor muscle of the pharynx, and are held in the chest by the large blood vessels, and ligaments of reflected pleura, and rest upon the diaphragm. There are three lobes to the right lung and two to the left, and these lobes are supplied with bronchi, arteries, lymphatics, nerves and veins.

The bronchi, arteries and lymphatics follow the same course and bifurcate simultaneously. These vessels together cast a density on the X-ray plate and are known as trunks or branches. These trunks are of especial value in the reading of X-ray chest plates, and are described as follows:

The trachea divides into the right and left bronchi which extend through each lung, gradually diminishing in size, and giving off lateral branches in anterior and posterior groups. The arrangement within the lung is very definite. On the right side a single large bronchus is given off above the pulmonary artery, and runs into the upper lobe; because of its position above the artery it is called the eparterial bronchus. The divisions as seen on the X-ray plates consist of a vertebral trunk which runs directly to the apex parallel to the vertebral column. The first interspace trunk is so-called because it finally divides under the first interspace, and the second interspace trunk has its division under the second interspace. All these branches have anterior and posterior divisions. The branches to the mid-lobe are given off some distance below the branches to the upper lobe and below the pulmonary artery. As viewed on the stereoscopic X-ray chest plates it is seen to run directly anterior. After this branch is given off the bronchus continues on down as a mainstemmed bronchus to the lower lobe. The branch of this main stem bronchus to the lower lobe is of special importance. It is large and courses directly posteriorly into the apex of the lower lobe. A density on this trunk show that a lesion is present in the apex of the lower lobe. In extension of pulmonary tuberculosis from the upper lobe it is usually the first site of the extension of the lesion.

In the left side we have the same arrangement of vertebral, first and second interspace branches in the upper lobe. But in addition, there is a long branch which curves around the

PRIMARY LOBULE

When we follow the bronchus in its branching out into the lung we finally reach a point where a smooth tubular character of the branches disappear and small projections appear from the lumen. These are called bronchi alevoli, and the division of the bronchus where these first appear is called a respiratory bronchus. Immediately beyond this the next division is called the terminal bronchus or ductus alveolaris. Connecting with the ductus alveolaris, there are from three to six spherical cavities which Miller the anatomist has

called atria. Each atrium communicates with a variable number of irregularly shaped air sacs, which have projecting from their surface the respiratory alveoli. *This is the brick from which the house is built—this is the anatomical unit—this is the lung.*

SECONDARY LOBULE

The secondary lobule is the amount of lung tissue contained between two septa and is usually conical or pyramidal in shape, with its base towards the pleura and contains from fifty to several hundred primary lobules with their bronchi, lymphatics, arteries, reins and nerves.

SEPTA

The septa are prolongations or extensions of the connective tissue of the pleura down into the lung. They are rich in lymphatics and act as an excellent barrier to the spread by continuity of any lung pathology characterized by exudation. In inflammation starting within any one of these compartments between two septa, it is definitely limited by these barriers. Spread through a septum will not take place in tuberculosis unless cavitation occurs.

LYMPHATICS

For many years it was believed that lymphoid tissue in the lung was pathologic, but now we know it has a very definite distribution throughout the lung. The lymphatic vessels are associated with the bronchi, arteries and veins, and are in the walls of the bronchi as far out as we find lymphoid tissue. The lymph flow and lymphoid tissue act as a strong barrier of defense to the invasion of any foreign material or living organism. Beyond the ductus alveolaris there is neither lymph flow, lymph vessels nor lymphoid tissue. The atria, air sacs, and alveoli are not left without defense, as the phagocytes play the part of scavengers in picking up dirt and bacteria which have penetrated these depths, carrying them over to the collection of lymphoid tissue where they are then within the realms of lymphatic defense. The normal lymph flow through the lungs is from the parenchyma toward the hilum. The flow in the pleura is over the surface of the lungs to the hilum. The direction of the flow is established and guarded by valves. Please not here that pigment is not carried from the hilum into the lungs, that inflammation does not spread along the lymphatics from the hilum to the lungs, but vice-versa.

BLOOD

The blood supply can be divided into two parts. First, the functional circulation, supplied by pulmonary arteries, and Second, the nutritive circulation supplied by the bronchial arteries.

NERVE

Our knowledge of the nerve supply of the lungs is far from complete. Those interested in this subject should read recent articles from Miller, the anatomist.

DUNHAM

In the very beginning of X-ray work Dr. Dunham noted the difference on the X-ray plates between tuberculosis of the child and tuberculosis of the adult, and divided the condition into two great groups, viz: the puerile type and the adult type.

OPIE

E. L. Opie verified this difference in articles in the Journal of Experimental Medicine in June, 1917, Au-

gust, 1917, and other articles that followed. It has also been verified by Gohn, Krause, and others. At the twenty-first annual meeting of the American Roentgen Ray Society, at Minneapolis, Minn., Dr. Kennon Dunham read a paper on X-ray examination of the chest, and an X-ray classification of pulmonary tuberculosis.

CLASSIFICATION

Puerile or primitive tuberculosis: Symptoms: Childhood tuberculosis, Tuberculosis of the non-sensitized patient, and focal tuberculosis.

a) Primary lesion and tuberculosis nodes.

(b) Miliary tuberculosis.

(c) Basal tuberculosis.

(d) Tuberculosis caseous bronchi, and lobar pneumonia without apical lesions.

(e) Caseous pleurisy.

ADULT TUBERCULOSIS

Symptoms: Secondary tuberculosis; nodose tuberculosis, apical tuberculosis, chronic fibroid tuberculosis, tuberculosis of the sensitized patient.

(a) Apical fibroid tuberculosis.

(b) Gelatinous and caseous broncho-pneumonia with apical lesions.

(c) Lobar caseous pneumonia with apical lesions.

(d) Fibroid pleurisy—pleural exudate.

ANIMAL INOCULATION

It has been repeatedly proven and is generally known that the first subcutaneous injection of tubercle bacilli in an animal causes only a slight lesion at the point of inoculation. Dissemination occurs by way of the lymphatics, and the nearest lymph nodes undergo violent reaction. With a subsequent inoculation into the same animal, as when an animal suffering with tuberculosis is re-inoculated, there is an active reaction with necrosis at the site of inoculation, and frequently a reaction occurs at the point of the first inoculation which is much more severe than that caused by the first infection. The second lesion is not progressive; it tends to heal, and no tuberculosis of the regional lymph nodes is produced.

KOCH'S PHENOMENON

This is known as Koch's phenomenon and bears out our view of the tuberculosis of the non-sensitized and sensitized patient. Keeping this in mind it is easy to see the lymph nodes at the hilum are invariably markedly involved and are the earliest chief center of disease in the non-sensitized patient.

HILUM TUBERCULOSIS

Because of this fact Jordan and others have taught for many years that tuberculosis begins at the hilum and extends out into the lung tissue. Miller, the anatomist, Gohn and Opie, the pathologists, and other investigators have disproven this theory. Gohn, Dunham and Skavlem with others believe that with the so-called hilum tuberculosis of children or the non-sensitized patient that the trachea and bronchial lymph nodes are not the primary foci of infection, but that we may invariably assume the presence of a parenchymal focus.

PUERILE TUBERCULOSIS

The early puerile tuberculosis as seen upon an X-ray plate, consists of a small circumscribed area of density connected to the hilum by a heavy trunk. Such parenchymal foci are usually found within the mid-lung zone. They may be distributed any where throughout all the lobes and

only occasionally are found at the apices. There is no special susceptibility at the apices for primary childhood infection of tuberculoss. The hilum shadows are heavy, showing densities suggestive of calcification, caseation or fibrosis. Sometimes large pulmonary bronchial nodes may be seen. These lesions due to infections which have healed are probably our best protection against pulmonary tuberculosis.

TERMINATION

The termination of puerile tuberculosis may be, first, recovery with increased allergy, leaving Gohns, and calcification at the hilum, which tell their story on the x-ray plate of a battle fought and won. Second, any of the various forms of puerile tuberculosis may result fatally, and are too often mistaken for other diseases.

PATHOLOGY

Before a child is ten years of age he is usually sensitized and has acquired a degree of immunity. Infection after this age presents the picture of adult tuberculosis with apical lesions.

The first reaction to the inflammation of tuberculosis in the sensitized person is exudation. The first exudate is that of the polymorphonuclear type, due to the reaction of tissue to any foreign protein. This disappears in about forty-eight hours to be replaced by mononuclear exudate and proliferation of fixed tissue cells. From these elements the characteristic features of tubercle formation with giant cells, epitheloid cells, and lymphatics are produced.

From this point the pathological changes progress to the reparative changes of fibrosis and calcification or the destructive changes of caseation, ulceration and cavitation. These lesions tend toward healing in the adult who has an ordinary amount of allergy or resistance. It is also true that the lesions of the adult type of the disease are the result of repeated infection, either from within or without.

ASSUMED CASE

Let us assume a case and say that the first lesion is in the right apex. This particular lesion has gone through the pathological changes of exudation, tubercle formation, and is now present only as an old fibrotic scar, but while this old lesion has been progressing to repair and healing a newer lesion has developed at some other point lower down in the lung or in the opposite apex; this newer lesion may be the result of spread from the original lesion or a new infection from without; the second lesion we will say is in a state of exudation. Drawing the picture still further, we may have developed an area of caseous broncho-pneumonia in one of the lower lobes. This latter lesion is the result of aspiration of infectious matter from some apical lesion. We can carry this picture on to cavitation, etc. Now in this problematical, yet typical case, there are many distinct lung lesions, all due to tuberculosis, and each one in a different state of pathological change,—there is present exudation, caseation, fibrosis, and cavitation.

Extending down into the lungs are connective tissue barriers or septa, in the shape of a cone or pyramid—these septa prevent the spread of any infection causing exudation and flooding this compartment, by continuity of tissue. This accounts for the localized rales heard on physical examination, and also the fans as seen on

the X-ray plates. The fan is not typical of tuberculosis as many have supposed but merely means that there is flooding of these compartments by exudation and their finding appears in many other diseases. The differentiation of these lesions can be made by an understanding of the progressive pathology of tuberculosis just described, and the ability to read it on an X-ray plate.

In early pulmonary tuberculosis it is essential to check up your history and physical findings with a well taken stereoroentgenogram which has been interpreted by a physician who is specializing in this work.

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OUR DUTY TO THE PUBLIC AND MISTAKES WE CAN MAKE.

By C. A. RAY, M. D.

Read Before The Cabell County Medical Association, Huntington, April 9, 1925.

Left to make my own selection, I have chosen for my subject on this occasion, 'Our Duty to the Public and Mistakes we can Make,' or, 'My Philosophy of the Practice of Medicine, founded upon almost forty years of experience.'

Our duty to the public as a whole does not differ one iota from our duty to an individual who, whether voluntarily, referred, or by consultation, comes under our care as a patient.

The Public Health Departments of our nation and states, the great institutions of Medical Research, hospitals for crippled children, tubercular sanatoriums, leper colonies, lying-in asylums and baby, clinics throughout the world were not conceived by the minds of the men and women of wealth who have endowed and made them possible, but out of the soul of perhaps some obscure doctor, a dreaming Joseph as it were, who, after long and wearisome vigil over a child with dyptheria, a friend with tuberculosis or a community with plague or yellow fever and had lost, then and there determined that it should not be ever thus.

It was not Osler's achievements alone that made him beloved of all the world. It was not the keen perception of Austin Flint that made his name a byword of physicians for generations. It was not the personality of Gorgas, the soldier, that will place his name in the Hall of Fame. It was not mercenary gain that prompted Ephriam McDowell more than a hundred years ago down in the wilderness country of Kentucky, to open the abdomen of a poor woman. It was not selfish aggrandizement that urged on with increasing fervor men like Crawford, Long, Lister, Jenner, Pasteur and many others I could mention, until they reached the goal for which the world will ever praise them.

Reading the lives of these men, we cannot imagine them ambitious for fame, riches or glory, but hav-

ing that spirit of merciful humane sympathy for some suffering individual made them great in spite of ambition.

Do not understand me to believe that a young physician should not be amitious for a successful career, but in the pursuit thereof, eliminating all selfishness in the presence of the affflicted and applying all the science and skill possessed by yourself and conferees, the realization of your ambitions will slip in, unannounced, with the heralding of your success by those whom your devotion has brought back to Health and Happiness.

If it is our ambition to gain distinction, we will rob the weak and flatter the strong, and become the fawning slaves of those who are able to foist us above our betters and deck us with titles and honors of the great, without any regard for our own merit and respectability. But, if we are ambitious to do good without regard for the fame we may win or the praise we may command, our course will be honorable and just, our acts and deeds most worthy.

Taking as the standard, the lives and achievements of our heroes of whom we proudly boast, and rightfully so, that the ideal of our profession is as much for pride as profit, and this being true, every individual has who is seriously ill is entitled to all, and the best the profession has to offer. If the patient can, he should pay and pay sufficiently for it. If he is poor and cannot pay, ample provisions are made in institutions throughout our land to take care of such, and do provide the best skill and equipment.

May I digress here to say that I think doctors of today charge people who are able to pay, fees entirely to small. I can see no reason for charging a millionaire the same fee for an appendectomy that you would a man who earns thirty dollars a week. I think the sooner all fee bills and other such agreements are sent to the crematory, the sooner you will get your just compensation.

Business is business, the pursuit of which is for profit alone. Work is work, to secure a living, is the desire of every honest man, and a debt he owes his family. Take the joy and pride out of your work as a doctor and you have a cold-blooded proposition in which, if you succeed, your success will be self-satisfaction alone and your name and fame will be forgotten like the junk dealer who made a million out of rags and bones and his grandchildren cleaned the streets of the city.

We, as members of the medical profession, County, State and National Societies, are one big family, with the same ideals and purposes in mind and if we emulate the model family group, each of us less fortunate brothers are entitled to share in the knowledge gained by those who by natural endowments, circumstances, or opportunities, have surpassed us in the acquirement of skill, technique, and keenness of observation; that, through us your knowledge and skill will reach and benefit some poor mortal who otherwise might perish.

Those of you who did not read an article by Dr. J. V. Smith, Professor of Philosophy in the University of Chicago, in the A. M. A. Bul-

letin of January, 1925, missed a gem, from which I quote:—'Of course one cannot with full justice draw up an indictment against a whole profession. There are physicians and physicians; But it is astonishing how large a number of intellectual laymen today harbor resentment against the medical profession, not because doctors are not good men, almost never because they are thought to be mercenary; but all too generally because they treat their great knowledge as though it belonged to them privately and would be lost if shared with others.'

Again he says—'How are we of the profession to justify ourselves ethically in living thus on the cream of life while the great majority of our fellows must take the skimmed milk. It is certainly not lack of knowledge that our professional men lack today; we injure our profession far more by the lack of that democratic spirit that sees in every man a stimulus to share the best we have.'

Egotism and self-conceit have no place in the makeup of a conscientious physician or surgeon. The egotist is next door to the fanatic. Constantly occupied with himself, he has no thoughts to spare for others. He refers to himself, thinks of himself and studies himself until his own little self becomes his ruling principle of action. The world is so ugly because they cannot see anything except when they look in a mirror. If there had been no improvement on the ideas and works of the ego of twenty five years ago, there would not have been any progress in surgery and therapeutics. Appendicitis, goitre and gall bladder diseases would probably be considered inoperable and therapeutics limited to the use of aconite, quinine and calomel. The most humble saddle bagged county doctor can give his silk-hatted conferee some good common sense ideas if approached in the proper manner. 'The Big I and little Your' doctors will die some day and go to Heaven we hope, and after a few years will look back in surprise on this old world and wonder how it got along so well without them.

Liberality of one's views, opinions and knowledge suggests freedom from narrowness and prejudice of the giver when displayed under proper circumstances and will do much toward creating that spirit of good fellowship so much to be desired among doctors, and it is not difficult to draw the line between self-reliance and modesty on the one hand and self-esteem and arrogant pretentions on the other. Sizing people up is a part of the doctor's business and it does not take long to decide whether it is an abundance of knowledge offered or an abundance of gall being handed out ot you. Whether he is honestly modest or ignorantly arrogant is easy to decipher.

One of the first evidences that a doctor possesses, the attributes of character which marks him as a broad-minded ethical physician, is his attitude toward consulting with another physician. As we have said before, the patient if necessary, or his friends or family think so, is entitled to consultation. A consultation is always by mutual agreement and for the benefit of the patient. The physician in charge has his rights and they should

under all conditions and circumstances, be respected. No physician should be little enough to refuse or even discourage a consultation, notwithstanding the fact that his patient's condition is favorable and progressing in a manner satisfactory to himself, and likewise should the consultant be big enough to act fairly, frankly and honestly in the expression of his opinion thereafter.

If you differ in opinions, a third party should be called and your position made plain to the friends of the patient, in a friendly and diplomatic manner, then follow their suggestions until future developments prove who was right and who was wrong. By so doing, your responsibility ceases until it is proven you were right. Personally, I have always made it a rule to carry out, to the letter, the suggestions of a consultant, with the full knowledge and co-operation of the family, using my own judgement as to how far I should go, and I do not recall having ever lost the friendship of a patient or esteem of a conferee by my actions. Any of us are liable to make mistakes, or, for various reasons overlook small points of great importance when considered along with the history of the case.

We have, more than once, seen an abdomen opened for acute appendicitis when the abdominal pain was referred from a pneumonia of the right lower lobe, and not many months ago I was saved the same humiliation by a friendly surgeon who advised me to wait twenty-four hours after I had fully made up my mind and advised operation. I thought my friend's opinion was worth something and subsequent developments proved that I was mistaken and he right.

Hydronephrosis may be, and often is, mistaken for an ovarian cyst. Many pathological conditions of the kidneys produce the same line of symptoms which can, with much difficulty, be differentiated by an even skilled urologist. Choked disc demonstrated by a trained ophthalmologist may clinch the diagnosis of an intracranial growth or retinitis, disclose the insiduous progress of chronic nephritis. The gastro-entrologist may locate the source of symptoms of indigestion in the duodenum, gall bladder or appendix. What can be more important in the future welfare of a patient than to be able to tell him that his pulmonary tuberculosis is in the incipient stage, or, that the breast or shoulder neuralgia is the beginning of angina pectoris/

The field of medicine is too big for one man to be proficient in all of its branches, therefore the specialist has his field of usefulness and should be encouraged, but at the same time he should not lose sight of the fact that his CASE is perhaps a vital part of a PATIENT. Much respect is due the general practitioner who, although he may not look or act the part, by years of experience and observation, possesses that power or inexplainable intuition to know that something of serious consequence is in store for his patient.

If you would possess this desirable faculty, beware of over-specialization. By concentrating on one part of the body you are liable to lose sight of the greater part of the anatomy - physiology and easily drift into a routine more applicable

to whittling a stick of soft wood rather than operating on a human being. I once heard an old professor assert 'that a doctor who starts out to specialize before having five years in general practice was a very dangerous man.' We do not make it that strong, but do think the specialist is much safer if he has had three to five years experience at the bedside as a general practitioner.

Statute laws require only that a physician or surgeon do the very best he can without neglect in a given case, but moral laws expect the profession to give the best it has as a whole; therefore, I repeat, that any human being who is ill, no matter what his position or standing in life may be, is entitled to the councils of the medical profession.

For the promotion of this idea we have first the consultation room at the bedside of our patient, then our Medical Journals, National and State Societies, and best of all, our County Societies. It is just as important for every member of the profession to belong to and attend the meetings of his County Society as it is to see that his automobile has water, oil and gas before starting out on a call. Here all petty jealosies should be laid aside, free discussion and ideas exchanged on every paper that is read. The broad minded author does not prepare and read a paper before you to display his own achievements, but hopes by your discussion and exchange of ideas, to increase his own knowledge. There is nothing so discouraging and humiliating to an essayist as to have some member rise and say—"We are indebted to Dr———— for his splendid paper and hope he will do it again." If your criticism is friendly, make it, if otherwise, don't hesitate to express your adverse opinion. There is nothing so detrimental to the interest of the County Society as the adverse discussion of an author in the lobby after adjournment.

I see so many good things in the A. M. A. Bulletin, at this point I cannot refrain quoting from a recent publication.

"Your County Society—Get in the Game—Do your Part.

Apathy is a curse to progress. The Slogan, "Let the other fellow do it" is what water is in gasoline, or an automobile with a slipping clutch.

The nation that reaches a position of strength, the community that becomes a model for all other communities, the society that would function to efficiency, is the one that reflects not the work of a small group or clique, but the greatest number adding their bit of energy to the total result.

Society is a seething, ever-changing maelstrom; the customs of today give way to the different innovations of tomorrow, and when tomorrow becomes yesterday, still other unknown and unrealized forces govern our lives.

To stand still is to stagnate. To stagnate is to wither and die.

As the society representing organized medicine in our community we have certain obligations. We are the guardians of the health, therefore of the happiness and prosperity of our people. Our lines of activity reach to the horizon of the human endeavor.

A few men are not and should not be responsible for this trust. It

is a work, a problem and an enterprise for the whole. We become only as influential, as strong civically, and as worth while as our final efforts represent the will of the mass.

You, the physician, have certain obligations. Besides the many expected virtues, you have the obligation to become as good a doctor of medicine as it is possible.

Your County Society is a real trust of which you are a component part. Absence is dereliction of duty. One who fails to rise to the emergency is apathetic.

If you know and realize that you are not the physician you should be, unless you strive to increase your general knowledge and skill you are false to your trust. A postgraduate course as outlined by your joint committee on graduate education may help remedy this fault.

If you would guard your interests and the interests of medicine you should be conversant with the many factors of legislation that are ever arising and affecting us.

If you would add to the dignity, worth and strength of organized medicine you should show an active interest in your county society. Surely eight meetings a year to attend is a small hardship to impose.

Go to the stated meetings of your county medical society! Become familiar with the workings of the society! Voice your opinion! Get in the Game! Tear down in order to construct bigger and better things! Have opinions and fight for them! Grab a line and help pull our craft up the stream!

You cheat yourself if you let the other fellow do it."

There is a certain relation between the physician and surgeon or specialist which is frequently ignored or overlooked by one or both and sometimes results in ill feelings or estrangment among doctors, very much to the detriment of the patient. It is our belief that the physician who calls a surgeon to operate on a patient or specialist in any branch of medicine, should continue his service in the case and be consulted about the general welfare and health of the patient. The family physician is generally familiar with the patient's peculiarities and idiosyncracies that in many instances his services are invaluable and may sometimes turn the tide of an unfavorable prognosis. Under no circumstances whatever, and we declare this most emphatically, even at the ultimatum of losing the patient, to both parties, should a doctor who has been called in consultation assume charge of the patient. You will sometimes be placed in a very embarrasing position, perhaps with a very good friend, especially those of you who are connected with hospitals, but no doctor can maintain his self-respect and esteem of other physicians and do otherwise.

Dr. 'A' is out of town, or cannot be located for an emergency Dr. 'B' is called and the situation is explained to him. Dr. 'B' should render necessary services and when Dr. 'A' appears, inform him of his actions, retire from the case and charge a consultation fee. After all, medical ethics are no more or less than the attitude of one gentleman toward another, whether they be lawyers, blacksmiths or farmers.

My apology for imposing upon you this line thought is our aim to enhance the spirit of good fellowship, raise the standard of social and professional relations, impress the obligations of our ethics and perhaps make a friend of one whom you thought an enemy. If they have been worth while, I am grateful for having had an opportunity to present them. We may not have become rich or famous, but we can live our life and practice our profession in such a manner that when the time comes for flowers it can be said of us, he portrayed the spirit of the poet who wrote:

"Let me live in a house by the side of the road
Where the race of men go by,
The men who are good and the men who are bad
As good and as bad as I.
I would not sit in the scorner's seat
Or hurl the cynic's ban,
Let me live in the house by the side of the road
And be a friend of man."

ANNOUNCEMENTS AND COMMUNICATIONS

Charleston, W. Va., July 10, 1925.
W. Va. Med. Jour.,
James R. Bloss, M.D., Editor,
Huntington, W. Va.

Dear Sir:—I hope you will pardon my writing to you a multigraphed letter, but time and my limited means do not permit me to write an individual letter to each of my newspaper friends throughout the state.

I would like you to know that the Military Training Camp Association the young men of the state in military training camp, the President of the United States, the Secretary of War and all the branches of the national defense appreciate the fine patriotic service which has actuated you at all times to give unstintedly the finest of publicity for national defense in all its branches.

You, of course, know that West Virginia leads in the number of young men serving in the late war, that the army officers believe that West Virginians make the best soldiers, that West Virginia, although having nearly double the allotment to which she would be entitled on the basis of population, was the first state in the United States to fill her quota for the Citizens Military Training Camps, as well as the first state in the Fifth Corps area.

To these thanks I add my personal appreciation.

Sincerely, your friend,
JUSTIN K. ANDERSON, chairman.

I heard on the floor of your senate chamber the distinguished, esteemed, honorable and venerable member of Gilmer of that august body, with the silver tones of an Ingersoll, the pathos of a Mark Anthony over the dead body of Julius Caesar, the vocabulary of a Shakespeare, the zeal of a Billy Sunday and the vehemence of a Dante speak in favor of cult practice. This oration was quite a surprise as he had by every action indicated his antagonism to chiropractic adjustments and chiropractors. The cause of his conversion is still unknown. In his pleadings for that body to allow him, the grand old patriarch, to point the way to the promised land, the land of Canaan, as it were, the milk and honey of medical practice and to be derived at only by chiropractic adjustments, he with great favor called their attention to the wise old Rabbi Gamaliel and with tones that would have melted the heart of a stone asked them to meditate on this Rabbi's phil-

osophy in which he said if this work be of man it will come to naught, but if it be of God you can not overthrow it. May I remind you that Gamaliel's philosophy was uttered two thousand years ago and to my mind Barnum has a more modern conception of present conditions when he said, "Another one is born every minute." Before passing from our esteemed senator, let us say, to him we hold no malice, may he live long, be prosperous, be happy and may he never live to see the day that he shall repent or be sorrowful for having in large measure been responsible for legalizing cult practice, may in his last days he hear rolling down through the corridors of time the plaudits of the chiropractors and chiropractors' friends which he so roundly won, may his posterity take great pride in the fact that their father accomplished what others failed to do when he lowered the standards of medicine in West Virginia, and last, may he in his declining years, the catheter age, as it were, never be forced to call for physical aid on any member of the medical fraternity which he so ably ridiculed.

J. R. SCHULTZ,
Charleston, W. Va.

DALLAS WILL ENTERTAIN THE SOUTHERN MEDICAL ASSOCIATION IN NOVEMBER.

A warm invitation is being extended to the doctors of the South to attend the annual meeting this fall, and preparations are being made to entertain between four and five thousand. Already 1500 rooms in the best hotels have been set aside for this purpose, and it is estimated that more will be available.

Dallas has all the chief requirements for a successful convention city, ample hotels and auditoriums, easy accessibility, facilities for entertainment and diversion, coupled with whole-hearted hospitality on the part of the citizenship. It is not only a medical center of importance, but a city of interest and opportunity.

EASILY ACCESSIBLE

Ten trunk line steam railroads serve Dallas with 100 passenger trains daily in and out of the $6,500,000 Union Terminal Station; 258 interurban trains leave the $1,000,000 electric interurban station daily. Dallas is 16 hours by rail from Kansas City, 18 hours from St. Louis, 27 hours from Chicago or Cincinnati, and 43 hours from New York.

For those who wish to use the automibile in attending the S. M. A. convention, Dallas is located on five transcontinental highways, Bankhead, Meridian, King of Trails, Dallas-Canadian-Denver, and the Dixie Overland. These highway organizations assure the tourist of well kept roads. In Dallas county alone are 1,000 miles of surfaced highways, and a tourist camp and centers of highway information are available also.

CLUBS, RESTAURANTS, THEATRICAL FACILITIES

Dallas has a number of strong clubs, splendidly housed, such as the Dallas Athletic Club, University Club, City Club, a number of fine golf clubs and all the leading national service organizations, such as Rotary, Lions, Kiwanis are represented here — all are most hospitable in the entertainment of visitors.

Restaurants, either connected with hotels or independent, are numerous and of a generally high standard. Some of the highest priced chefs in the nation are here. You can get meals with a western flavor, Mexican dishes, Chinese dishes, or old-fash-

ioned southern cooking. All the year truck gardens and farms are producing in some part of Texas, and this, coupled with proximity to packing houses, poultry farms and orchards, tends to keep food prices reasonable.

Dallas has 37 theatres, with a combined seating capacity of 28,000. These include summer and winter stock companies, many good road shows during the season, high class vaudeville and motion picture houses, and the Little Theatre, which was twice awarded the Belasco prize. There are theatres costing as much as $2,000,000 and seating as many as 3,000 persons.

CLIMATIC CONDITIONS

Dallas climate as a whole is pleasant and invigorating, without severe extremes, and November in Texas as a rule is crisp and clear, ideal for travel and for outdoor sports.

Through the medium of this Journal, in later issues, data on the hospital and clinical facilities of the convention city will be given, meanwhile the medical profession of Dallas and of Texas, invites you to plan to attend the Southern Medical Association Convention this fall.

CURTICE ROSSER,
For the Publicity Comm.

POINTS IN THE NEW GAME LAW

The State Game and Fish Commission is desirous that the hunter and fisherman of West Virginia be fully informed as to changes made in the game and fish laws by legislative enactment at the 1925 session. A copy of the forest, game and fish laws will be mailed to any one on application to the game and fish commission, Charleston, W. Va. Any person who does not have access to a copy of the law may find it of advantage to keep in mind the following points:

1. The open season for hunting squirrels begins on September 28, instead of September 1, as formerly. There is no open season on any game until September 28.

2. Raccoons and opossums cannot be taken until November 1; and there is no open season on beaver and otter.

3. The season on deer and wild turkeys is closed for two years.

4. The daily bag limit on rabbits is set at five per day.

5. No one can use a ferret except he is a land owner and uses the ferret to protect his property.

6. The season for bass fishing is July 1 to December 1, of each year.

7. The bag limit for bass is ten per day and for trout, twenty-five per day.

8. Game fish cannot be gigged. Fish of any kind cannot be gigged during the closed season on game fish.

9. It is unlawful to have in possession any hunting or fishing equipment, such as fish traps, seines over legal size, etc.

10. It is unlawful to cut down trees in which game animals den or take refuge, merely for the purpose of taking such animals.

11. It is unlawful to use a spot or jack light for hunting game animals, except that the same may be used for hunting animals that take refuge in trees.

12. Non-resident hunting license costs $15. Non-resident fishing license, $5.

New provisions of the forest fire law will be taken up with the forest land owners.

The hunter and fisherman are asked to watch their step.

Yours to serve,
A. B. BROOKS,
Chief Game Protector.
J. J. SUMMERS, Chief Deputy.

THE WEST VIRGINIA MEDICAL JOURNAL

JAS. R. BLOSS - - - - - - - - - - - - *Editor*

WALTER E. VEST, Huntington
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HARRY M. HALL, Wheeling } - - - - - - - *Associate Editors*

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All original articles for The Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all parts of the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

Advertising forms will go to press not later than the tenth of each month.

All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

Should be made by check, draft, money order, express order or registered letter to Sterrett O. Neale, Executive Secretary, 211 Smallridge Bldg., Charleston, W. Va.

Editorial Office: 804 Lincoln Place, Huntington, W. Va.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

Dr. George R. Semple, 51 years old, a member of the West Virginia State Medical Association since 1921, died at his home in Aurora, Preston County, according to word received.

Dr. Semple was widely known through northern West Virginia and had many friends in the medical profession throughout the state.

Dr. Stemple was born January 18, 1874, in Aurora. He took up the study of medicine and in June 1901, was graduated from the Kentucky School of Medicine. He passed the state board examinations that year,

and commenced practicing his chosen profession in Harrison County until 1907. In that year his health failing, he returned to Aurora and lived a quiet life. However, in 1918, even though in frail health, he again took up the active practice of medicine in Aurora and Eglon, because the physicians there had answered the call for military service, and no one was available in the field. Dr. Stemple was actively engaged in this practice until a few days before his death. He was an influenza victim.

Dr. Stemple twice was married, first to Miss Cora V. Anderson of Wyatt, W. Va., and then to Mrs. Bessie L. Cole. He is survived by his widow and three children, Godfrey A., Virginia and Elizabeth. Burial services were said in Aurora.

THE WOMAN'S AUXILIARY

At the recent meeting in Bluefield, the Woman's Auxiliary of the state association was organized.

Mrs. Seale Harris of Birmingham, Ala., was in attendance during the whole of the state meeting, and had a number of conferences with the ladies to this end.

The purpose of this organization is to bring into closer affiliation the wives and daughters of the members of the profession. The State Auxiliaries are affiliated with the national body in the same way that the component associations of the American Medical Association are organized. It is hoped that through this auxiliary that more wives of physicians will be encouraged to attend our state meetings, and in this way help to increase the interest in the annual gatherings.

The first president selected for the auxiliary is Mrs. A. G. Rutherford, of Welch.

We feel sure that this new organization is going to be of great help toward making the annual meetings of the state association more valuable and enjoyable.

Under the able leadership of Mrs. Rutherford, we bespeak for it great success.

BIRTH CONTROL

The subject of birth control is rapidly assuming large proportions in the minds of the people. Sociological workers have shown that the race will inevitably deteriorate if the unfit are allowed indiscriminately to reproduce their kind. Economists have shown that the increase of population is rapidly gaining upon the food supply of the world. All are agreed upon the desirability of some means for improving the race, but how it best can be done is a problem which has not yet been solved.

It is estimated that the agricultural area of the United States will produce food sufficient to support a population of 160,000,000 people. At the present rate of increase of the population, this maximum may be reached in 1960, unless other food materials are found. The time will have arrived, which Malthus predicted over one hundred years ago, when food supply is inadequate to feed the population. War, pestilence and famine are the means usually operative in restoring the balance.

The laity seems to think that the doctors possess a secret means of birth control. This is a delusion. We are aware of no sure method of regulating birth. If we did possess such a knowledge, it would be very difficult to know how to apply that knowledge with wisdom and discrimination. Who is going to decide who is fit and who

is unfit to propagate his kind? Procreation is regarded as an inherent right of every individual. This idea is supported by religious teachings of ages. While it may be contended that the right to procreate is limited by the advantage of society, and that the religious command to increase and multiply is scientific heresy, it is a fact that in the present state of public feeling, no efficient method of birth control could be enforced, no matter how desirable it might be. We have not yet arrived at standards sufficiently discriminating to determine who are the fit. At the same time, education of public thought upon this important question is urgently necessary.—Ed. Minn. Med. July, 1925.

ZINC STEARATE DUSTING POWDERS FOR INFANTS

The second report of the committee on accidents from zinc stearate dusting powders appointed by the board of trustees of the American Medical Association has recently been published. Copies of this report, with an appendix showing the opinions of 34 representative pediatricians on the therapeutic value of such powders, can be obtained on request. Address Committee on Zinc Stearate Dusting Powders, American Medical Association, 535 North Dearborn Street, Chicago, Illinois, enclosing a self-addressed stamped envelope.

There were reported to the committee 131 accidents from the inspiration of zinc stearate dusting powders by infants. Twenty-eight of the victims died. The committee conferred with representatives of certain distributors concerning the dangers incident to the use of such powders on infants. Following a meeting held at the headquarters of the American Medical Association, these distributors agreed to co-operate by adopting self-closing containers for the powders they distribute and agreed that cautionary labels were desirable. Opinions were secured from 34 representative pediatricians concerning the therapeutic value of zinc stearate dusting powders. Thirty-one believe that such powders have no advantage over other dusting powders, that they constitute a hazard to infant life, and that their use should be discouraged.

STATE AND GENERAL NEWS

OHIO COUNTY

Vacations are in order up here, and it would take more time than happens to be at the disposal of this reporter to tell where each man is going. We have often referred to the celebrated position Canada holds in the affection of the profession up here. It has not lost its hold, all the reports about the character of malt beverages are to say the least, anything but alluring, so it can truthfully be said it is not for that they go.

To anybody contemplating a mere scenic tour in this locality, which is to say Niagara, Montreal, Quebec, Skagway river, Lakes George and Champlain, down the Hudson to New York and back, we would recommend an itinerary of the National Tours, 37 West 39th St., New York City, which is $204.98 for three persons from Wheeling back to Wheeling, all outside staterooms and lower berths, and all expenses except meals at "European plan hotels."

In the "wash-room" these bracing mornings the Dayton trial is the leading topic of conversation. Dr. O. M. Staats is quite a deep investigator into the realms of evolution. Dr. R. U. Drinkhard being 20% by volume, a Baptist minister of the Fundamental-

ist type is inclined to see a little bit the way the Silver Tongued Orator does. We doubt if anything that goes on down in Tennessee can afford any more thrills than these two running on all six. Most medical men hereabouts are entirely on the side of Scopes, and are bewildered to think there could be such a thing as a trial got out of it. That's the trouble with most medical men, they are, to be as constantly in touch with humanity as they are, about as easily deceived on what is actually going on as any crowd you could meet. So many medical men cannot believe even yet so-called intelligent people are really caught on cults and pathies. They deem it just a little collection of passing fancies. They should attend a legislature or two, and receive a liberal education.

This reporter secretly enjoys the embarrassment of the modern educators down in Dayton. Particularly does he enjoy the discomfiture of Clarence Darrow. It is rather puzzling to do this when you really agree with them. But in his paper at Bluefield this reporter stated the medical profession had gone through theirs, now it was the turn of the lawyers and general educators to bunch up against crass, unreasoning creduality and ignorance. Here they are face to face with the same organized crowd of half baked zealous so-called good citizens, that the medical profession has put up with for years. The scientific men at Dayton have to turn around and helplessly face a jury, just like we have to face a collection of state senators. What chance have scientific terms and explanations with their long formulas going to have before a lot of gas filling station employes, butchers, bakers and candle-stick makers. It would be well for some of the celebrated, silver-tongued lawyers, who are so fond of protecting the personal liberty of the masses against the profession of medicine, to put their ears to the ground and hear the lamentations of one Clarence Darrow, who while he can sway audiences to tears so they forget the most outrageous kind of murders, cannot with all his oratory —even though his cause is just—present scientific facts clear as they may be, so they will win against blind prejudice. Then too—there is the case of the educators. A lot of them give the profession of medicine many of its worst baiters. They are forever taking up all the diet fads, fresh air crusades, back to nature movements, Christian science fallacies, and storming against drugs. Far be it from them to pour "diseased serums" into their blood, or be vaccinated, or swallow mercury. Their education warns them it is not to be thought of. They are often in the front line of those that hoot us. Well, they know how we feel now. They know what makes us speechless against their diatribes. A well informed man can only be silent when the mob is prejudiced, hysterical and blind in their attacks.

This reporter has heard several men criticise the fee bill on the workmen's compensation blank for not naming a fee for fracture of the skull. Trepanning the skull is $100. This invites the man who needs a new car badly to put a little buttonhole in the skull whether it needs it or not. Now of course, no one would do this, still the schedule of fees is nothing but an instrument of satan, tempting the weaker brother. We all know most skulls do not need it and it would be better to pay someone for not putting a trephine into them. Why

not a straight fee for fracture of the skull?

Here is a nice question too. If a clerk goes back to work on Sunday on work he could not do on week days, and is hurt by falling timbers in a cyclone is he not entitled to compensation?

We overlooked the last session of the Ohio County Medical Society on May 15, 1925. Dr. Otto C. Gaub of Pittsburgh, gave a lecture on "Congenital Mal-Development of the Intestinal Tract that May Require Surgical Intervention," with lantern slides.

This was one of the most comforting lectures of the year, and to this reporter probably the most heartening one of many years. We fancy it may interest others.

Now there are probably none of the dozen or two who may read this exciting narrative who have not at sometime or other promised to the awaiting family and friends a rather angry looking, swollen—even gangrenous appendix. After the incision is made and the cecum is up, and you are face to face with that little offender, which according to W. J. Bryan cannot be evoluting, you discover it resembles nothing so much as a good sized fishing worm. The one you use for bait. Your own picture of yourself is that you and not by any means the patient is suffering from surgical shock. With trembling voice and faltering step you start out, (if you have not borrowed one) to fulfill your promise to the family to show them this beliggerent and red handed organ which has separated by a hair line the living from the dead. You go on and on explaining (with no visible effect on the audience) and finally you say it was kinked on itself and drawn over by an adhesion. Aye there it is. Dr. Otto Gaub says that all you need, that that very malformation is enough cause for all of it—and as far as we are concerned we echo a thousand amens.

Now do not for a moment gather from this that the doctor does not work this out carefully and clearly. He does. He said up where he operates they were called so often in their hospital staff meetings for taking out innocent looking appendices that they grew weary of the pathologists criticisms and so for long periods they made exhaustive studies and they proved the kinks and malformations can give rise to all the trouble. As a matter of fact you know you have done it time and again, removed a small malformed appendix that you felt like stepping on for not being more of a show, only to find the patient recovered.

The doctor is a good talker, has done lots of work, had good pictures, is an authority and we personally take him affectionately to our bosom.

We attended a meeting of the Marshall County Society, to which some laymen were invited. It was held at the country club. We genuinely enjoyed a good time. They are open handed, hospitable fellows down there. In their talks they say what they think too. We recall Dr. Morgan said, "Gentlemen, I believe the chiropractors really help us. They bring us closer together." We predict for this crowd of fellows that they will some day have one of the most powerful societies in the state.

Dr. Fulton has fully recovered.

Dr. Hupp is still in Europe.

Sister Xavier has almost made the North Wheeling Hospital look like a new hospital. We have not seen so big a change in anything done in so short a period.

NEWS NOTES

At the Bluefield meeting of the State Association Dr. T. W. Moore of Huntington, was elected as chairman of the Eye, Ear, Nose and Throat section, and Dr. Moore elected as secretary of the section Dr. Raymond A. Tomassene of Wheeling.

AMERICACN ELECTROTHERAPEUTIC ASSOCIATION

The American Electrotherapeutic Association will hold its 35th annual session September 15 to 18 at the Hotel Drake, Chicago, Ill. Papers will be read by the leading men in the field of physical therapeutics and by invited guests of national reputation. A demonstration of actual technic of application of the various physical modalities will be given. There will be a complete exhibit of the latest electrotherapeutic apparatus and accessories. All legally licensed physicians are welcome and detailed program can be obtained by addressing Dr. Richard Kovacs, Secretary, 223 East 68th St., New York City.

AMERICAN BOARD OF OTOLARYNGOLOGY.

An examination was held by the American Board of Otolaryngology on May 26, 1925, at the Medico-Chirurgical Hospital, Philadelphia, with the following result: Passed 137, failed 20, total examined 157.

The next examination will be held at the University of Illinois School of Medicine on October 19, 1925. Applications may be secured from the secretary, Dr. H. W. Loeb, 1402 S. Grand Boulevard, St. Louis, Mo.

ADDITIONAL HOSPITALS APPROVED BY THE COUNCIL ON MEDICAL EDUCATION AND HOSPITALS FOR THE TRAINING OF INTERNS.

Since the list of hospitals approved for internships was printed in The Journal, March 28, the following additional hospitals have been approved:

St. Francis Hospital, Santa Barbara, Cal.
Colorado General Hospital, Denver.
Washington Sanitarium and Hospital, Washington, D. C.
Wesley Memorial Hospital, Emory University, Ga.
German Evangelical Deaconess Hospital, Chicago.
Ravenswood Hospital, Chicago.
Research and Educational Hospital of the University of Illinois, Chicago.
Roseland Community Hospital, Chicago.
Decatur and Macon County Hospital, Decatur, Ill.
Wesley Hospital and Nurse Training School, Witchita, Kan.
St. John's Hospital, St. Paul.
Chester County Hospital, West Chester, Pa.
William Beaumont General Hospital, El Paso, Texas.
U. S. Army Station Hospital, Fort Sam Houston, San Antonio, Texas.
Wheeling Hospital, Wheeling, W. Va.
St. Elizabeth Hospital, Appleton, Wis.
Marquette University Hospital, Milwaukee.
University of Alberta Hospital, Edmonton, Alberta, Canada.

COUNTY SOCIETY REPORTS

The Barbour - Randolph - Tucker Medical Society met at Philippi in Farmer's Room in Court House, June 25, 1925, 8:30 p. m., the following being present: Drs. B. I. Golden, Magill, McIntosh, Wilson, Irons, Williams and Smith. Visitors, Drs. Parmesano and Simon, dentists.

Dr. Golden presided. Minutes of previous meeting were read and approved. A letter from Dr. Henshaw relative to co-operation of physicians in the government's plan to holding

military training camps, etc., was read. No action deemed necessary. Secretary read the application of Dr. H. W. Brooks of Thomas, for membership, and under suspension of rules he was duly elected. The secretary called attention to the fact that the minute book of the society was full and a new book was needed, and suggested that some safe repository should be designated for keeping the records. He was authorized to secure a proper record book for future use, and to store the minute book in the safe of the Davis Memorial hospital.

Dr. Golden stated that some member who had been present at the society meetings when action had been taken on the Newman matter, had informed Newman of what was done, stating that he, the informant, had opposed the matter, notwithstanding the fact that the vote was unanimous for, with no opposition in vote or otherwise. Dr. Golden justly denounced such perfidy, and suggested that the society should take drastic action in such matters. Such action was condemned by all, realizing that one Judas in the society is more dangerous than a dozen outside—however, as yet no definite action was taken.

Dr. Magill insisted that a member who sat in meetings and did not oppose any action of the society either by vote or in discussion, was as much bound by the action as if he had supported the same. Silence was considered consent.

Dr. Hall was expected to make a report of the meeting of the state society at Bluefield, but was unavoidably absent. Dr. E. R. McIntosh then read his paper on "The Tonsil Question." Dr. McIntosh had taken great pains to prepare his paper, giving much of the physiological functions, the nature of these glands, which after five to seven years seem to be very well dispensed with, and giving much of his experience in dealing with these troublesome addenda. Dr. McIntosh was highly commended for his paper, which was discussed freely by Dr. Golden and others.

In tonsillar operations Dr. Golden strongly opposes local anesthesia, as there is always danger of enlarging the infection by passing the needle through diseased tissue. Dr. Golden emphasized that these operations are not simply office work, but should be done by an experienced and qualified operator. These operations may be, and are often more serious than generally considered—especially when we look for good results. Dr. Golden insists that if it is not imperative, tonsils should not be removed before the seventh year. He also called attention to the importance of looking for the real cause of tonsillar conditions, citing a case of his which was the result of cancerous infiltration, which responded to radium treatment, but an operation would have been a serious mistake.

Dr. Golden condemns the custom of spraying the throat after operations, as by this you destroy nature's provision for stopping hemorrhage and causes extra inflammation and possible infection. He believes we are doing entirely too much operating in removal of tonsils unnecessarily. He insists that in the young we be more careful in ascertaining the cause of the trouble. Dr. McIntosh closed the discussion.

Dr. C. B. Williams made a brief report of the Barbour County Health Clinic. He reported that the health nurses and the ladies of Philippi, assisted by Dr. Smith, and with Dr.

Griffith of Clarksburg as operator, 23 tonsillar cases were operated upon. They had to turn off many cases for lack of facilities. Temporary quarters were provided by the ladies of Philippi. All cases were kept over the night. Many other cases are seeking operation. A clinic is to be held in Belington on July 6, which is expected to duplicate the one at Philippi.

At a late hour the society adjourned to a restaurant where a refreshing lunch was greatly enjoyed through the kindness of Drs. Williams and Smith. Society then adjourned to meet in Tucker County in July, provided the members in that county desired the meeting.

J. C. IRONS, Secy.

The Marion County Society tried a new stunt at their monthly meeting on June 30, sort of combined celebration and cerebration. At 5 p. m. with our families, we met at the Doctors and Dentists Club on Oucketts Creek. Some pitched horse shoes, others swam, mostly all talked. At 7 p.m. we had a picnic dinner. Following the meeting was held and it was short and to the point. Dr. Jas. C. Burt of Pittsburgh, Pa., of the Allegheny General and St. Francis staffs read a paper entitled "The Prostatic Functions in Men Past Middle Age." Dr. Burt's paper was well written, to the point, and sufficiently short so that it could be remembered. Following this we adjourned —then an orchestra came and we had a delightful dance until 12 m. A list of those present were: Drs. King, Scanlon, Edmonson, Cyrus Boyers, Smith and Howell of Morgantown, Dr. James C. Burt of Pittsburgh, Drs. E. W. Howard, C. L. Holland, J. M. Trach, L. B. Boyers, J. R. Tickwiller, C. O. Henry, K. Y. Swisher, G. V. Morgan, C. W. Waddell, E. P. Smith, G. R. Miller, H. L. Horton, H. S. Keister, J. A. Reidy, W. T. Boyers, P. F. Priolean and G. H. Traugh of the Marion County Medical Society.

The wives and families of the above doctors furnished the refreshments. Dr. E. W. Howard made lemonade.

The only regrettable feature of the affair was the slim attendance. If members will not turn out for a combination like the above they will not turn out for anything unless one were to offer $5 to each one for a night call. G. H. TRAUGH, M. D.

MEDICINE AND SURGERY

THYROID DURING PREGNANCY

P. A. Daly and Solomon Strouse, Chicago (*Journal A. M. A.* June 13, 1925), report on seventeen patients who presented a clinical picture of functional disturbance of the thyroid beginning about the middle of pregnancy. They complained of marked nervousness, irritability and emotionalism; of troublesome insomnia; of palpitation and ease of exhaustion. They presented the physical findings: enlarged thyroid, tachycardia, tremor, increased blood pressure, and in some instances one or more eye signs usually associated with hyperthyroidism. Seven were primiparas; ten were multiparas; their ages ranged from 17 to 42 years. In thirteen cases the symptoms began between the fourth and sixth months; in three they began before the third, and in one after the seventh month. In all of these cases bromids, from 45 to 60 grains (3 to 4 gm.), were given daily for one week, no other medication being used. Only three obtained relief; fourteen were not favorably influenced. Compound solution of iodin,

from 3 to 5 drops three times a day, was then administered to the patients who obtained no relief from bromids. No other medication was used, and the patient's routine of life was not changed in any way. All were promptly relieved from their subjective symptoms, usually within seventy-two hours, the most striking result being the relief from insomnia. In all but one, the blood pressure returned to normal level; diminution in size of the thyroid was apparent in about 50 per cent.; the tremor and eye signs — when present — disappeared in all; the pulse rate decreased appreciably in only about one third of the cases. Two patients with persistent nausea and vomiting were completely relieved. The plan adopted was to administer compound solution of iodin in courses of one week, with intervals of from one to two weeks between courses. Relief was obtained, as a rule, within one week; most of the patients, however, received two courses of iodin, and several required three weeks before the symptoms were permanently alleviated. One patient had a recurrence of symptoms during the lactation period and responded to a similar course of iodin. The smaller group of eight patients presented the clinical picture of diseased thyroids; i. e., exophthalmic goiter. They gave histories of several years of symptoms occuring in recurrent cycles. Six had definite exophthalmos. Exacerbation of symptoms, in these bore no relation to the duration of the pregnancy, occuring any time from the second month to term. In this group, iodin therapy gave relief from subjective symptoms and, in a measure, from objective signs, but the relief was not permanent, lasting for several weeks when a return of symptoms would necessitate another course of iodin. It was possible to carry them through their pregnancies safely and fairly comfortably. Since the completion of their pregnancy, several of these have had thyroidectomies performed.

ROENTGEN-RAY TREATMENT OF TUMORS OF THE BRAIN

E. B. Towne, San Francisco (*Journal A. M. A.*, June 13, 1925), has studied ten cases of glioma of the brain, of which six were verified and four were unverified, to determine whether postoperative roentgen-ray treatment had any effect. In four cases the treatment had no favorable influence; in four cases there was more or less marked improvement, which may have been due to the surgical procedures; and in two cases beneficial effect was demonstrated by relapse on withdrawal, and improvement on resumption, of the roentgen-ray treatment. Two illustrative cases from each of these groups are reported. Towne says that roentgen-ray treatment of tumors of the brain, excluding pituitary tumors, should be undertaken only after accurate localization; after exploration to rule out benign tumor and to verify, if possible, the diagnosis of glioma; and after decompression, whether or not there is increased intracranial tension. With these requirements satisfied, postoperative treatment should be used persistently, even when the glioma is cystic. There is no way of predicting whether the roentgen-ray will have a favorable effect on the tumor. As some gliomas do well with decompression alone, good results can be attributed to the roentgen-ray only by discontinuing the treatment and demonstrating the beneficial effect of further treatment if there is a relapse.

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SOME TRANS-ATLANTIC OBSERVATIONS

By FRANK LeMOYNE HUPP, M.D.

The care of the sick aboard the average trans-Atlantic liner is well provided for. The ventilation and light are all that could be desired. The Veendam of the Holland-American line can care for about thirty or forty patients in their comfortable infirmary, even the isolation department has not been neglected. The ship surgeon is a graduate of the medical department of an American University and his quarters are as well furnished and equipped as one could desire, and prepared to meet any emergency among the passengers or crew, whether his patient be prince or peasant emigrant. The operating room was rather dark, but seemed to contain the necessary outfit for meeting any major surgical procedure. We were told that one of the large vessels had recently diminished her speed in mid-ocean to enable a prominent surgeon passenger to do a cholecystectomy in a case of ruptured gall bladder. Yet this would not seem necessary in a ship developing only 36 knots an hour with little or no vibration, and a moderately smooth sea.

There seems to be a great deal of sameness to the older continental hospitals, many of them were constructed in the mid-Victorian days or earlier, and while immaculately clean in every respect, they contain few of those modern conveniences which we expect to see and which seem so necessary for the comfort and happiness of those seeking health. These remarks do not apply to the surgical departments, for even in these older institutions the operating suites seemed to have been recently rebuilt, and provided with terrazza floors and tiled walls, and equipped for the most part with all the modern apparatus which one expects to find for clean work. The same may be said

for the X-ray rooms. In several of the institutions the directors seemed to take particular pride in pointing out some equipment and making mention of the fact that it was purchased in America. Many of the hospitals coming under this category have beautiful gardens and command striking views, and have extensive grounds, covered by flourishing trees, shrubs and flowers of every description. (Fig. 1).

The Municipal Hospital of Lucerne, Switzerland, is a type of these older institutions. Situated in the suburbs, admirably located on an elevation overlooking the blue waters of the Lake Lucerne, with its Alpine peaks capped with eternal snow reflected in its mirror like surface.

The new Hospital Brugmann of Brussells, stands out conspicuously as one of the most complete of the modern hospitals of the world. It is built on the pavillion plan and made up of some forty detached buildings. (Fig. 2).

The buildings and surroundings of this recently constructed hospital remind one of the Rudolph Victoria Krankenhaus of Berlin or the Eppendorf Hospital of Hamburg. Yet possessing all of the modern architectural ideas and equipment which have come with present-day requirements.

The surgical department of the Brugmann is under the direction of that illustrious and learned surgeon De Page, whose monumental achievements during the world war stands out as one of the brightest chapters of service and self-sacrifice in the annals of medical history. It may not be generally known but De Page's wonderful wife was one of the victims of the Lusitania, and he was in charge of the hospital in Brussells in which Edith Cavel was directress of the training school. (Fig. 3).

While in Brussells we visited the National Shooting Gallery, a place of many acres set apart for target practice for the Belgian soldiers. It was here the heroic Edith Cavell faced the German firing squad and paid the supreme penalty October 16, 1915. It was with a feeling of reverance that we placed white roses on the very place she fell. With hearts bowed down by all that this visit recalled, and by what was seen at Louvain and at Malines, the home of the sainted Cardinal Mercier, to say nothing of Waterloo, which was included in that afternoon's ride, one could not but recall the words of the immortal Wm. Osler, who looked upon war as a positive disease: "A vice of the blood, of the plasma rather, it runs riot in the race and rages as of yore," and in his address on "Science and War," in October, 1915, he wrote: "The race is in one of its periodic attacks of acute mania, Jeremiah of old would say the world is drunken and the nations are mad."

"What I inveigh against," said Osler, "is a cursed spirit of tolerance, conceived in distrust and bred in ignorance, that makes the mental attitude perennially antagonistic, that subordinates everywhere the race to the nation, forgetting the higher claims of human brotherhood."

In front of the Edith Cavell Memorial School for Nurses there stands a very fitting and beautiful monument erected to the everlasting memory of two brave women. (Fig. 4).

While sojourning in Europe a book just published in England has come to the writer's attention, entitled, "New Cancer Facts," by D. Master, with a foreword by Sir James Cant-

(Fig. 1). The Municipal Hospital, Lucerne, Switzerland

(Fig. 2). The New Brugmann Hospital, of Brussells, Belgium

(Fig. 3). Brugmann Hospital, Children's Department, Showing Individual Compartments and Isolation.

(Fig. 4). The Edith Cavell and Marie DePage Memorial.

lie. Much of the material in this book is based on certain investigations carried out by Dr. L. W. Sambon, lecturer in the London School of Tropical Medicine.

Sir James says that owing to Dr. Sambon's researches "two important facts stand out: (1) Cancer is a parasitic disease; (2) the control of cancer is within our reach."

It is hardly necessary to tell the readers of the Journal that these views have not been admitted by those engaged in cancer research in our country. The parasitic origin of cancer is not new, but is based on the researches of the Danish biologist, Fibiger, who about a year ago published the results of experiments, which suggested that cancer in rats is caused by a parasite which infests cock-roaches. While Fibiger's views are interesting they have nowhere been accepted and must still be subjected to the search light of test and examination. Masters book is written in an interesting style and does not reject the theory generally accepted that cancer is due to irritation, but he contends that parasites play their part in the production of the disease and that the germ may be one of those minute organisms, invisible under the microscope, even passing through the laboratory filter. He went to infinite pains examining with precision the homes of people who were dying of cancer, the conditions in which they lived, their surroundings or anything which might shed a light on the subject. He visited Italian-Romagna and parts of Iceland where cancer is said to be prevalent and because he found in profusion rats, mice, black beetles, meal worms, and meal-mites and other pests that begin life in the cockroach or cellar beetle, maturing in rats and mice, he supposed that he had established an etiologic link between these parasites and the disease itself. The fact that cancer is neither infectious nor contagious nor even hereditary is decidedly against Sambon's theories. I would advise any reader of the Journal who wishes to follow up this interesting speculation to visit the Crocker Research Laboratories in New York City, under the supervision of Dr. Francis Carter Wood, and there see the experimental work on tumor and cancer development in rats and mice, where every phase of this theory has been threshed out and published. How are these gentlemen going to explain the fact that cancer can be produced by X-ray burns? It reminds one of a theory that cancer prevailed only in districts where rivers and floods were plentiful, but the appearance of the disease in the Australian gold fields when water is scarce gave the lie to that idea.

The Inter-State Clinical Society or Post-Graduate Assembly, comprising some 600 American physicians and their families, arrived in England, May 30, headed by their president, Dr. Charles H. Mayo, of Rochester. They have been royally treated in every city they have visited. In the various hospitals special clinical and pathological demonstrations have been conducted by the attendng, honorary and consultant physicians. In addition to the things purely medical which have engaged their attention, they have extensively feted. Many and elaborate receptions have been held, theatres and museums visited, and special functions given in their honor, under the supervision of the committees from the various British medical societies.

More than 400 of the doctors and their families were welcomed by France yesterday, June 25th, at the Faculty of Medicine, thus opening the strenuous week arranged in their honor. Dr. Mayo placed a wreath of roses on the tomb of the unknown soldier at the Arc de Triomphe in behalf of the visiting physicians. At the Hotel de Ville, in his reply to the address of welcome, Dr. Mayo said: "If science will restore war-torn France, it will soon be restored, for there is the most magnificent science here that can be found in the world. It has been French science that has saved the lives of thousands of people, the lives of thousands of plants and animals and through them human beings, and science too has prevented the loss of billions of dollars through teaching the world the care of crops." Dr. Woods Hutchinson wisely observed on the same occasion that, "it is prevention of disease that the whole world is seeking today. Heretofore doctors who only lived among the sick did not know what to do if they saw a healthy man. But today they are dealing with the problem not of getting patients, but eliminating them." He contended that some day the time would come when every person would put themselves absolutely in the hands of physicians and then the disease problem would be simplified, and the cost would not be as great as such a revolutionary plan might indicate. The average expenditure per capita in America today is about $4.10 annually for the poorer classes and ranging up to about $50 annually for the rich, so that doing the thing thoroughly would not mean much of an increase.

The visit of the American physicians to the laboratory of Madame Curie was a delightful one. Despite her advanced years and the ravages on her health made by the dangerous radium, with which she has continued her strenuous experimental work since her lamented husband's death, she was found hard at work at 1 Rue Pierre Curie. Madame Curie is still fighting hard against the common foe cancer.

Today, June 28th, is Hospital Sunday in London. Over two thousand places of worship in the great English Metropolis will take collections for this fund, and every denomination will join hands in a united blow at disease. There are eleven thousand patients in the beds at London's hospitals, and upwards of twenty thousand out-patients were treated last year. This work of conducting these hospitals, I am told, costs three million pounds sterling annually. Since its inception in 1872, 3,000,000 pounds have been distributed through this Hospital Sunday collection. I have been told by a reliable authority that the cost of this collection, its distribution and administration was under 4 per cent. I can testify to the great value and importance of the work done by this personal touch and altruism, as it is one of the methods of collecting funds for the hospitals of New York City under the name of Hospital Saturday and Sunday. But over and above this helps the institutions, is its wonderful effect upon the people contributing, deeply implanting as it does that great idea of social service, which should be fostered; and which is, and should be, their tradition and pride.

Why not establish for our West Virginia hospitals a Hospital Sunday and emulate the custom of our English cousins?

There is a campaign now on in Paris to raise $300,000 for the American Hospital Memorial building. This much used institution has been made possible by the gifts of many hundred Americans in Europe, and in having the generous support of public minded men and women who have given large sums for its maintenance. It will be and has been for the benefit of those travelling Americans who are unfortunate enough to be taken ill while abroad. Every reader of the Journal is acquainted with the collossal problems met with before and during the war. It is meant that the new and modern building is to become a Monument and a shrine to the countless wounded who were saved and nursed back to health, and to those who peacefully died there during those terrible days, as well as to the American doctors, men and women attendants who gave their service, even their lives. When completed the Memorial Building will be the most complete and up-to-date structure of its kind in Europe.

It is not generally known but according to figures issued by the United States Department of Commerce 260,000 American citizens came abroad during the course of the year 1923 and it is variously estimated that a million and a half will find their way across the Atlantic from American shores in 1925.

As American Ambassador Myron T. Herrick has said, that those benevolent Americans who established this hospital in 1913, builded wiser than they knew, for they could not know that this small beginning for the care of the sick was destined to form an imperishable tie between France and America, and to exert and influence in all these years to come far and above its declared purposes. Many of you will remember that the American Hospital and the American Ambulance did historic service in the care of the wounded, under the supervision of Dr. Joseph A. Blake, later becoming the American Military Hospital No. 1. The medical direction of the American Hospital in Paris is in the hands of a staff of well known physicians and surgeons, yet any reputable and qualified physician will be privileged to admit and treat their patients there. A splendidly organized training school of nurses has been established under the management of the medical staff of the hospital with Miss Sylvia M. Hannan, R. N. Presbyterian Hospital, New York, Directress of the School, and Miss Eleanor McK Savage, R. N. Presbyterian Hospital, as assistant, and Miss Elizabeth Ravina, R. N. Massachusetts General Hospital, is the Operating Room and Obstetrical Supervisor.

DIAGNOSIS AND TREATMENT OF URETERAL STRICTURE

WILLIAM S. ROBERTSON, M. D.
Charleston, West Virginia

Partial or complete obstruction to the flow of urine from the kidney pelvis to the bladder may result from several causes which may be classified under the following heads: (1) pressure on the ureter from without, (2) obstruction within the lumen of the ureter, (3) angulations and torsions of the ureter, and (4) stricture of the ureter which, as defined by Kelly, is "an intrinsic narrowing of the ureteral walls due to disease." Urinary stasis also follows some conditions

of the lower urinary tract; for example, stricture of the urethra, enlarged prostrate, etc. By far the most common cause, however, is ureteral stricture and to Hunner belongs the credit for the recognition of its frequent occurrence, the determination of its etiology and its role in the production of many urinary pathologies. Notwithstanding unfriendly criticism, bitter opposition and even ridicule from some urologists of prominence, his work has definitely established that stricture of the ureter is not only the primary and essential lesion in the etiology of many morbid conditions of the upper urinary tract, for example, hydroureter, hydronephrosis, pyelitis, pyonephosis, stone in ureter and kidney, and some so-called "essential" hematurias, but also is responsible for not a few extra-urinary reflex disturbances. Not since the advent of the cystoscope has any discovery in urology been of such moment as the recognition of the high rate of incidence of stricture of the ureter. The rather wide acceptance of these facts by urologists (there are still many who do not concur) is destined to revolutionize urologic therapy. Granted that the primary cause of a given pathological lesion of the urinary tract is stricture, the logical procedure is to correct the narrowing and as this is feasible by dilation through a cystoscope, either of the direct or indirect type, it becomes evident that many conditions which were formerly amenable to open operation only, may be relieved without resorting to radical measures.

Until compartively recently, stricture was rarely diagnosed and if discovered at all, was usually considered of congenital, traumatic or tubercular origin. Hunner has found it present in 2,000 cases in the past eight years. He defines stricture as a "chronic inflammatory condition of the ureteral walls resulting in infiltration and varying degrees of narrowing of the lumen," and is of the opinion that "the majority of strictures have their origin in an infection of the ureteral walls from some distant focus, such as diseased tonsils, teeth, sinuses or disease of the digestive tract."

In a series of fifty cases of pyelitis, Baker found an appreciable obstruction in forty nine. Goldstein and Rathbun have shown that ureteral stricture occurs frequently in men and is responsible for lesions above the infiltration just as in women. Many other observers have confirmed Hunner's work and have made valuable contributions to our knowledge of stricture from their observations.

Ureteral stricture may be suspected from the history of the case, from the physical examination and from the results of a urinalysis. However, the diagnosis can be made only by special urologic examination.

History:—Pain is probably the most constant and important symptom and varies in intensity from a slight discomfort to a perfect simulation of a renal colic incident to the descent of a calculus. In these cases presenting constant or intermittent abdominal pain if the urine is found to be negative, as occurs in 75 per cent of stricture, and a plain Xray reveals no suspicious shadow, the urinary tract escapes indictment and some operation fol-

lows either upon the appendix, gall bladder, female generative organs, or gastro-intestinal tract.

It is not a rather common experience after abdominal surgery, that the patient has a recurrence of those symptoms which precipitated the operation, sometimes even before the hospitalization period has ended. And is it not a fact that a considerable percentage of operative patients disappoint and embarrass us in that the relief they sought, had confidently expected and had been conscientiously promised, did not follow the operative procedure to which they were subjected? It is difficult and awkward to explain these failures to our patients. We must either admit error or fall back on that thread-bare diagnosis of adhesions, a diagnosis which, while rarely correct, hides a multitude of diagnostic shortcomings. If recovery is a sequence of ureteral dilatation in even one of these cases, it is interesting; if relief follows in a series the value of this procedure should convince the most skeptical.

At a recent medical meeting the essayist, although the subject presented was "Abdominal Pain," made no allusion whatsoever to the pain dependent upon urinary tract morbidity. The first requirement in order that we minimize the number of our mistakes, is to recognize that abnormalties of the urinary system give rise to more instances of abdominal pain than do diseases of adjacent organs. This statement may be questioned. I have no statistics relative to the coincidence of urinary pathology with that of other abdominal visera, but from the observations of those who do urology one of two conslusions must be accepted either there is a very common coincidence of diseases in the urinary and other organs or there are too many unnecessary laparotomies. This opinion is based on the fact that the large majority of cases coming for urologic examination have previously been operated upon, once or oftener, not on the urinary system but for some other condition. If this coincidence of disease commonly exists, then the preoperative diagnosis must often not be inclusive as pathology of the urinary system is frequently not suspected. Absence of an abdominal scar in the cases seen by the urologist is most unusual.

Back ache, vesical irritation, many symptoms suggestive of disturbances in the female generative system, many reflex affections of the gastro intestinal tract, headache which may approach migraine in severity, chills and fever in the presence of infection, if the stricture for any reason closes, are some of the other symptoms which have been found dependent in some instances on the existance of stricture and have disappeared when the stasis has been relieved.

Physical examination: If stricture is present there is usually tenderness over one or both kidneys and over the course of the ureter. It is well to bear in mind that the tenderness elicited in abdominal palpation is at a point nearer the median line than McBurney's. In the female, a bimanual examination will often disclose a thickened ureter, pressure upon which will reproduce the symptoms which prompted the patient to seek medical advice.

Urinalsis: It has been stated above that approximately 75 per

cent of stricture cases have normal urine or a urine which shows only slight evidence of patholgy. This fact should be remembered. We have formerly depended largely upon the urinary findings, chemical and microscopic, in determining the existence of a pathology; if the urine was negative, it was concluded that, except in the case of autonephrectomy, the urinary system was free from disease. Albumen, casts, blood, pus, epithelium and crystals will, of course be met with in cases associated with infection, stone, etc.

Special Urologic Examination : On this the definite diagnosis of ureteral stricture depends. There is a widespread practice among some urologists to rule out stricture provided a No. 5 or 6 catheter passes to the kidney pelvis easily. No deduction can be more erroneous. The normal ureter has an average lumen diameter of 3 mm. which in catheter scale is 9 F. A No. 5 catheter is 1 2-3 mm. or about one half the diameter of the normal ureter; it can therefore be readily appreciated that a catheter of this size might pass to the kidney without encountering any obstruction even if considerable narrowing of the lumen were present. I have advisedly used the phrase "special urologic examination" for the reason that the catheters used in searching for stricture are provided with wax bulbs of varying sizes.

If the patient is a female, direct cystoscopy (the so-called "Kelly method"), is usually employed and the wax bulb is placed 8 to 10 cm. from the catheter tip, which is also waxed. However, if the patient is a male, the indirect or prism cystoscope is generally used and the bulb is placed very near the catheter tip, as described by Goldstein. The catheter is then threaded retrograde through the cystoscope, leaving the bulb protruding so that in the passage of the instrument, the bulb enteres the urethra ahead of the cystoscope. The instrument having been introduced, the ureter is catheterized.

Strictures are not revealed during the **introduction** of a catheter but upon its **withdrawal,** the waxed bulb, catching in the narrowed lumen, results in a resistance to the removal of the catheter which is known as a "hang." An exact parallel is found in the use of the olivary bougie in the male urethra, the "hang" or "hangs" denoting accurately the number and location of strictures in the penile canal. Surely no one attempts to diagnose stricture of the urethra with a Van Buren sound so why should the ureter be explored with a cylindrical instrument of uniform size in searching for narrowing of this canal.

Should an obstruction be encountered in passing one of the smaller catheters c o m m o n l y employed through the water or prism cystoscope, it does not necessairily denote stricture. Angulations, valvelike pockets and folds of the mucus membrane may be engaged by the tip of the catheter, prevent its introduction and lead to an erroneous diagnosis of stricture.

A most valuable aid in drawing our conclusions as to whether the case under examination has urinary disease dependent upon obstruction is frequently furnished by the patient who will often voluntarily ex-

claim, as the catheter passes up the ureter "That's the same pain I've been having." It is a helpful practice to fill the renal pelvis with normal saline to a distention giving moderate discomfort. Patients can and do differentiate between pains of unlike character and if distention of the pelvis produces a new or unfamiliar pain, the probabilities are against the existence of a condition obstructing urinary flow. On the other hand, if he "recognizes" the pain caused by distending the pelvis as identical with that he has formerly had, we may feel confident that he has had a renal colic from some cause.

Most strictures are found within 6 cm. of the os ureteri; next in frequency it occurs 8 to 10 cm. above the bladder, near the bifurcation of the iliac vessels, more rarely it may be located elsewhere. Stricture is nearly always bilateral, a fact that may explain the phenomenon known as the reno-renal reflex for in cases of bilateral pathology the less damaged kidney not infrequently gives the most pain. The lesion may be annular, diffuse, dense or resilient and may be single or multiple in either or both ureters. Such points of exact diagnosis can only be determined with especially equipped catheters, either with waxed bulbs or with woven or metal olivary attachments such as are employed with the ingenious instrument devised by Walther.

No examination of the urinary tract is complete without urography Uretero-pyelograms furnish very important data in many cases of stricture, at times disclosing these points of narrowing with accuracy, a dilated ureter and pelvis above the obstruction should there be a hydro-ureter, hydronephrosis, or both. In other instances even with dense stricture the ureter and pelvis seem normal in outline.

Why some ureters and pelves dilate above stricture and others do not is not easily explained. Hunner believes that the nervous equilibrium of the individual patient may play an important part in the anatomical variations found above a stricture, the patient with a highly sensitive nervous system reacting to pain stimuli in the ureter with a more or less constant tonic spasm of the upper tract, thus preventing it from dilating. As a matter of clinical observation the stricture patient with a kidney pelvis smaller than normal is the one who generally requires the most treatments for the exceedingly dense and painful stricture, and the treatments are likely to be accompanied by anuria and other evidences of exaggerated nervous reflex. To explain why in one individual the dilatation takes place in the calices at the expense of the kidney cortex, in another the dilatation is chiefly in the pelvis, and in a third the dilatation is mostly in the ureter. Hunner has advanced the theory that these three areas of the upper tract may have developmental variations of the musculature, the greater dilatation occurring in the individual patient in that portion of the tract possessing the thinner musculature.

TREATMENT: If we accept the systemic origin of stricture, treatment begins with a thorough search for the focus of infection and the removal of this. Local treatment consists in the passage of catheters equipped with wax bulbs or similar

dilators. Dilatations are given on alternate sides every five days so that each side is treated once every ten days. This interval has been found advisable as not infrequently severe reactions follow these catheterizations. The size of the bulb is increased at each sitting. Stricture in the male is not so satisfactorily managed as in the female, anatomical differences necessitating the employment of the indirect cystoscope in the former with which it is difficult to use a bulb larger than 4 mm. or 12 F. Fortunately this amount of dilatation is followed by relief in most instances. (McCarthy's New Scope). Neff has done some work with an elongated electrically illuminated endoscope, the male patient taking the knee-breast position, but this method is not applicable in all cases. In the female, bulbs as large as 18 F can be successfully introduced. The number of treatments required varies in different cases, some patients getting relief after one or two dilatations while others require repeated visits, six to twelve or even more treatments on each side.

Irrigation of the kidney pelvis with any antiseptic of choice may or may not be done according to the preference of the operator. It is significant that infections of the pelvis rarely yield to irrigation unless considerable dilatation is simultaneously done, although the kidney can usually be sterilized without irrigation if free drainage is established through the ureter. Contrary to popular opinion, urinary antiseptics administered per oram are of doubtful value.

Under dilatation by the vesical route many morbid conditions of the kidney which were formerly operated may be corrected. Occasionally strictures are met which cannot be opened from below and require a retrograde dilatation through an extraperitoneal incision. Further, some cases when first seen have such extensive destruction that radical procedures are indicated.

With the inevitable coming of a closer professional relationship between internist, surgeon and urologist, not only will there be fewer operations in the field of urology but many unnecessary laparotomies will be avoided.

403 Bank of Commerce Building.

PRE-OPERATIVE AND POST-OPERATIVE CARE OF CASES IN ABDOMINAL AND PELVIC SURGERY.

By
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Read before the Cabell County Medical Society, Huntington, W. Va., April 9, 1925.

The profession of medicine and surgery is today, standing upon a high terrace of scientific achievement. We look to the East and its accomplishments with pride though not that of profound satisfaction. But, it is the Golden West that concerns us, that invites us to further conquest, further exploration, with the hope of added discoveries.

We are concerned more with what is in front rather than what is back of us. There are yet mountains to climb, and many peaks to surmount. One of the heights standing out plainly on our horizon awaiting our ascent,

is the better pre-operative and post-operative care of surgical cases.

Because of the vastness of the field thus to be considered, this paper will deal, in a limited way, chiefly with the problems met with in the treatment of the more common cases in abdominal and pelvic surgery.

A consideration of work on the genito-urinary tract, certain pelvic cases and diseases of the rectum will be excluded. As one visits the numerous clinics of this country, he is impressed with the wonderful advances made in recent years in the surgical technique shown at the operating table, and many, at times, at least, are justified in feeling a certain pride in operative achievements.

But, after all, if we carefully check up the end results, we must admit that there is much to disquiet us, much to disappoint us, and, consequently, much yet to do before our efforts in these surgical fields are what we would wish them to be. Who has not been profoundly impressed by what has seemed a successful or even brilliant accomplishment of a severe, to say nothing of a simple surgical operation, then to be disappointed or even humiliated by having overlooked some important factor in diagnosis or in the patients actual condition from the result of a more or less hasty or careless pre-operative consideration or from the post-operative care.

The author has for some time been giving considerable attention to these causes of disappointment, and feeling the necessity and importance of better care of patients before and after operation, has thought that a short discussion of some of these problems would not be out of place.

A profession of such strenous activities and responsibilities should inspire all workers in every field of surgical endeavor to give to their patients the very best that is in them. Nothing short of this is worthy of the debt we owe our patients, our great profession and ourselves. Our duty then, may be summed up in the Golden Rule.

If we do realize at times that in our haste or in a too superficial and careless examination and pre-operative care of our patients coming to operation, we have overlooked some serious condition or defect, this is not enough to compensate for the unnecessary loss of life or for the physical and mental disability of those intrusted to our care. It hardly seems necessary to say that a careful and painstaking examination of every patient coming to operation should always be had; not an examination dependent only on subjective symptoms, but also on a notation of all these together with such information obtainable both from the patient himself and from others concerned as to personal and family peculiarities coupled with our own investigation, and topping it all by the liberal employment of the laboratory, the X-Ray and other helpful accessories.

It is a very superficial excuse to say that we are too busy and too rushed with work to examine those who place their lives in our hands or who look to us for the safeguarding of their health.

In the business world it is to be noted that the most successful merchant is not always the one who sells his wares the cheapest, for prices are largely fixed by custom and agreement; but one man is more successful than another because he pays attention to the little niceties so essential to the pleasure and the comfort of his customers; in other words, it is

the way in which he bows them in and bows them out that leaves the lasting impression.

A patient entering the hospital should be received by a wide awake, tactful and pleasant admitting officer, who bows them into the institution in a spirit of friendly sympathy and helpfulness; not in an attitude of gloom and despair but in a spirit of cheerfulness and encouragement.

The laboratory has been one of the greatest factors in bringing the scientific spirit into medicine and surgery. It is absolutely essential to the highest development of these professional activities. But, too often, we think it relieves us of the use of our senses in clinical work—that instead of bothering to make a careful study of the patient, to use all of our own powers to get the facts in the case and to bring into use the results of our experience and observation, we take a little of his blood, a little of his urine, a little of his sputum and perhaps a little of his cerebro-spinal fluid and get something back on paper, and think our responsibility as physicians and surgeons ended and the whole question settled for us. The laboratory and X-Ray are perhaps the most valuable assests we have in helping to arrive at a correct diagnosis, but they do not free us from our great responsibility, and should not lead us too far to one side in summing up the case. We are not fair to the laboratory man, not fair to the X-Ray technician and unjust to our patients and to ourselves when we fail to use our own trained senses in our valuations and in our judgements in the diagnostic study of the patients given to our care.

The nurses in attendance should understand that depressing conversations relative to the patient's condition or expected treatment should be avoided. They should see to it that every influence brought to bear on the patient should be designed to act on their peace of mind and avoid discussing with them the seriousness of the ordeal through which they are expected to go, and should not tell the patient how busy they are in the hospital or how hard the nurses work, for fear the patient in his usual pre-operative nervous state, conceive the idea that he will be neglected in his hospital care.

When time will permit, patients going to operation should drink freely of pure water, should be water logged and the administration of large doses of bicarbonate of soda at frequent intervals for twenty-four hours previous to operation is of great value in relieving and preventing acidosis. The giving of drastic purgatives before operation is, as a rule, bad practice. It is always well that the intestinal tract be clean and the stomach empty at the time of operation; but the less a patient is disturbed from the even tenor of his ways the better he will stand surgical interference.

Severe purgation and starvation before operation have been too much abused in the preparation of surgical cases. Patients should not be unnecessarily depleted and devitalized before the trying ordeal of operation. In most cases a restricted diet for twelve hours before operation with a simple soap suds enema on the evening or the early morning proceding the ordeal is usually all that is required. There has been much said both for and against the giving of opiates before operations on the abdomen and pelvis. In our service it is given before most operations.

Grain 1-8 to 1-6 of morphia sulphate with atropine is given hypodermatically one hour before the operation is to be started. This usually gives the patient a feeling of well being and a quiet period before the ordeal begins and usually lasts as a splint to the bowels and to the traumatized parts for some time after surgical intervention. With a patient given the benefit of the golden rule in the examination, preparation and in preoperative care, with all the facts, peuliarities and particulars in the case brought together and with a knowledge of the kind of aenesthesia indicated, the surgeon may approach his task with a degree of composure and security.

A discussion of operation technic as relates to cases of abdominal and pelvic surgery is out of place in this paper, but it might be proper to add that many of the serious problems met with in post-operative care are the result of the manner in which the operation was performed and the patient handled during that proceedure. In discussing post-operative care of patients, it is to be understood, first, that each case must be considered mainly individually and, with relation to its peculiar circumstances.

There is, therefore, no fixed rule governing after treatment other than to say that all efforts should be directed toward the comfort, safety and complete recovery of the patient. One of the most important lessons, it seems yet to be learned, is not to interfere too much with natures efforts at recovery; but with a careful watching, let well enough alone. Too much medicine, too much purgation, too much manipulation in many instances does not help, but retards recovery, and, may, in themselves, produce troublesome and even distressing complications after the surgical ordeal.

During the first twenty-four hours after operation the patient should be kept warm and quiet. Every helpful contribution to his comfort should be maintained. The practice of withholding drink from surgical cases is thought not to be good treatment. The patient should have water freely and in most instances after the stomach is empty of its accumulated mucus, it is well borne and hastily revives the patient.

Another mistake too often made is the keeping of patients too long and too closely confined on their backs or in one position. The position should be changed often, in this way relieving discomfort, pressure and congestion. Most patients should be propped up in bed early. The idea that early sitting up will cause separation of the wound and retard healing is not borne out by experience. A clean wound, properly sutured will bear great strain, beside the usual adhesive plaster over the dressings renders adequate support to the separated parts during the process of healing. Nowhere is the patient's normal attitude, habits and personal comfort so necessary as in the post-operative lying in period.

In some cases there is a temporary stasis in kidney action, but more often a temporary paralysis of the urinary bladder due largely to the lack of expulsive powers of the bladder itself or to a lack of expulsive powers on the bladder by the adjacent muscles of the abdomen. Catheterization should be done when indicated, but this may in a large measure be overcome and the patient made to void by lifting him to a sitting position. A

simple measure which will often give relief is to introduce a glycerine suppository into the rectum when usually the patient will void; or, the giving of a light soap suds enema is a satisfactory help.

The giving of opiates and sedatives after operation is not accepted as the best treatment by all surgeons. I personally see to it that my patients do not suffer and relieve them by whatever method best suits the case; but, I have no hesitancy in giving light doses of morphia whenever and as long as indicated. If there is one thing above all others to be emphasized in the after care of surgical cases it is the giving of plenty of pure water. They need it early and often after most operations, more than they do food. Water is required to refill the depleted and dehydrated tissues, and at the same time to increase and maintain elimination. Too much haste in moving the bowels by strong cathartics should be discouraged. There is no need usually to hurry in getting the bowels to move. On the second day after operation a light enema may be given or a tube inserted into the rectum to relieve the accumulation of flatus.

Too early purgation may add to the already paralytic distention of the small gut. Eserine grains 1/60 to 1/80 given hyperdermatically at intervals of four to six hours has proved a very valuable adjust in over coming troublesome flatulence. On the third or fourth day, one grain of calomel and soda in broken doses followed by one half ounce of caster oil is a reliable and safe aperient. This may be followed up by soap suds enema.

Dressings on clean wounds when there are no evidences of infection should not be disturbed too early. Usually about the fifth day they may be renewed and by the tenth or twelfth day all stitches should be removed. Drainage of wounds in the abdomen and pelvis seem to be less common of late but when necessary their inspection and dressing should be repeatedly done. There is yet no unanimity of opinion as to when to drain and as to the length of time the drain should be retained.

It is well known that in certain infections of the abdomen and pelvis such as from gonorrheal bacteria and other chronic infections, no drain is required; for the peritoneum is able to care for the exudate; but, in cases where bacteria from the bowels, gall bladder or stomach are present in the abdomen, drainage is required. If one means to drain, they should drain; that is with a drainage tube big enough and long enough to perform the function for which it is intended.

To me it is yet a disquieting thing to determine just how long a drain should be left in the adbomen. This is a point on which even men of large experience still differ. A soft rubber tube, or gauze covered by rubber dam of proper diameter should be carried down into the abdomen sufficient distance to drain the abdomen or pelvis as may be indicated. This tube should be disturbed gently, every day after the second day, that it may not be too long in one position in contact with the intestines for fear of devitalizing the gut by necrosis, producing hemorrhage from the erosion of a vessel, adhesions, fecal fistula, or even obstruction. The practice of withdrawing the drain a little each day after the first dressing seems to be a good proceedure, but, I am not

yet convinced that the very early removal of the drainage tube in cases that really need drainage, should be the rule. I am in the habit of leaving the drain at least a short distance within the peritoneum for a period of one week, or till I feel certain that constructive adhesions are well established and the suppurative canal is capable of carrying away the infections exudate.

Who is it that has not had cases in which the drain was removed and the wound mostly healed, when drainage was thought to be ended, to have his patient develop a sudden rise of temperature and a post-operative ileus from an accumulation of pus deep in the abdomen which was revealed at a subsequent operation or at the postmortem? The uncovered gauze wick or drain should not be used in the abdomen for the reason that it soon acts as a dam and becoming adherent, is difficult to remove. There are so many and so varied complications that may arise after operations on the abdomen or in the pelvis that it would be impossible in so short a time to discuss all or even to mention some. The problem of shock has been so frequently discussed that it will not be mentioned except to say that with the modern methods of combatting this complication, it is not often a serious factor being largely overcome by warmth, plenty of fluid by mouth, rectum and in the presence of marked anemia or loss of blood, by transfusion.

Acute dilatation of the stomach can as a rule be promptly overcome by the introduction of the stomach tube and frequent washings of the stomach. In the severe forms of intestinal obstruction, dilatation of the stomach is usually one of the late complications. Acute perforative appendicitis is yet to the surgeon, one of the most difficult problems. We are all well aware that this misfortune is still exacting a heavy toll of life. One of the most common and potent reasons for this is due to both pre-operative and post-operative conditions. The surgeon in the presence of acute gangrenous or perforative appendicitis when discovering a walled off and well defined pus cavity, feels a certain sense of security as he removes the appendix and drains the cavity without breaking through the constructive adhesions that surround it. But too often adhesions which were primarily constructive become destructive. Mechanical ileus coming on at a time when least expected, becomes very soon, a most dangerous complication.

The strangulation of the upper bowel with the absorption of its contents into the blood stream is the principal factor to combat. The symptoms of ileus are too well known to discuss, but with the actual condition present, no time should be lost in surgical intervention. The surgeon must be alert and bold in the early recognition of this very dangerous complication, and make haste to relieve the condition for fear of being too late and the patient overcome from profound toxemia. In desperate cases it is the best practice to perform a quick enterostomy making a fecal fistula and drain the gut of its poisonous accumulation, when, if necessary after improvement in the patients condition the obstruction can be removed whether it be from peritonitis, volvulus, kinking, cicatricial bands or a pus pocket. In otherwords, the condition resulting from

the obstruction should be treated first. In many cases it is unsafe to open the abdomen and hunt for the obstruction. If the complication is recognized early when the general condition of the patient is still good, one may quite safely explore the abdomen for the obstruction; but in the more desperate cases, many may be saved if rendered immediate relief by draining the gut and establishing a fecal fistula.

We have all observed that in those cases where fecal fistula occurs spontaneously, the patient makes a rapid recovery and that later the obstruction below gives away and bowel movements are established by nature's processes. The important thing is to save the patient and by not doing too much in these very threatening cases of post-operative obstructions, simply draining the upper bowel, we will be rewarded in our efforts by saving many seemingly hopeless cases. It might not be out of place to add, in this connection, that occasionally if not quite often, symptoms simulating appendicitis, gall stone colic and perforation of the stomach or duodenum, may be caused by lesions in the chest or elsewhere, especially by right sided pneumonia or pyelitis of the right kidney. Certain types of pneumonia usually referred to as abdominal pneumonia may be mistaken for surgical lesions of the abdomen, especially for appendicitis. They are common in children and do occur occasionally in the adult. I have known cases to be operated on for appendicitis and perforation of a duodenal ulcer when the true condition was pneumonia. Of course, the reverse of this may be observed.

In cases when the white count is over 20,000 the indications are more for pneumonia than appendicitis. In abdominal pneumonia of the right side, the pain may be referred either to the right upper or lower abdomen. Even a history of vomiting may be given. This is likely to occur if the initial chill happens soon after the ingestion of food. One must be careful to exclude pneumonia in children when suspecting appendicitis.

Here especially, is where the laboratory findings are of great importance. There are to be recognized certain differences in the signs of abdominal conditions in children and in adults. In older people great reliance can be placed on the history and subjective symptoms; in children they may be of little value. Young patients should however be asked questions and made to point out the place that hurts them. Lesions of the alimentary canal are most common in children, but the symptoms of onset may direct attention elsewhere. The preliminary examination should be very thorough in order to arrive at a probable diagnosis.

Palpation and rectal examination are the two most objective methods of determining abdominal conditions in children. It may be necessary to give a light ether anesthesia for rectal examination, and especially so, for the detection of tumor in suspected cases of intussusception. When acute symptoms in children point to the presence of disease in the abdomen or hip joint, rectal examination should always be made. The presence of a pyelitis or acetonaemia will be revealed by careful urinalysis of specimen uncontaminated by bacteria or other deposits from the vagina or labia in female patients. Abdominal lesions in children are largely limited to appendicitis, pneumonococcal peritonitis, abdominal tuberculosis,

intestinal obstruction, intussuscepton, iliac abscess and pyelitis; so that malignant growths of the colon, gall bladder disease, ulceration of the stomach and duodenum may be readily excluded.

The most common abdominal emergency in children is of course appendicitis. The clinical signs vary according to the particular location of the appendix in children, which is not so constant as in the adult; often being high up beneath the liver, and in such event mistaken for lesions in the chest, or low down in the pelvis mistaken for lesions of the bladder or adjacent organs. Peritonitis in children due to pneumonia germs will run a rapidly fatal course or terminate in pelvic abscess; in which latter event, abdominal drainage gives some promise of recovery.

Intussusception in children is not rare. This condition calls for careful attention in diagnosis. It is easily recognized if the clinical picture of tumor mass is felt and the bloody mucous discharge from the rectum of the characteristic dark red jelly type be present, but if these cardinal symptoms may not be prominent, the diagnosis is correspondingly difficult.

The author has recently had occasion to observe a number of post-operative complications brought about by various causes. One was a fatal case in a woman aged 52 upon whom hysterectomy and appendectomy had been performed ten years previously. Her bowels had moved only with great difficulty most of the time after operation, requiring each year more and stronger purgatives. In this case the partial occlusion of the gut gradually increased till a sudden explosion occurred completely obstructing the intestine by a firm cicatrical band. Another was a woman aged 32 on whom operation had been performed three years previously. This woman as the first case, was beyond surgical help when admitted to the hospital. The autopsy revealed adhesions of the gut to broad ligament and peritoneal wall as a result of operation for pelvic infection. She had a most enormously dilated stomach.

Another patient seen just recently was a lad aged 11, on whom operation was performed for acute perforative appendicitis. He had done well for ten or twelve days. The drainage tube had been out some time and recovery seemed assured. He suddenly developed a high temperature with severe vomiting and obstruction. A hasty operation was performed and a pocket of pus was found deep in the left abdomen far away from the site of the appendix. Another lad operated on for acute suppurative appendicitis made good progress toward recovery for two weeks, when it became necessary to operate for subphrenic abscess.

A woman aged forty, upon whom operation had been performed for chronic pelvic infection did well and left the hospital in three weeks. One month after being discharged she was re-admitted to the hospital in a moribund condition from ileus. Incision was made quickly in the abdomen and the first coil of bowel found was brought out and incised, thus draining the poisonous contents. She made a perfect recovery. The bowels began to move after a few days, the obstructive adhesions evidently giving way spontaneously by nature's efforts. These cases just mentioned are samples of numerous ones observed and of what are very commonly met with by every surgeon working in these fields. Owing to the prob-

able occurrence adhesions in the abdomen and pelvis after any operation where pus or active infection is present, when as a result of the condition found at operation intestinal obstruction is likely to occur soon after or even remotely from the original surgical interference, one should be careful to warn patients that such a misfortune as ileus or obstruction might happen at any time; and, that this condition should be thought of whenever distressing pain is present in the abdomen accompanied by vomiting and inability to get bowel movement. In the whole range of abdominal and pelvic surgery, there are many well established rules of after treatment of surgical cases which have been established by careful and experienced observers—rules developed and given as a result of hard painstaking work and common sense; so, to depart too freely from them, would be, in many instances, unsafe and to invite disaster; but, as advances are made daily in every line of human endeavor, so any departure from usual custom that offers more comfort, more hope and better end results to our patients, should at least, not be discouraged, but tolerated and endured in the light of modern progress.

SURGICAL DRAINAGE OF THE ABDOMEN

By DR. B. S. BRAKE
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Read before the Combined Staff of St. Mary's Hospital, Clarksburg, W. Va., Nov. 20, 1924.

Much has been written upon the subject of this paper. Sir Henry M. W. Gray of Montreal in the August, 1924 number of Surgery, Gynecology and Obstetrics presented one of the most recent contributions to the literature upon the subject.

In cases of abscess about the appendix he removes the pus by suction and by the repeated use of dry packs, removes the appendix, and if there is no hemorrhage, closes the peritoneal cavity completely without drainage. If spreading peritonitis is present he follows a similar proceedure. Again he removes the pus from the pelvis and elsewhere by suction and by packing and repacking the infected areas with dry gauze strips till they come away free from odor. In the meantime the appendix is freed and removed. The peritoneum is then closed without drainage and a rubber dam drain placed at each end of the incision down to the peritoneum. He names two conditions which make him feel that drains should be used. They are (1) persistent oozing of blood from the surface of an abscess cavity and a condition of the patient necessitating rapid operation; and (2) a shaggy, irregular lining covering the surface of the abscess. He states that he has never had occasion to regret not draining where the proceedures mentioned were carried out.

I am not here to advocate such bold methods in the treatment of pus conditions within the abdomen; I am not disposed to condemn them either at this time. If these teachings are sound, Sir Henry M. W. Gray is considerably in advance of me in the matter. Time, the great test of ideas, new and old, will prove or disprove the wisdom of these practices. There is no doubt that formerly drains were used entirely too frequently in the abdomen, and today one need only to watch a few different surgeons work to observe the rather wide differences

of opinions as to the indications for abdominal drains.

There is abundant reason to believe that the various natural defensive forces of the body are able to take care of a great deal more infection within the peritoneal cavity than we formerly considered, provided the infective focus is removed and the secondary deleterious material evacuated.

It was proposed by Berg that smears be taken from the infected area of the peritoneum in the course of the operation, that these smears be stained and examined and the question of drainage be settled by the bacterial count per field and by the character of the infecting organisms. This idea has been found to be impractical and the proceedure unreliable.

In order to attach to this discussion an air of originality, I have taken the trouble and the liberty to study the charts of 100 cases of acute appendicitis operated upon in this hospital within the last two or three years, or since more or less complete records have been kept in the hospital.

So far as could be determined from the charts all these appendices presented advanced gross pathology. Most of them were described by the surgeons as acute gangrenous appendicitis, but a large number of them were diagnosed by the pathologist, Dr. S. L. Cherry, as acute suppurative appendicitis. In short, the pathology of the cases selected ranged from the acutely inflammed, non-perforated gangrenous appendix through the succeeding stages to the perforated appendix with abscess about it or spreading peritonitis. No chronic or sub-acute cases are included in this study and so far as could be ascertained, all mild acute cases were eliminated from consideration.

Of this series of 100 cases, no drainage was employed in 55. Thirty-eight of the 55 that were not drained were diagnosed by the pathologist as acute suppurative appendicitis; the remaining 17 were not reported by him, or the diagnosis of acute gangrenous appendicitis was sustained by him. It is understood that all of these appendices presented some of the macroscopic appearances of gangrene or necrosis as they were so described by the different surgeons upon the operative sheets. In this list of non-drained cases one perforation was recorded that could be seen with the naked eye, but no definite pus was present outside the appendix in any instance. Two appendices were found to contain free pus, and plastic exudate was mentioned in four cases. Doubtless this condition, or local peritonitis was present oftener in as much as the pathological descriptions as a rule were very meagre in the operator's reports. In three of these cases with plastic exudate, healing of the incision by first intention took place.

The results of these operations where no drainage was employed were very satisfactory. However it is pointed out that these patients exhibited comparatively mild intra-abdominal pathology. Of the 55 patients two died, giving a mortality of 3.6% approximately. One of them died from pneumonia and the other rom septicaemia 15 rays after operation. No secondary abscess or obstruction occured in any of them. A secondary operation was performed upon the case that died from septicaemia for suspected abscess, but none was found to be present and the sur-

geon made no mention of finding any evidence of peritonitis at this operation. Primary union of the incision followed in all but six of these 55 cases, or in other words it failed to take place in 11% of them. In one instance where healing by first intention failed, the appendix was perforated at operation and in another there was plastic exudate upon the omentum. Phlebitis developed in one of these cases of incision abscess.

As already stated 45 of the 100 cases studied were drained. Of this number 13 seemed to be fairly definite peri-appendicular abscesses and in one there was pus in the belly without any evidence of walling off. Nine other cases of this 45 were perforated and gangrenous, but no mention was made of peritonitis or purulent exudate within the peritoneal cavity. Two were gangrenous but did not appear to be perforated. In the remaining 20 the pathology was not described except as inferred from the diagnosis after operation, which almost invariably was acute gangrenous appendicitis.

In 21 of these cases hard rubber tube drains were used; In 24, the cigarette. Two drains were used in 15 instances and three in one other.

Post-operative treatment of the drains varied with the different operators. Some of them practiced the method of shortening the drains every day or so and thus gradually removing them. The average number of days before the rubber tube drain was removed was 9 days. One rubber tube was left in the abdominal sinus 17 days. In 5 cases there was no record of removal at all. The cigarette drain was left in place on the average 5.5 days.

The results of treatment in this series of drained cases of acute appendicitis are worthy of consideration. However, it is not meant to contrast these cases with the non-drained ones or to imply that the higher mortality of the series where drainage was employed may be attributed to the use of drains. The difference in mortality was plainly due to difference in pathology, the drained series representing the more advanced stages of the disease.

Of the 45 patients where drainage seemed necessary and was used, 6 died, giving a mortality of 13.3%. One patient died from sepsis within the first 24 hours after operation. Two died from secondary abscess. In one of these secondary abscess cases two cigarette drains were inserted at the first operation and it could not be determined from the chart whether they had been removed or not at the time the abscess developed. A secondary operation was performed and the abscess found some distance from the original focus of infection. The other patient which was recorded as having developed a secondary abscess passed out on the 12th day after operation with the cigarette drain still in place. No secondary operation was attempted upon this patient. Two died from obstruction of the bowel twelve and thirteen days respectively after their appendectomies. In one of these cases a secondary operation was performed and the obstruction found alongside the rubber tube which was still in place twelve days after the primary operation. This interesting finding I shall later refer to in support of the main contention I shall make in this discussion. The other case of obstruction was drained with one rubber tube. He did well for eight days and then developed signs

and symptoms of intestinal obstruction and died 4 days later with the tube still in the sinus and without any operation having been performed for the relief of the obstruction. In the sixth and last fatal case the appendix was found to have sloughed off. Two large tubes were used for drainage and the progress notes made no mention of their removal. The patient expired on the 17th day. Septicaemia was given as the cause of death. Among the cases which recovered, one developed a secondary intra-abdominal abscess for which a successful operation was performed 14 days after the appendectomy. In this instance a hard rubber tube was left in a week after the first operation. The pocket of pus was located alongside the drainage sinus. In another case a cigarette drain was left in three days and a rubber tube 4 days. A secondary abscess developed sufficiently for diagnosis on the 23rd day. The patient was operated upon and recovered. Another patient was operated upon successfully for secondary abscess. One cigarette drain was inserted at the primary operation; no mention was made of its removal in either the progress or nurses notes. Therefore this case is of little value in this study except to show that the patient recovered after a secondary operation.

In review of the cases which developed obstruction we note the mortality was 100% and in the 5 that developed secondary abscesses, the mortality was 40%.

Thirty-six of the 45 drained cases made uneventful recoveries; that is to say 80% got well without any serious complications arising.

The average stay in the hospital of these recovered drained cases was 23 days. The shortest stay was 12 days, and one was in 53 days.

It is not intended in this paper to criticise any of the surgeons upon the study of whose charts this discussion is based. This statement is not inserted here merely because of the fact that I realize that I live in a Proverbial glass house, but for the reason that I found no instance in any case that died or required a second operation where there was any departure from the conservative methods of either operative or post-operative treatment. It is rather a time-honored custom, the wisdom of which I question, namely the leaving of drains in the abdomen as a matter of routine for long periods of time.

I recall a rebuke given by a prominent Southern surgeon a few years ago to an intern for removing a rubber tube drain from the abdomen of a patient after it had been there ten days. This intern was new on the job and when in the course of doing the dressings he saw this tube and observed its rather foul condition as it lay in the purulent discharges from the patient's interior, he could think of no useful function it might be performing, rather felt that it had been forgotten, and lifted it out. Some months later in another hospital I was surprised when the attending surgeon instructed me to remove all drains (gall bladder excepted) from the abdomen within 48 hours of their insertion.

It happened that we had a run of peri-appendicular abscesses soon after this order was given. Unfortunately I have no written record of these cases, but I feel that to say there were at leat ten within the year would be no exaggeration. There also was a number of cases in which there was no definite walling off of the pus by adhesions, in other words diffuse or spreading peritonitis with purulent exudate free in the peritoneal cavity. The appendix was removed in all instances and the cigarette drain employed in all except a few cases where the rubber tube was used. The drains were removed the second day after operation. The results were most favorable. No case of intestinal obstruction developed in any of these patients while they were in the hospital or under observation and no secondary abscess resulted. No secondary operation became necessary.

I have no delusion to the effect that the problems of drainage are always so simple, or that all patients with peritonitis arising from the appendix may be saved. There are certain fulminating cases which will promptly die and an occasional patient will do badly that at operation looks favorable.

My personal experience in practice, of course, has not been great. Yet a few words concerning a few points which I consider important and which I endeavor to practice in dealing with purulent intra-abdominal conditions may be permitted.

All the gentleness that is consistent with the necessary speed of operating should be practiced. I do not like retractors. The hands usually will answer as retractors and they do not traumatize. The late Cragin of New York, who was considered one of the most rapid and skillful operators in that city in his time, never allowed a retractor to be used in the abdomen when he was operating. The intestines should not be pinched with instruments such as sponge forceps, but should be manipulated with the fingers aided by wet gauze if necessary.

A suction apparatus is of great aid in the removal of pus from the abdominal cavity. By means of suction the purulent material may be removed more thoroughly and with less traumatism to the peritoneum than is possible with gauze packs alone. When packs become necessary, wet ones are used. It appears to me that the dry packs recommended by the writer referred to earlier in this paper are more likely to injure the delicate peritoneum than the wet gauze.

The appendix or other focus of infection is removed. I believe the cases where this procedure is not advisable are few indeed. This to my mind is the prime object of the operation. In this connection I am reminded of a recent case in which I assisted in an operation for diffuse peritonitis presumed to be secondary to acute appendicitis. The patient had been operated upon in this hospital two years prior to the second admission. The chart showed that the surgeon merely drained what appeared to him to be an abscess arising from the appendix but did not record that he removed the appendix. As the second surgeon looked up the record of the first operation before he opened the abdomen, he naturally was very anxious to find and remove the appendix. Diligent search however failed to reveal it. Local signs made it quite evident that

the ileo-caecal region was the source of the infection, but nothing remotely resembling the vermiform appendix was found although good exposure was obtained. It is probable that the organ almost completely sloughed away at the time of the operation for abscess. Just what caused the recurrence of suppuration is not plain. The patient made an uneventful recovery, the surgeon withdrawing the drain the third day. This case was not included among the ones already recited.

If the appendicitis is not complicated by perforation, abscess about it, or diffuse, spreading, or general peritonitis, no drainage is employed unless perchance the stump of the appendix is found to be so friable that it neither may be inverted nor otherwise securely closed and a fecal fistula is therefore expected. Mere gangrenous appendicitis is no indication for drainage even though there be more or less plastic lymph upon and about the appendix. At present, in acute conditions, I drain where there is pus in the abdomen whether it is in the form of an abscess or not walled off and accompanying diffuse or spreading peritonitis. If a fecal fistula is expected or if there is much oozing of blood in contaminated cases, a cigarette drain is inserted. No definite rule may be given that will safely guide all operators in deciding whether to drain or not. Of late the dictum has been heard to the effect of "When in doubt do not drain," but I deem it more wise when in doubt in this matter to insert a cigarette drain for 48 hours. I do not believe it will do any great harm in this length of time and it may serve an excellent purpose.

I do not like the rubber tube drain. The cigarette answers the purpose of drainage as well and is less apt to traumatize the viscera than the tube. Of course it is true that the gauze of the cigarette becomes offensive in odor after two or three days and may not permit drainage through it after that length of time, but to me these features are not objectionable in as much as I remove my drain early. While the cigarette is left in, drainage occurs through and around it in sufficient amounts. I consider that the rubber tube is contra-indicated in those cases where it is impossible to get a secure closure of the appendicular stump and where the cecum also is involved in the inflammation to the extent it is thickened and friable. It seems to me that the pressure of a hard rubber tube upon such a cecum tends to favor the production of a fecal fistula. The cigarette drain seems to be less objectionable in this respect and it will conduct the bowel content to the outside if fistula does occur.

I do not believe in a multiplicity of drains. I have seen operators insert so many that very little closure of the incision was possible on account of them. One drain to the site of the original focus, I believe, is usually sufficient.

I remove the drain as a rule the second day after operation and never later than the third day. It has been found that this length of time is sufficient to establish a sinus, after this is accomplished, I can see no use for the drain. Yates by experiments upon dogs showed that a drain in the abdominal cavity is completely isolated in a few hours from the general peritoneal cavity by fibrinous adhesions. His experiments were made upon normal dogs. It is not established by these laboratory tests upon healthy dogs that such complete isolation

takes place when a drain is left in an abdomen where peritonitis exists. Autopsies have confirmed that nature does quickly build a wall around a drain in the abdomen, but it would seem more plausible to believe that while this is true to a large extent, yet suppurating areas immediately adjacent are apt to find outlets for their exudate through small tributary sinuses into the main one formed about the drain. However this may be it is an accepted fact that the general peritoneal cavity may not be drained and that we may hope to drain only the local area of infection surrounded by its adhesions.

If the drain is left in a greater length of time than two days, more reaction takes place about it, the inflammation of neighboring gut is increased and aggravated, obstruction of the bowel is favored, and secondary abscess is more apt to occur. The cases I have reviewed here have shown that obstruction and secondary abscess do occur immediately about drains when they are left in a long time. With virulent pyogenic organisms and a drain acting as a foreign body deep in the abdomen among the very delicate intestines for periods of ten days or two weeks, is it not surprising that we do not have more cases of post operative obstruction and secondary abscesses than we do? I do not believe that we are playing safe by leaving drains in the belly this long, but that we are playing with trouble.

In further support of this contention I request to submit very brief reports upon 13 cases of acute appendicitis that were drained at operation and from which the drains were removed early. Eight of these patients were operated upon by me, the remaining five, by others in this hospital.

I shall run over my eight cases first.

CASE ONE

Abscess about the appendix. Appendix removed and two cigarette drains inserted. Drains removed in 60 hours. Uneventful recovery.

CASE TWO

Acute gangrenous appendicitis with associated acute typhlitis. Appendectomy. One cigarette drain used. Drain removed in two days. Post operative course smooth.

CASE THREE

Appendix gangrenous and sloughed off. Much serofibrinous exudate in abdomen, diffuse peritonitis. Two cigarette drains inserted. One drain removed in two days and other in three days. Patient developed pneumonia in three days after operation and a stitch abscess twelfth day. No drainage from the abdominal cavity took place. Patient recovered completely and is well now three years after operation.

CASE FOUR

Large number of red blood cells in urine before operation suggesting that the right kidney might be the offending organ. As the entire abdomen was rigid and tender and the pain was all through the abdomen, a diagnosis of acute appendicitis and peritonitis was made without cystoscoping the patient. The abdomen was filled with purulent fluid, the appendix was gangrenous, and diffuse peritonitis was present at operation. Appendectomy was performed and two cigarette drains inserted. Both drains were removed in two days. The patient made a nice recovery, leaving

the hospital in eight days with primary union of the incision.

CASE FIVE

Perforated gangrenous appendix with abscess about it which could be seen and felt. Appendix removed and two cigarette drains inserted. One drain withdrawn in two days and the other in three days. Patient recovered without complication and left the hospital in 25 days.

CASE SIX

Very fat woman 50 years of age. Considerable sugar in urine before operation. Abdomen filled with purulent exudate, appendix gangrenous, cecum greatly thickened and inflammed. Insulin was given but the patient died two days after operation in a coma.

CASE SEVEN

Perforated gangrenous appendix. Appendectomy. One cigarette drain used. Drain partially withdrawn in two days and completely removed in three days. Patient recovered without complication.

CASE EIGHT

Fat man, fair and forty, with acutely inflammed, perforated gangrenous appendix and marked involvment of the cecum. Appendix removed and one cigarette drain inserted. As the fascia had been closed very tightly about this drain, I feared to remove it at the end of two days. I therefore partially withdrew it and the next day removed it completely. Profuse drainage followed and the patient recovered without complications.

The remaining five cases were not mine but were operated upon in this hospital.

CASE ONE

Perforated appendix with abscess about it. Appendix removed and one cigarette drain inserted. Drain withdrawn in two days. Recovery, uneventful.

CASE TWO

Free pus in abdomen, acute appendicitis. Appendectomy, one cigarette drain. Drain removed in two days. Recovery, satisfactory. Left hospital in twelve days.

CASE THREE

Acute gangrenous appendicitis. One cigarette drain used. Drain removed in two days. No trouble followed.

CASE FOUR

Gangrenous appendix. Appendectomy and one rubber tube inserted and left in three days. Recovery; twenty-three days in hospital.

CASE FIVE

I assisted in this operation and did the dressings. Patient a boy about 12 years of age. Perforated appendix with large abscess about it. Abscess drained with piece of gauze and one rubber tube after removing the appendix. Gauze removed in 36 hrs.; as patient was not mine I left the tube in till fourth day. Patient made a nice recovery.

Here we have twelve drainage cases in which the drains were removed early, that is in two or three days. No secondary abscess or pocketing of pus occured and no obstruction developed. No secondary operation was necessary. The one case that died expired in diabetic coma the second day after operation. She was definitely septic from her peritoneal infection also, but her death

could not be attributed to any fault in the management of the drain.

Where an abscess in the abdomen may be opened and drained without opening the general peritoneal cavity, it is advisable so to do. This proceedure is most applicable in cases of pelvic abscesses in women resulting from acute pelvic inflamation. Such collections of pus are usually capable of being opened and drained through the vagina with most satisfactory results. To illustrate I ask your indulgence while I briefly recite three cases.

CASE ONE

Woman brought into the hospital in labor with her pelvis blocked by a tumor mass. Her attending physicians had made numerous examinations without gloves before admission. Caesarean operation and removal of a pedunculated tumor seemingly arising from the ovary and filling the pelvis. The tumor proved to be a sarcoma of the large round cell type. Patient ran a febrile course and after some days developed a large pelvic abscess, which I opened through the vagina posterior to the cervix. The pus had the odor of colon bacillus, but contained many streptococci as well as colon bacilli. Cigarette drain used and removed early. Prompt recovery followed and the patient is well now three years after operation.

CASE TWO

Another Caesarean case which developed pelvic abscess as a result presumably of several examinations prior to operation. As in the previous case primary union of the incision was obtained, but in this instance the abscess was in the false pelvis on the right side. It might have passed for an abscess about the appendix, but an appendectomy had been performed two years before the Caesarean section. The development of this abscess was accompanied by pain, fever and rather marked signs of sepsis. Mercuro-chrome was given twice intravenously. While this drug may have aided in the localizing process, it did not prevent the final development of an abscess. This abscess I opened through a lateral McBurney incision without entering the peritoneal cavity by keeping well to the lateral side. Two cigarette drains were inserted and removed in two days. Recovery followed uneventfully.

CASE THREE

History pointed toward a ruptured ectopic pregnancy. As the temperature was 103 on admission it was decided to keep the patient under observation a while. Temperature came down and remained around 100 for three or four days. The history also did not exclude diagnosis of abortion with consequent acute pelvic inflammation. The latter diagnosis seemed the more tenable. The development of a pelvic abscess was predicted and after several days a definite fluctuating mass was palpable in the pouch of Douglas. I opened and drained this abscess through the vagina posterior to the cervix and lightly packed the large cavity with long cigarette drains. The smears from the evacuated pus showed staphylococci, streptoccocci, and colon bacilli. The day after the operation the patient complained of pain in the region of the rectum. I removed the drains completely and the pain subsided. Crossen in his "Diseases of Women" advises the use of a rubber tube in such cases and to leave the tube in

from two to six weeks. This woman suffered no interruption in drainage, but has recovered as completely as could be expected after a severe pelvic in fection. Two cases of this kind of course prove nothing, but in connection with the other cases which I have described where the drains were removed early, they are of some value. I see no more reason for leaving a drain in the pelvis projecting into the vagina from 2 to 6 weeks than I see for leaving it elsewhere so long. If there is any location in the body where a drain would lead to the passage of infection from without inward it would seem that the one in question is most unfavorably situated.

Nothing has been said in regard to the Fowler position. There is no denying the fact that fluids tend to gravitate down hill. For this reason I believe in the efficacy of the Fowler position in cases of purulent intra-abdominal conditions in order to attract the fluid toward the pelvis where absorption of the toxins takes place less rapidly than it does in the sub-phrenic region. However, I believe the exaggerated Fowler position should be used instead of merely raising the head of the bed a few inches. I doubt if this position is of value after the first day or so.

These cases are too few in number to permit any definite conclusions based upon the study of them in regard to any single point. I have argued the inadvisability of leaving drains in longer than two or three days. This belief I hold to be based upon reason and to be supported by the small number of cases which I have cited. It is not meant to be dogmatic in the matter, for there is very little in medicine that we know definitely. If this paper succeeds in stimulating thought upon the subject and some unprejudiced discussion, it will not have not have failed.

THE INDICATIONS AND TECHNIQUE FOR REMOVAL OF EXCESSIVE SUBCUTANEOUS ABDOMINAL FAT.

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The profession is not sufficiently acquainted with the benefits, cosmetic and physical, that can be secured by the operative removal of large masses of subcutaneous abdominal fat. Fatty pendulous abdominal walls have been looked upon as natural, as irremediable and therefore have received but very little study. It has however been repeatedly and amply demonstrated that superfluous masses of subcutaneous abdominal fat can, with safety and with advantage to the patient, be removed by operation.

The essential anatomic characteristic of the morbid entity herein discussed is the pathological accumulation of fat in the subcutaneous cellular tissue of the abdominal wall. In all these cases the abdomen shows a symmetric, at times an enormous increase in volume. The fat excess is present mainly in the lower, anterior and lateral infra-umbilical portions of the abdominal wall. This superfluous local fat deposit is usually, though not always, a part of general obesity. It may or may not co-exist with other, related or non-related, pathological changes in the abdominal cavity, contents or walls.

It is a condition incident to adult life. Excessive localization of fat in the abdominal wall is infrequent in men, but is not of uncommon occurrence in the female. Flabby and sagging abdominal walls overloaded with fat are met more commonly in individuals who since early life have been corpulent; the most pronounced forms, however, are seen in multiparae. It also occurs in nulliparae.

Redundant fatty abdominal walls, if uncomplicated, give few symptoms. These symptoms, however, both subjective and objective are characteristic, are conclusive. All the objective symptoms are demonstratable either to inspection or by palpation. At first pain and disability are slight. The condition progressing, they and the other associated symptoms increase in severity.

Pain is influenced by posture and is more marked with the patient in the erect posture. The pain is increased by all forms of exercise. It is lessened and in some cases disappears with rest in the recumbent posture. It often has the nature of a painful, dragging sensation, and is lumbar, inguinal and hypogastric in location. These patients are inactive; they become averse to all effort, there results a vicious circle for the increased inactivity leads to increase of the local and general adiposity. In women who near the menopause take on adipose, there not uncommonly forms a huge, pendulous roll of fat across the lower abdomen, below the umbilicus . This pendent fat-mass creates a crease, often madid and eczematous, located just above the symphysis pubis. In most patients, the continuous contact and friction of the inferior cutaneous surface of this fat apron and the underlying regions determine an erythema, an eczema, an excoriation, an elephanthiasis of the skin of lower abdomen, of the inguinal folds and in some cases of the upper part of thighs. Some patients present two distinct creases. All the subcutaneous tissues of the hypogastric and iliac regions take part in the formation of these folds which extend transversely from one lumbo-iliac region to the other and which vary in length and thickness. In the recumbent posture, the flabby fatty mass gravitates to either side and sags over the iliac spines and crests. The prolapsed tissues show impaired tonicity, impaired resistance.

This excessive fat-deposit hangs apron-like over the external genitalia and the upper portion of the thighs, may overlap the upper two-thirds of the thighs.

Other subjective symptoms and objective signs are enumerated in conjunction with the indications for operation.

Pendulous fatty abdomen must be differentiated from diastasis of the recti abdominalis, with which it is, at times, associated. When it is suspected that the recti abdominalis muscles are abnormaly separated, it is better that the examination be conducted with the patient in the recumbent posture. The patient reclining is told to elevate the head as high up as possible without the help of the arms. If the diagnosis be positive, this maneuver separates the inner borders of the two recti muscles from one another, causes a greater or lesser prolapse of the intestine through

the gap and enables the examining hand to easily depress the superficial abdominal coverings into the abdominal cavity.

The careful clinician will not overlook or misdiagnose hernias (umbilical, inguinal, vertral, etc.). They frequently co-exist with pendulous abdomen. Their anatomical location and clinical characteristics are suggestive. Hernias give an impulse on coughing, often do not present the same volume; if intestinal, they give a tympantic note on percussion. If no hernia be present, if there be no abnormal seperation of the abdominal recti muscles, the fat mass can be raised easily from, and made to glide somewhat upon, the underlying resistant muscular wall.

In properly selected cases, large masses of fat can be removed from flabby, sagging, fatty abdominal walls when the excessive fat deposit.

1. causes great annoyance and discomfort:

a. Pain.

b. Backache.

c. Dyspnoea on moderate exertion, ascending stairs, walking, bending.

d. Distressing irritation, inflammation of the skin, erythema, intertrigo, eczema, chronic inguinal excoriation.

e. Pouch-like overhangings of a cumbersome, useless, fatty apron in front of the upper portion of the thighs.

f. Undue fatigue and painful dragging sensation from the weight of the mass.

2. determines manifest disability:

a. Interference with locomotion.

b. Interference with marital relations.

c. Interference with the exercise of one's calling.

3. constitutes a physical handicap:

a. Inability to comfortably, to gracefully assume the erect posture, waddling gait.

b. Inability to attend to the toilet of the lower part of the body.

4. becomes an unbearable social handicap:

a. Patient is unwieldy, unsightly, incapacitated for recreation, not sick, not well.

Resection of large masses of subcutaneous abdominal fat is also justifiable and most serviceable:

1. In the obese, to lessen the tendency to hernia formation.

2. In operating for hernia in obese individuals, so as to obtain better exposure of hernial rings and hernial regions.

3. As an associated, supplementary and terminal step to many abdominal operations: Hysterectomy, ovariotomy, cholecystostomy and cholecystectomy, appendectomy, uterine prolapse and retroflexio uteri.

4. As a preliminary step to many abdominal operations so as to facilitate intra-abdominal work. A small fibroid in an atrophic uterus, a retro-cecal appendix, a small gallbladder tucked away in a deep fossa with a stone in the cystic duct or still worse, a stone in the common duct, etc.

5. In cases in which the careful fitting and wearing of an orthopedic apparatus is not otherwise feasible

The benefits secured from massive resection of superfluous subcutaneous abdominal fat are so evident,

so manifest, and the dangers attending the operation are so negligible that even in the absence of any other pathological process calling for an abdominal operation, the surgeon should not hesitate to advise and to urge the excision of these useless, troublesome and cumbersome fat accumulations.

The risk of simple lipectomy, either performed alone or in conjunction with other operative procedures are far outweighed by its beneficent results. It has been successfully performed at the same sitting with operations for the cure of hernias, umbilical, inguinal, ventral epigastric, incisional, appendiceal gall-bladder and uterine disease, etc.

In simple lipectomy, the operative procedure in limited to the massive retrenchment of redundant subcutaneous abdominal fat and overlying skin. The incision extends through the skin and fat, down to the fascia and not beyond

Lipectomy may also either pre cede or follow, but always at the same operative sitting, surgical steps for the cure of hernia (umbilical, epigastric, ventral, incisional, etc.) for the cure of uterine displacements and uterine diseases (fibroid, prolapse , or the cure of appendiceal and gall bladder disease and also for diastasis of the rectic abdominalis muscles.

Lipectomy has been performed to facilitate intra-abdominal work by making intra-abdominal organs more accessible and also to assure a better adjustment of orthopedic appliances.

Different operative procedures are employed for the cure of the condition under consideration each operator being partial to the method which has given him the most satisforctory results. Whatever technique be used, and it must always be adapted to the case at hand it is all important that the integrity of the abdominal muscles, fasciae and properitoneal fat be fully respected. Only the skin and fatty mass immediately subjacent to it and directly in front of the fascia are to be removed.

The operation which we perform and recommend is entirely different from that performed by Creveling and others who, to restore the abdomen to normal size and contour, carry their incisions through the entire thickness of the abdominal wall into the peritoneal cavity. Bear in mind that we are not considering here prolapsus of all the abdominal coverings. We are only discussing the removal of excessive subcutaneous fat accumulations.

The completeness of the fat-removal is a measure of the freedom from fat thereafter of the part operated. Enough fat should be removed to completely eliminate soreness from chaffing. It has been our practice to remove the mass in one or two pieces.

After having performed several lipectomies, the surgeon experiences little difficulty in deciding how much fat it is judicious to remove.

The removal of one large wedge-shaped fat-block, occasionally two, rarely three, usually suffices. As the patient lies in the recumbent position, the fatty mass gravitates to the sides and can be picked up, can be lifted up as a great ridge or fold lying across the abdomen. The operator grasping this mass in the center, pulls it up and away

from the body and circumscribes it by two incisions, one passing a little above and the other a little below the lines of deflection.

It is preferable that the incisions be clean-cut, made with one or several long sweeps of a broad-blade scalpel or short amputation knife.

The length of the incisions has little appreciable influence on the outcome of the operation. Patterning by slicing is bad practice. Small hacking cuts are to be condemned The smoother the fat surface, the better the approximation. Two initial incisions usually fulfill all requirements. These two incisions converge into one upon the fascial layer, thus no undermined surface, no pouches for the accumulation of wound secretions are left. Sufficient skin must be left for approximation. Let there be no undermining of the wound edges.

In selecting incisions, we are guided as to length, type and location by various factors: such as, the existence or absence of complicating conditions, the nature of the patient's general condition ,etc. For the excision of large wedge-shaped fat blocks, we have adopted and recommend two transverse elliptical incisions, beginning well over on one side and extending to corresponding points on the opposite side. These two incisions converge toward the fascial layer. Many other operators follow the same practice. If an abdominal section is to be performed at the same sitting, the fat is first removed by means of a double transverse incision. This having been done, one proceeds to enter the abodminal cavity by a vertical incision through the rest of the abdominal wall.

Traverse incisions have the disadvantage of increasing the already large waist measure and leaving at each end of the wound an unsightly projection. To avoid these, I remove a small vertical ellipse of skin near each end of the transverse incision. If transverse incision be used, the approximation and the apposition of the flaps is affected more easily, the liability to post-operative separation of the wound-edges is minimal, primary union is frequent, delayed healing is rare and long delayed cicatrization is very common.

Longitudinal incisions found favor with few clinincians. Though multiple incisions patterning by slicing, hacking cuts, undermining of wound edge, excision of vertical fat-blocks are not conducive to the most aesthetic and satisfactory results they have been practised by some.

Fat is a tissue of low vitality and special care must be taken that there be little or no accumulation of serous or sero saguineous fluid between or beneath the flaps. Retained wound secretions retard healing, invite infection. A drain is inserted at either end of the wound, if the wound be long a drain may also be inserted at its center. Closure is effected by approximation sutures of silkworm-gut. For the exact apposition of the wound edges, we use linens. In these cases, I frequently advise application of hot boric acid compresses to the operative wound for from two to three days; these fomentations are to be renewed every four hours. Th drains are removed as soon as the discharge warrants it and the patient is kept in bed for about fifteen days. The result of the clo-

sure should be a smooth abdomen with a linear scar and without any hanging folds. Some patients during the first few post-operative days complain of abdominal tightness, of abdominal constriction. It calls for no special treatment.

SUMMARY

In suitably selected cases, the operative removal from the abdominal wall of large wedge-shaped masses of subcutaneous fat has the following advantages:

1. It is a safe and invariably beneficial surgical procedure. It has always been performed under general surgical anesthesia; never under local or spinal anesthesia.

2. It is always devoid of immediate or remote dangers to the patient though the wound be extensive the hemorrhage is moderate and healing is good.

3. It is simple of execution and, if unassociated with another operative precedure, the technique is easy and the performance of the operation does not consume much time. It is all important that the incision be carried to but not beyond the fascia.

4. It may be the only operation indicated and performed in the case at hand.

5. It is, at times, called for as a preliminary operative step to facilitate intra-abdominal work and to give better access to intra-abdominal organs.

6. It is not infrequently employed in conjunction with other operations. The operator retrenches an unwieldy, useless, pendent mass of subcutaneous abdominal fat and at the same sitting brings relief to, or corrects, co-existing pathological abdominal conditions.

7. It eliminates a physical handicap, effects a marked improvement in the patient's appearence and general well-being and procures complete relief from the unsightly, painful and disabling deformity.

8. It gives permanent results, if post-operative instructions regarding diet and exercise are followed.

9. It secures the following benefits:

a. Diminution in weight.

b. Freedom from discomfort, local and general, and from the disability incident to cumbersome, burdensome, pendulous fatty abdomen.

c. Improvement in the patient's general apperance, the hippopotomal abdominal wall being converted into a straight front. Improvement in pose: body is no longer awkardly balanced and gait ceases to be waddling. Patient is enabled to resume his or her occupation.

d. Patient, after its performance, can occupy a more normal, more natural and more useful relation to society.

e. The patient can be more active, can give his body more personal attention, can give his or her work the necessary attention and necessary application.

DIAGNOSIS AND TREATMENT OF THE COMMON SCALP DISEASES.

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The general practitioner is daily confronted with the diagnosis and then treatment of scalp diseases.

No conditions offer more worry to the patient or physician than these because of the cosmetic appearances of this group of diseases. Some of these conditions are prevalent in the adult and others in the children or infants and both demand immediate attention insofar as the patient is concerned. Many diseases of the scalp have been recognized and named but it has been the purpose of this paper to include only those which are frequently met with by the practitioner and for that reason the diseases discussed below, have been chosen.

ALOPECIA AREATA

Alopecia areata is a primary alopecia not preceded by any functional symptom, excepting probably a local pruritis. The hair falls out diffusely over a localized area or in a large patch or in areas which are independent and complete from the original one. This area may involve any part of the scalp; it may be irregular or symmetrical in distribution; it may be single, multiple or occupy almost the entire scalp leaving only a few patchy areas of normal hair. The deunded surface is smooth and irregular. It may be arrested and undergo resolution at any time or it may spread to the whole scalp or to other hairy portions of the body. On the scalp, the process of extension by characteristic hairs in groups or isolated areas. These hairs have been compared to the point of exclamation (!) and are in process of atrophy resembling needles stuck in the skin. From above downward they diminish size and color and fall out easily. Areas in process of restoration are indicated by growth of fine, downy, colorless, lanugo hairs which are later succeeded by larger pigmented normal hairs. These alopecia areas often show dead hairs enclosed in the skin which are easily epilated, or when scraped reveal black debris in follicles. This often is mistaken for tinea or new growth of hair. These patches may enlarge, coalesce and assume all shapes and forms. It may begin over any area and spread in any direction. It, however, shows remarkable tendency to border and extend around scalp with patches all over scalp—hence, the resultant baldness. A large percentage of the cases involves the beard and eyebrows in the male.

Diagnosis: The diagnosis is comparatively easy. The areas of alopecia with their smooth, shiny, surface showing no signs of atrophy; the presence of exclamation point hairs; the rapidity of developement; the absence of broken hairs and negative microscopic examination serve to distinguish it from ringworm of the scalp with which it is most often confused.

Treatment: There is no specific treatment for this disease. The general health, if below par, is cared for by tonics and other measures. Locally many stimulants such as tar, cantharides, phenol, trikresol and others have been used with more or less success. It has been the practice of the writer to investigate the head for focal infection in the teeth, tonsils and sinuses which are first cared for together with any refractive error that may involve the eyes. The best combination so far in my experience has been alternating local paintings of trikresol and erythema doses of the mercury-quartz vapor lamp to the affected areas.

TINEA TONSURANS

Ringworm of the scalp is far more common than one expects. usually a disease of puberty although a few isolated cases in adults are reported. This condition is caused by a fungus of which there are two types; a microsporon (small type) which is the most common and macrosporon (large type.) The disease is characterized by a dry, squamous patch 1-2 inch or more in diameter usually circular with sharply defined borders. It begins as a small punctated erythematous patch and spreads by peripheral extension. The hairs in the patches are less numerous than in normal areas. Some hairs appear normal, others broken off at level of skin and are covered by a dirty grey scale giving "black dot" appearance to the scalp. A dozen or more greyish-black stumps may be removed together from scalp by fingers and this differentiates this type of disease from all the others. It is slow and chronic and may persist for may months but clears at puberty. Sometimes small remnants of ringworm remain in the healthy hair and appear as secondary areas on which a few ringworm hairs are recognized by their grey fragile coverings. The disease is contagious through its entire course and spreads like wildfire in schools or institutions.

Diagnosis: The age of the patient the partial areas of baldness, the well defined scaly patches studded with brittle, broken hair shafts together with the plugged follicular orifices filled by epithelial debris give a typical clinical picture. In all cases, the microscopic examination of the scales or hair shafts after heating with 10 per cent sodium Hydroxide, will, in positive cases, reveal the spores in the hair or scales.

Treatment: The success of the treatment depends upon the prevention of new foci developing and the eradication of the lesions present. For this reason, epilation of the scalp by X Ray as advocated by MacKee and Remer offer the best, most reliable and the modern method of treatment.

DERMATITIS

In this era of facial and scalp cosemetics an increasing number of scalp dermatitis is being seen. Although not serious so far as the patient's health is concerned, yet it is serious enough to cause the patient much worry and discomfort. This type of eruption is usually mild and superficial, although at times, due to secondary changes, it becomes severe and obstinate. Subjectively the patient complains of a pruritis, or feeling of warmth and burning in the scalp. The scalp appears red, inflammed and tender. A fine vesicular eruption is usually present and often times this precedes an oozing, crusted condition which follows, giving a picture not unlike an acute erythematous or vesicular eczema. Usually the face and neck and the areas especially about the ears and eyelids, show a similar condition with an associated edema. The causative factor usually can be found in the dyes (henna) or the scalp applications (benzene, strong resorcin) used in their treatments.

Diagnosis: The superficial type of the eruption, its finely vesicular character with a history of local ap-

plication or "beauty treatments" usually clinches the diagnosis.

Treatment: Scalp should be cleansed of all irritating substances. Mild applications, such as boric acid, or Burrow's solution, applied, as wet compresses, usually suffice in its treatment. The patient should be informed of the true nature of the disease and be instructed against further cosemetic treatment of that type.

PEDICULOSIS

This animal parasitic affection of the scalp occurs at all ages and in both sexes, but is most common in adolescence and in women. Long hairs favor its multiplication especially where a low chignon or plait is worn localizing the maximun point of this disease to the post-occipital regions. Depending upon the amount of irritation, the clinical picture varies from simple pruritis and scratching of scalp to a severe form of dermatitis or pyodermia or even abscess formation. The usual dispensery picture presents a mass of crusts with aherent hairs and matted, oozing appearence at the area examined. On separation of the hairs, the crust are broken with each hair retaining part of them. A closer examination reveals innumerable eggs or "nits" glued to the hairs or firmly attached to the individual hair strand.

Diagnosis: The diagnosis is made after a close examination which reveals either the living parasite or the ova or "nits". These ova are greyish in color, hard, half-heart shaped shiny masses firmly attached to the hair shafts. They vary from the epithelial scales of a seborrhoea in that the latter are nonadherent, usually loose and greasy, irregular and laminated and are perforated by the hair shafts. From continued irritation or infection the clinical picture may be that of an eczema or impetigo contagiosum as a complication.

Treatment: The treatment does not necessarily involve the cutting of the hair. Equal parts of crude petroleum and olive oil applied to scalp by means of cap nightly to be followed by a shampoo and fine combing in the morning for three or four days usually clears the condition. If the ova are still persistant dilute acetic acid or vinegar can be applied to dissolve them. Any secondary irritation or infection requires treatment according to the involvement present.

PSORIASIS

Psoriasis has been reported as being confined to the scalp alone. This, however, is the rare exception because the scalp location of this disease forms only a part of the generalized eruption. In most cases the scalp is frequently involved either in small, discrete patches or in one large patch and usually some, but not a marked, loss of hair results. The scalp eruption may be thickly infiltrated, covered by a dry, silvery, heavy infiltrated scaliness; the hair is lusterless, easily broken or readily removed. The lesions may extend along the anterior hair line where this thickened infiltrated, red eruption is very diagnostic. Again, the scalp may be moist, accompanied by fissuring and infection. Then the hair appears moistened, matted together and the

lesions are red, moist, glaring in type, giving the appearance of a marked seborrhoeic reaction. The other parts of the body, as the knees, elbows and sacrum show the typical papular squamous eruption. Cervical glandular enlargement may be present due to the secondary reaction in the scalp. Diagnosis: This usually is made by the character of the concomitant body lesions located primarily on the knees, elbows and sacral regions. The dry papular-squamous lesions, covered by a laminated, silvery, scale which when removed leaves a punctutate hemorrhagic area when taken together with the scalp lesions, readily makes the diagnosis.

Treatment: No specific treatment can be given. General hygenic measures such as frequent bathing should be advised. Locally, tar, ammoniated mercury and salicylic acid, can be applied to relieve palliatively the symptoms of the patient. In obstinate cases X Ray can be used with relief to the patient. The physician should advise the patient of the recurrent nature of this disease and the inability of the medical profession to offer a "cure".

SEBORRHOEIC ECZEMA

Seborrhoeic eczema is primarily a disease of the scalp which may spread to the body. It is characterized by the appearance of rounded, circinate or irregular lesions which are covered with yellowish greasy scales and differs in this respect from the dry, silvery, imbricated, scaliness of psoriasis. It is probably a special form of inflammation so that many of the eczematoid eruptions of the scalp are on this basis. The commonest form of this disease with which we are familiar is called "dandruff" or pityriasis capitis. This form is localized to the scalp and may present a dry, greyish abundant branny scaliness of the scalp with an accompanying dry, lustreless appearance of the hair and moderate alopecia. Again, it may be crusted, moist, red, inflammatory and oozing, constituting the "eczema capitis" of the older writers. The disease may spread to the forehead, behind the ears and to the nape of the neck and is accompanied by an acute inflammatory reaction with pruritis, oozing and crusting. In the chronic cases, the lesions in these areas are dark red, scaly, infiltrated and segmental in character and a localized loss of hair (alopecia frontalis) is present. In the oilier form (pityriasis steatoides) the loss of hair is much less, but the greasiness is far more abundant. From the scalp, the eyebrow, alae of the nose, presternal, inter-scapular and later the axillary and genito-crural regions may be involved.

Diagnosis: This disease primarily involves the scalp. It is greasy or oily in character, more inflammatory in type, its lesions are superficial. It lacks the pruritis, moisture and infiltration of an eczema which seldom involves the inter-scapular and pre-sternal regions. It lacks the silvery, dry imbricated scale with the punctate bleeding areas caused by the scale removal which is so characteristic of psoriasis.

Treatment: Sulphur, resorcin, ammoniated mercury, salicylic acid and tar locally applied in the milder strengths are used in its treatment.

Of this group sulphur is most reliable. Acute inflammatory reactions should be quieted before the above named drugs are used. Weekly scalp shampoos with tar soaps are useful. The ultra-violet rays offer a benefit when properly used.

IMPETIGO CONTAGIOSUM

This disease is usually secondary in the scalp to pediculosis capitis. The disease may show clinical varieties and the lesions may vary in type but essentially the features are similar. The condition rarely is confined to the scalp unless in the Bockhart's type where we have a superficial pustular folliculitis which is pustular from the onset. The individual lesion is an superficial pustule, follicular in type and pierced by the hair shaft which is characteristic. These lesions usually remain discrete but may become confluent modifying the clinical picture. In the typical impetigo which is prone to attack the face, ears, neck and hands, the early lesions are erythematous, later vesicular or bullae which secondarily become pustular. The lesions dry up rapidly forming yellow or "honey yellow" colored, loosely attached, pasted on "crusts" which soon drop off leaving hyperemic areas. The lesion may be single or multiple and rarely become coalescent. Resultant scars are very rare from this condition.

Diagnosis: The diagnosis in either form is comparatively easy. The face involvement with the "dried down," "pasted on" crust and the superficial type of lesions primarily clear, then pustular with the presence of macular erythematous spots are sufficient for the diagnosis. The Bockhart's type reveals a pustular folliculitis pierced by a hair shaft, the lesions being discrete and pustular from the onset.

Treatment: All crusts should be removed with soap and water and the parts thoroughly bathed. Ammoniated mercury (1-10%) is the drug of choice for local application to which pehnol (1%) can be added for the pruritis which may be present. Where secondary infection is marked hot compresses of boric acid or Burrow's solution is of great service at times. For raw, oozing surface powdered calomel one part, boric acid powder 12 parts is of great advantage. Again silver nitrate solution (10-20%) has been a specific in cases resisting other forms of treatment. It is best in all cases, however, to use the milder strengths of the antiseptic applied because irritation favors the spread of this condition.

SYPHILIS

(a). Syphilitic alopecia occurs during the secondary stage of the disease and usually within the first year. This type is so peculiar that it is diagnostic in its appearance. It begins over the temporo-parietal regions as an irregular, diffuse alepecia which assumes a moth eaten or "cat step" hair cut appearance. The eyebrows may show a "hatching" appearance. Other signs of syphilis such as a chancre, roseola, mucous patches may be present. The condition lasts 6-8 weeks followed by a spontaneous regrowth of hair. It is supposed to be more frequent in patients predisposed to seborrhoea of the scalp and it is interest-

ing to note that a high percentage of these cases show a nervous system involvement as part of the systemic infection. The diagnosis is made upon the peculiar yet typical moth eaten alopecia together with the clinical findings elsewhere and the serologic examination.

(b). Secondary syphilides of the scalp may be of several types according to the lesions present elsewhere on the body. These appear during the secondary stage as macules, papules or pustulo-crusted lesions. In the latter case they assume the semi-circular, polycylic or horseshoe form of red, dry or moist papular, psoriasiform, ulcerated, crusted or scaly lesions. Other signs of syphilis are usually present. The diagnosis is made by the clinical picture of secondary eruption present together with the serologic examination.

(c). The gumma may attack the scalp or the body framework of the skull. It has the same diagnostic characteristics as a cutaneous gumma elsewhere such as a punched-out ulceration, polycylic outline, rough, uneven, foul base covered by a muco-purulent discharge, usually unilateral or single in type having the appearance of a "cold" process. When healed it leaves a typical tissue-paper like scar surrounded by a zone of peripheral pigmentation.

The treatment is the routine antisyphilitic measures so well known as salvarsan, mercury, iodides and bismuth.

ECZEMA

Eczema of the scalp, in the adult, is usually the erythema-squamous and squamous type with a subacute or chronic inflammation reaction. Frequently it extends over the forehead, the mastoid regions, behind the ears, especially the folds where it assumes a very moist aspect. The scale formation may be slight or abundant. At times a secondary inflammatory aspect gives the lesions the pictures of an acute dermatitis. In stubborn cases, the infiltration is thick, the scaling abundant and the lesions verge onto the nape of the neck. In children and infants, the vesiculo - pustular and vesicular types are most common with a variable amount of crusting and the scalp lesions are usually associated with an eczema of the face. Posteriorly when the occipital region or neck region in involved and a pustular eruption is present, pediculosis is thoroughly searched for. The scalp may be red, raw, oozing and crusted or again dry and crusted with a slight matting of the hair.

Diagnosis: In adults seborrhoea and psoriasis must be differented. Eczema always presents an inflammatory eruption, infiltrated, moist and pruritic ending in either a crust or a scale. It is usually confined to these regions either primary or secondary. Seborrhoea is superficial, non-inflammatory and has a greasy scale and usually involves the presternal and inter-scapular regions. Psoriasis is always dry, infiltrated, papular in type covered by a imbricated furfuraceous, silvery scale which when removed leaves a pin point hemorrhage. The scalp, in psoriasis, is only a part of the generalized eruption favoring the knees, elbows and sacral regions.

Treatment: For the crusting present, soap and water followed by the

free use of olive or almond oil or liquid petroleum is advisable. A boric acid compress can be used safely if the inflammation reaction is marked and can be followed by a mild ointment containing weak (1-4%) of acid salicylic and resorcin. Later weak tar, liquid carbonis detergens, white precipitate can be used. If still resistant heavier percentages of tar and salicylic acid are used. It is best not to use "powder-containing" salves in the treatment of adult scalps because of the irritation produced about the hair follicles. In infants, the above measures can be carried out. The hair is shorter and a Lassars paste is often of use as a base for the ointment. Crude Coal Tar (4-8%) is the drug of choice and gives the best results. Tar, white precipitate, salicylic acid and precipitated sulphur can be used in selective cases with good results. The best base for scalp ointment, in my experience, is a mixture of sapo molle and petrolatum or cold cream in equal parts to which 5-20% Lanolin can be added when the occasion demands. X Ray and ultra-violet rays are used only in selected cases.

5026 Jenkins Arcade.

PAPILLOMA OF THE BLADDER

REPORT OF TWO CASES

By C. F. FISHER, M. D., Richwood, W. Va.

Pain in the abdomen is an apprehensive and at once a suggestive symptom. Through the medium of the press the public mind has been so acutely informed that now physicians are called in usually before "home remedies" are instituted, particularly if the illness be of sudden onset and associated with pain.

Pain in the right abdomen, to the laity, at once suggests appendicitis, and often rightly so, and pain in the abdomen in early pregnancy the possibility of threatened abortion is at once brought to mind.

This latter statement calls to mind a most interesting case seen several months ago.

Mrs. R. E. G., age 28, school teacher, married four months, consulted me complaining of pain in the left iliac fossa, fleeting in type, lancinating in character, associated with tenderness over the seat of pain. There was slight vaginal bleeding associated with the pain. She had menstruated once after her marriage but not since. Her past and recent history with exception of the above was essentially negative. Temperature, pulse, blood pressure and urinalysis both chemical and microscopic was negative. Pelvic examination revealed a marital vaginal outlet, Bartholin's glands and urethra were normal, cervix soft and tightly closed. The body of the uterus could not be definitely outlined, but high in the left pelvis was an exquisitely tender mass, size of an orange, regular in shape and outline, and partially fixed in position.

Thinking of the possibility of extra-uterine pregnancy, we suggested more thorough pelvic examination under general anaesthesia. This was declined, and she being instructed of the dangers of the condition, should it really exist, left the hos-

pital of her own accord, to return at once should the symptoms recur.

This patient returned one week later, stating that the night before she had been seized with violent cramp-like pains in the region of the bladder, associated with great frequency and urgency, with pain at the end of urination, and bleeding from the vagina (?) continuous, bright red in color, and not associated with clots. This continued several hours. She then became aware of a large mass protruding between the labia which she tried to remove by traction, but found it very firmly attached. She was told at home of the possibility of the mass being attached to a foetus, and it was no longer molested.

Thirteen hours after onset of symptoms she was admitted to the McClung Hospital.

Examination revealed protruding from the external urinary meatus a dull red foul mass, soft, size of walnue, and bleeding freely upon manipulation. The mass was attached to a pedicle, bluish in color, which ran the length of the urethra, to be attached to the trigone of the bladder. The urethra was of calibre sufficient to admit index finger. The vagina contained a yellowish brown discharge but no blood. The mass discovered in the previous examination persisted.

Our clinical impression at the time was an extruded pedunculated papilloma of the bladder.

Immediate operation for its removal was advised and consented to and done under ether anaesthesia. The urethra was dilated and the mass with pedicle was removed. The bladder explored by cystoscopy revealed no further masses.

The mass in left iliac fossa, palpated under anaesthesia, was found to be a normally pregnant uterus.

The patient made an unevetful recovery and left the hospital in five days, after being treated for the associated cystitis.

The pathologist's report was "Papilloma. The cells showing no tendencies of an invasive character and hence not malignant." (I am indebted to Dr. Hugh R. Spencer, Baltimore, Maryland, for this report.)

In all available literature, a most thorough search has not revealed a similar case. This tumor, no doubt, had been present for some time, the length of time we would not be able to state, but the cardinal symptom of neoplasm of the bladder, hemorrhage, did not occur but once before extrusion, the remainder of her complaint, particularly referable to the bladder, occurring during and after extrusion.

This particular form of bladder tumor is noted for its tendency to recur and to develop malignant changes. Several years ago I heard my chief in surgery, Dr. Arthur Shipley, make the remark that "All benign tumors of the bladder are malignant." I am sure this aphorism is as true today as when he uttered it.

Rofin (French Urol. Assn. Vol. IX) reports the recurrence at 57%.

"That a tumor of the urinary bladder show gross and even microscopic evidences of the papillomatous type is no proof that its re-

moval, as complete as it may seem to be, will not be followed by a recurrence or a relapse in the form of carcinoma."

In 1915, in the symposium of the Amer. Urol. Assn. Geraghty stated that the microscopic diagnosis was fallible, but Buerger seemed to think it was sufficient for absolute diagnosis.

Keyes (Keyes Urology P. 500) states "The first, last and often the only symptom of tumor of the bladder is hemorrhage."

This is illustrated very well by another case which came under my care over a year ago. F. M., blacksmith, age 50, whose solitary complaint was hemorrhage from the bladder, painless and copious. Cystoscopy revealed a papilloma of the bladder near the orifice of the right ureter. Microscopic section showed it to be malignant in character. Under treatment with fulguration and radium this tumor has disappeared and there has been no complaint referrable to the bladder since.

Pain and dysuria usually come late, but may precede the hemorrhage. Retention may occur, either caused by clots or the tumor itself.

The object of this paper is to learn rather than to teach, and to advise careful history and painstaking examination in all cases of hematuria.

McClung Hospital.

THE WEST VIRGINIA MEDICAL JOURNAL

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RABIES

Dr. OscarDowling, Health officer of the State of Louisiana, in the Chairman's address to the Section on Public Health and Preventive Medicine of the A. M. A. at Atlantic City directed attention to three great national health problems; drug addiction, rabies and venereal diseases.

Generally speaking, two of these are probably rightly appreciated but rabies, certainly in West Virginia, is not. Recent outbreaks of this disease in Cabell County attest the fact that it is a very real

problem. Dowling gives a brief but excellent resume of rabies and its prevention calling especial attention to the complete stamping out of the disease in England and Wales. The dog is the usual animal carrier and the tramp dog the most common offender. Muzzling is of great value in checking the spread of this infection and the dog catching system, when properly enforced, aids very materially in ridding the community of worthless canines, but the Louisiana sanitarian believes the best means available is the prophylactic immunization of all dogs against rabies. This is a rational measure and could be carried out by a licensing system requiring the registration, licensing and tagging of all dogs and making a prerequisite for the issuance of a license tag a certificate from a licensed vetinarian that the animal had been properly inoculated.

One point not properly understood generally is that suspected dogs should be confined for observation and not killed. Another truth not yet fully appreciated by the laity is that the Pasteur treatment is practically absolute as a matter of prevention if inaugurated early enough after the bite of a rabid animal and should be resorted to in all cases.

Rabies is one of the most horrible diseases to which flesh is heir and when once the onset of symptoms has begun is uniformly fatal. Although it is comparatively rare in the human, the disease is entirely preventable and it behooves the state to take proper steps to insure the eradication of the malady.

W. E. V.

MIDWIVES SURVEY

A state wide survey to ascertain the number of midwives in W. Va. is being conducted by the State Department of Health, under the law introduced by Dr. Harriet B. Jones of Glendale, and passed by the recent Legislature. Mrs. Kathryn Trent, representing the State Health Department has gone into several sections of the State and is calling upon the midwives to register. During the latter part of August she was employed in the Coal River and Kanawha County Districts.

The survey has disclosed that 113 midwives have been or are practicing in Braxton County. The Health Department knew of only 72 before a State representative made the survey. It is expected that a similar result will be shown in other Counties, and Dr. W. T. Henshaw, Secretary of the State Health Council, believes that more than 1000 will be found in West Virginia.

Every midwife in the state; that is, every woman who assists at a child birth for pay, must register under the new law. Those that are licensed now will not have to renew their licenses until December 1926.

Midwives must be not less than 21 years old, be able to read and write, be clean and constantly show evidence in appearance and in their homes of habits of cleanliness, must posses a diploma of a school for midwives, recognized by the State Health Commissioner or have attended under the instruction of a licensed physician, not less than five mothers and new born infants, during lying-in periods of at least ten days, and shall present a written

statement that she received the instruction.

Midwives must be of good moral character, and free from communicable disease, and are to confrom with all of the rules of the State Department of Health and the State Sanitary Code.

Midwives are prohibited from administering drugs, assisting in labor by any artificial or mechanical means, using any kind of instruments, or making vaginal examinations. Local Health Officials are to have a record of all licensed midwives and all matters pertaining to the conduct of midwives and to be reported by him from his area.

The statute does not contain any penalty clause for violation of this law.

CHIROPRACTORS LICENSED

Approximately 62 chiropractors have qualified under the law passed at the last session of the Legislature, according to information obtained at the State Department of Health. Of this number 55 were granted licenses under the waiver clause of the new law. Seven out of thirty-five who took the State Board Examination as provided, were granted certificates to practice, it was learned.

Those who took the examination and passed in the subjects of anatomy, histology, physiology, pathology, symptomatology, physical diagnosis, hygiene, sanitation, chemistry and bacteriology, in addition to the several chiropractic tests, were Margaret A. Haines, Weston; Mabel C. Dickey, Pennsboro; George A. Stolge, Wheeling; Ralph W. Mathias, Ronceverte; Tirza B. Longfellow, New Martinsville; Mrs. Lela P. Junker and Clay A. Junker, Parkersburg.

The list of those who were licensed without examination was not available at the time this is being written. Reports of alleged irregularities were heard as emanating from the examination rooms. One applicant for a license under the waiver clause, from Huntington, whose honesty and integrity was vouchsafed for by a Professor at Marshall College, was refused a license it is understood, because the date of his diploma is alleged to have been altered. Another license of a man who comes within the waiver limit is being withheld, it is said, at the request of one of the Chiropractic Board of Examiners.

Of the thirty-five who took the tests two withdrew after taking only three or four of the studies.

A section of the law requiring chiropractors who are residents of the state, of good moral character and who are graduates of a chiropractic school or college, giving a course of not less than three years, of six month each, "all of whom shall have a diploma from a first-class high school as recognized by the State Board of Education of W. Va. or have an education equal to the same shall be granted a license to practice chiropractic in the state without examination," proved to be a stumbling block for the examining board, it is said. The State Board of Education held, according to Dr. W. T. Henshaw, State Health Commissioner, in a ruling to the Public Health Council, that the necessary qualifications of an applicant to practice under the new law did not mean that a diploma

was necessary if the applicant obtained from a qualified educator a letter setting forth that his or her education was "equal" to that which he or she would have had to obtain before a diploma from a first-class school would have been granted.

It is understood that under this ruling, one chiropractor, from Charleston, offered a statement from a Professor at the W. Va. Collegiate Institute, a negro College located about twelve miles below Charleston on the Kanawha River, and the Public Health Council had to accept it.

Other chiropractors presented letters from principals of high schools, normal school teachers, and other well advanced educators setting forth that these said educators had fully examined the applicants and found them to possess an education "equal" to that which they would have obtained if they had received their high school diplomas.

One member of the State Senate from northern W. Va., who voted for the chiropractic bill from the beginning to end and fought all amendments that would have clarified the law, is known to have written letter to the State Department of Health urging that every courtesy be shown to a woman chiropractor in his vicinity who had to take the examination. She made an average of about 23 per cent. Another applicant who carried letters from some of the most prominent people in the Eastern central part of the state had an average of 21 per cent. This one had a high grade in the chiropractic "art of adjusting," but failed in all other branches including chiropractic philosophy, chiropractic analysis, nerve tracing, and palpation. The letters were from members of the family of a man who held high office and other prominent citizens.

Several of the applicants who applied for license without examination were disqualified by the examining board and told they would have to take the tests. Virtually all refused. The Huntington chiropractor whose diploma showed the marks of having been changed from "1922" to "1916" is understood to have gone back to Davenport, Iowa, to continue his studies.

Under a ruling of the State Health Council, chiropractors who failed to pass the first examination have until October when a second examination will be conducted. If they fail to pass the October examination they will have to close up shop or be prosecuted under this law, according to Dr. Henshaw.

The question arose a few days ago as to whether or not the chiropractors would be subjected in the October examinations to the same questions by the medical members of the Public Health Council as are the applicants for license to practice medicine; that is in the subjects of anatomy, histology, physiology, pathology, symptomalogy, physical diagnosis, hygiene, sanitation, chemistry and bacteriology. There was some talk of having two sets of questions; one for the chiropractors and another for those seeking a license to practice medicine. However, it is generally believed that the same set of questions would be submitted to all applicants in the ten subjects listed.

An idea of the questions that were asked is given in the following list:

One of the strong points of chiropractic has been how much the chiropractor says he knows about anatomy. With ten questions to answer out of a list of twelve, but seven out of thirty-five could make a sufficient aggregate grade to pass, and it is understood that a majority of these possessed a college degree or had had some preliminary medical school training.

The list of questions or subjects on anatomy submitted to the chiropractics follows:

1. Name the structures from without inward inclosed in the Vertebral Canal.

2. What space is occupied by the spinal fluid?

3. What two kinds of nerve fibers are found in a spinal nerve trunk? Which of these are found ni the Pyramidal tracts of the spinal cord and which kind are in the tracts of Burdach and Goll?

4. Give nerve supply of the stomach and small intestine.

5. Name the Articulations of the Sacrum.

6. Define Neurone and give a description of its structure.

7. If a foreign body were to enter the Saphenous vein, and follow the blood current, where would it first come in contact with Capillaries?

8. Name the divisions of the large Intestine and give the position of each division.

9. In what part of the Bile passages would an obstruction cause Jaundice?

10. Describe the structure of an Artery.

11. What kinds of muscular tissues are found in the body? Give an example of each.

12. Give histological anatomy of the excretory structures of the kidney.

THE NEW COMPENSATION LAW

West Virginia's new Compensation law, passed April 24, the closing day of the regular session of the West Virginia Legislature, became effective July 23. Of particular importance to the medical profession of the state is the amendment to Section 27, Sub-section A. increasing fees for medical, surgical and hospital treatment from $300 to $800. This increase is designed to correct an evil that long has worked a hardship upon the members of the profession.

Another important change is the modification of the Contract List clause. Under the old law no payment could be made out of the Compensation Fund for medical, surgical and hospital treatment of an injured employee if the employee was a subscriber to a contract list in connection with his employment. However, this proviso has been added to Section 27, Sub-section C, reading:

"Provided, however, if in the opinion of the commissioner on the advice of the medical examiner, an injured employee needs hospital treatment for an injury sustained under this act, such hospital treatment shall be ordered by the commissioner and paid out of the workmen's compensation fund, not however, in any case to exceed $800."

It is believed that this provision will be so construed as to provide for rehabilitating injured workmen

and thus restore them to as near normal as possible.

The amendment to Section 27, sub-section A, increasing the fees from $300 to $800 means very much to the medical profession in West Virginia. The Public Policy and Legislative Committee of the State Association actively supported this amendment, Dr. R. H. Walker, a member of the committee, being particularly active. Dr. R. H. Dunn, Councilor from the Sixth District, and Dr. John E. Cannaday appeared before committees and explained the situation in detail. Other members of the profession worked strenuously to bring about its passage.

An example of what this law means to the profession is shown in a letter received recently at the executive secretary's office. An injured workman was treated in a Huntington Hospital from April until July. He was operated on twice. The total medical, surgical and hospital bill was $630. However, under the old law the compensation commissioner could pay but $300, and of this he apportioned $200 to the hospital and $100 to the physician.

In discussing the new law, Commissioner Ott and O. R. Graham, chief clerk of the claim department point out that the law went into effect on July 23, and is applicable only in those cases wherein employees were injured on or after that date. They explain that a workman injured on July 15 and discharged on August 15, would come under the law with the $300 limit fees.

"No provision was made in the law making it effective from date of passage," said Commissioner Ott. "Therefore, if a workman is injured on July 23, fees would be paid under the old law. To have made the statute retroactive would have opened many claims and would have placed the fund in a perilous condition. Please make it clear that only claims arising from injuries suffered on or after July 23, will be acceptable under the provisions of this new act."

THE WINTER'S WORK

The majority of the component societies will begin this month with their programs for the Fall and Winter activities, after the summer vacation. It seems to us, and we have been observing county society activities for quite a number of years, that never before during our experience has there been as much interest manifested in organization work. This year, we, as a State Association, have had more things accomplished than in any previous year which we recall. In our opinion this is very largely due to the fact that the executive secretary has been keeping us reminded that we have a State Association, and that its affairs are going on all of the time. These things will surely result in greater activities this Fall among the various local societies, and we hope that program committees have been active in preparing an outline for the Winter's work.

We would take this opportunity of requesting that the officers of the county societies will see to it that more state news is sent in either to the editor or to Secretary Neale, for there is nothing which makes members look forward to the monthly issue of the Journal with greater anticipation than the news col

There are many things of great importance which will have to be taken up and acted upon also, not the least of which is the selection of the local Professional Relations Committee, which will function wtih the similar committee of the State Organization. It is hoped that the full significance of this committee and its importance will be realized by the members of the county societies. No committee of the State Medical Association is, in our opinion, so important as is this one, and there will be no committee of the local societies so important or so pregnant with possibilities for real constructive work as will this local committee, the membership of which must be very carefully and thoughtfully selected. This is but one of the important things to be dealt with. It is our earnest wish that this coming season of this Association's activities will be the most profitable and interesting one we have ever had.

THE PUBLICATION OF PAPERS

The editor very frequently wonders just what the various members of the Association would do, were they in his place, about publishing papers sent in to him.

Each author of course feels that his paper or address, or article is the most important one of all, and that a delay in its publication will deprive him of priority of work done, etc. This is but natural, and yet they seem to lose sight of the fact that there may be other papers which have been sent in previously to theirs which are entitled to publication first.

If we were to publish all of the papers immediately we would have one grand issue of the Journal of something like 500 pages, and then for the balance of the year it would be only abstracts and material of that character which would appear.

Three or four years ago an effort was made by your editor to publish the papers read at the State Association Meeting in the order in which they were presented on the program. This was done with the idea in view of preventing any hard feelings among the members, or that there was any partiality shown. It did not work out well for the simple reason that a great many of the men never turned their papers in at all, and we could not get them. For instance this year one or two papers have been published which were presented at Wheeling more than a year ago, because they had not been received sooner.

At the present time the editor has a number of papers in his hands, several of which he has been requested to publish at once. It will be an impossibility to publish them all. This opportunity is taken to explain to the members that it is not possible to publish every man's paper just when he thinks it should be published.

This has been one, and not the least one by any means, of the troubles of your editor during the past ten years. I am sure that if the men only realized how impossible it is to give every one first place many of these requests would not be made, and less offense felt if a delay is impossible.

COUNTY SOCIETY REPORTS

The Barbour - Randolph - Tucker Medical Society met in the Hotel Imperial at Thomas, W. Va., July 29, 1925, 4 to 6 p.m., the following being present:

Members: Drs. J. L. Miller and H. M. Brooks, Thomas, W. Va.; H. H. Bolton, Pierce, B. I. Golden and C. H. Hall of Elkins, W. Va.; J. C. Irons, Dartmoor.

Visitors: Drs. G. N. Cromwell, Davis, W. Va.; V. M. Danford of Kempton; Dr. and Mrs. Miller, Eglon; W. E. Whiteside of Parsons, Frank Thompson of Douglas, and Dr. Dyhre of Ben Bush.

Dr. Golden presided. The time being limited the business of the Society was postponed, and they proceeded to the clinical cases and papers.

Dr. J. L. Miller presented an unusual case of recent occurrence, in which the patient in hurridly arising struck his leg against the corner of the table, the point of contact about eight inches above the knee, slight seemingly, but which caused paralysis of the limb with swelling and discoloration about the knee,—greatest tenderness near the knee and at sides of limb, some distance from place of injury. The diagnosis was injury to the nerve with possible rupture of small blood vessel. Five days after injury still slight paralysis and pain but slowly improving.

Dr. Miller also presented a girl over eight years of age, with an immense sarcoma involving the entire left femur, and now entending to other limb and body. The case had been diagnosed over two years ago, when an operation was advised, but refused. The patient was later taken to Baltimore, but was decided beyond surgical aid.

Dr. Bolton exhibited a child born June 13th which was apparently normal in every way, but which began to have some bowel trouble on July 6th, which was soon diagnosed as obstruction, taken to hospital at Davis where Dr. Cromwell operated and found the bowels to have fibrous adhesions in several places, sufficient to obstruct bowel action. The child made a rapid recovery which was, according to statistics, unusual considering age of child.

Dr. G. N. Cromwell gave a report, his observation and attendance at birth of twins, one born alive, the other dead, apparently for some days. This case was rare from the fact that there was only one placenta, and the birth of a living child under such circumstances was unusual.

He also reported an operation upon a child five years old for intussusception of bowel, due to diphtheritic paralysis. The bowel was invaginated from both ends, the child had shown no symptoms of paralysis of throat. The operation was advised as a last resort, but without benefit.

Dr. V. M. Danford read a short paper entitled "Those Nerves."

Dr. C. H. Hall had a paper giving the technique of treating T. B. cases, by the calcium chloride method, but for lack of time not read, as some wished to return by train. Dr. Hall kindly promised me a copy of his paper for the Journal, as many inquiries have been made as to the mode of treatment—the report of results, which so far have been encouraging.

The Society then repaired to the dining room to enjoy an excellent lunch.

While at lunch, in discussing the T. B. treatment Dr. Miller and Bolton reported cases coming under treatment and notice from others, by means of inhaling plaster of paris in T. B. cases. The troublesome cough is soon eased or stopped, and patient rapidly improves. The belief was that the inhalation coated the cavities and checked the secretion, and gave nature a chance to heal and repair damages.

This is new to us, and we give it hoping for further reports.

The Society then adjourned to meet in Elkins in August.

J. C. IRONS, Secy.

MEDICINE AND SURGERY

Dr. J. S. DeJarnette, superintendent, Western State Hospital, Staunton, Virginia, contributes an excellent article to the Virginia Medical Monthly (August, 1925) on eugenics as related to feeble-mindedness. epilepsy, insanity, race-blending and kindred evils in the body politic, and discusses the application of a law recently passed by the General Assembly of Virginia providing for the sterilization of the unfit. He closes with an original poem which is so apropos that we quote it:

MENDEL'S LAW

Oh, why are you men so foolish—
  You breeders who breed our men
Let the fools, the weaklings and crazy
  Keep breeding and breeding again?
The criminal, deformed, and the misfit,
  Dependent, diseased, and the rest—
As we breed the human family
  The worst is as good as the best.

Go to the home of some farmer
  Look through his barns and his sheds,
Look at his horses and cattle,
  Even his hogs are thoroughbreds;
Then look at his stamp on his children,
  Lowbrowed with the monkey jaw,
Ape-handed, and silly, and foolish—
  Bred true to Mendel's law.

Go to some homes in the village,
  Look at the garden beds,
The cabbage, the lettuce and turnips
  Even the beets are thoroughbreds;
Then look at the many children
  With hands like the monkey's paw,
Bowlegged, flat headed, and foolish—
  Bred true to Mendel's law.

This is the law of Mendel,
  And often he makes it plain,
Defectives will breed defectives
  And the insane will breed insane.
Oh, why do we allow these people
  To breed back to the monkey's nest,
To increase our country's burdens
  When we should breed from the good and the best.

Oh, you wise men, take up the burden
  And make this your loudest creed,
Sterilize the misfits promptly—
  All found unfit to breed.
Then our race will be strengthened and bettered,
  And our men and our women be blest,
Not apish, repulsive and foolish,
  For we should breed from the good and the best."

W. E. V.

Titus contributes an excellent article on Hyperemesis Gravidarum to the Journal of the A. M. A., August 15, 1925. He views this condition as

a carbohydrate depletion due the taking up of glycogen by the fetus from the maternal organism, and advocates supplying the carbohydrate by feeding or by intravenous glucose solution. He uses chemically pure gluecose in 25% solution and gives a quantity equal to .8 gram per kilo of the patient's body weight. The solution should be made with double distilled water, filtered five or six times and sterilized in a steam sterilizer for thirty minutes at 100 centigrade on three successive days, or in emergencies in an autoclave at fifteen pounds pressure for twenty minutes. Caramelization or sediment renders the solution unfit for use. We quote his excellent

SUMMARY

1. Intravenous injection of glucose for hyperemesis gravidarum, first recommended in two previous communications by co-workers and myself, has now come to be an accepted method of treatment.

2. Because of a diversity of opinions on such matters as the dose of the sugar, the preparations of glucose to use, the concentration of the solutions, and the frequency of the injections, detailed directions are outlined in this paper.

3. The principal points to be observed are that: (1) the therapeutic dose of glucose for an adult of average size is from 50 to 75 gm., and smaller doses do not give the desired effect; (2) any preparation of glucose for intravenous administration must be chemically pure because reactions in the patient are usually traceable to impure or carelessly prepared solutions; (3) hypertonic solutions (preferably 25 per cent.) act more promptly and favorably than weak solutions, and (4) single injections are safer than a continuous flow, but must be repeated from one to threre times daily according to the condition and response of the patient.

4. Favorable results are now reported in a total series of 328 cases of hyperemesis gravidarum treated by high carbolydrates feedings or intravenous injections of glucose. Therapeutic abortion was performed four times, and three of these patients died. Two of these cases were clinically to be classed as acute yellow atrophy of the liver.

5. The basis for the treatment of hyperemesis gravidarum by glucose and other carbohydrates whether given by vein or mouth, or by bowel is to be found in the physiologic assumption that there is a carbohydrate deficiency in the maternal organism.

6. This deficiency occurs as the result of an unusual demand for carbohydrates made by the growing fetus, and a diminished carbohydrate intake in the patient's diet, thus being a combination of an indirect and a direct starving.

7. Pregnancy toxemia and starvation are not identical, for additional factors undoubtedly are involved. Every pregnant woman is a potential subject for toxemia, and if by a starvation of carbohydrates the liver is depleted of its reserve glycogen, its detoxicating action is thereby impaired, and a more profound effect from toxins from whatever source is thus made possible.

8. Carbohydrate deficiency in pregnancy toxemia probably is the cause of part of the central necrosis of the liver lobules seen in fatal cases, its action being the same as that by which simple starvation produces similar necrosis.

9. The action of glucose is probably twofold: (1) a direct liver-sparing effect, and (2) a stimulatin of the storage properties of the liver cells, which is practically identical with regeneration and repair.

10. Ampules of concentrated glucose solution which may be diluted as required are now being prepared by reliable pharmaceutic firms, and may be obtained for emergency use or when laboratory facilities are not available.

11. A limited but fairly comprehensive experience with the combined use of insulin and glucose injected intravenously has led to the belief that this is of no clinical advantage. Moreover, there is evidence to show that insulin actually causes glycogen stores to become depleted, by its demand for glucose to be oxidized and otherwise metabolized. In toxemia of pregnancy, therefore, in which storage in the liver and not combustion of the injected sugar is the desired result, the simultaneous administration of insulin is contraindicated.

W. E. V.

DILATATION OF THE URETER AND KIDNEY PELVIS DURING PREGNANCY.

In the severest case of acute pyelitis of pregnancy seen by H. L. Kretschmer and N. S. Heaney, Chicago, (J. A.M.A., Aug. 8, 1925), the ureteropyelograms showed enormous dilatation of both kidney pelves and ureters, with extreme torsion and kinking, and marked outward displacement of both ureters. In a study of eleven subsequent cases of acute pyelitis, there was marked dilatation of both ureters and kidney pelves in six cases. In two cases only one side was injected, in both of which cases the injected side was found dilated. In three cases in which both ureters were injected, the right ureter and kidney pelvis showed enormous dilatation in two cases and only marked dilatation in the other, while the left ureter and pelvis were normal in all three cases. In the nineteen cases of normal pregnancy, bilateral dilatation was found in nine (47.36 per cent). In seven cases the kidney pelvis and ureter were dilated on only one side (36.84 per cent). (In three of the seven cases only one side was injected.) In three cases no dilatation was found (15.8 per cent). In one of the latter three cases the pelvis were normal but the ureters were not filled with the bromid solution. In a group of six patients giving a history of pelvis before coming under observation but at present without symptoms, bilateral dilatation was present in two cases, unilateral dilatation in three cases and no dilatation in one case. Several patients came under observation because of persistence of pyuria and urinary symptoms after delivery. The authors found, without exception, definite evidence of dilatation of the ureter. In some of the cases there was a definite displacement of both ureters away from the median line, so that the distance between the two ureters was very markedly increased. This was particularly noticed in the cases in which the dilatation of the ureters was extensive. In some of the cases the dilatation extended all the way up the ureter from the bladder to the kidney pelvis and was extreme. In others, the dilatation seemed to come to a very abrupt stop at about the brim of the pelvis below which point

the ureters either were slightly dilated or were normal. This was particularly marked in cases showing lateral displacement of the ureter. Several patients during pregnancy complained of obscure, indefinite and a typical abdominal pain. These patients were subjected to pyelography. Dilated and kinked ureters were found, as well as hydronephroses. In several cases the ureteropyelogram showed the presence of kinks in the ureter. It is generally not known that dilatation of the upper urinary tract during pregnancy is as common as these figures demonstrate, particularly that varying degrees of dilatation occur in approximately 80 per cent of cases of normal pregnancy.

STATE AND GENERAL NEWS

Members of the Kanawha and Logan Medical Societies have arranged for a joint meeting and barbecue to be held at Madison, Boone County, Tuesday afternoon, September 22nd. Madison is about the half-way point between Logan and Charleston on the new state road. Every member of the organized medical profession is invited to attend.

Doctors from Charleston and vicinity will leave the Kanawha Valley Hospital at 11 a.m. on the day of the joint session.

A. M. Kelley, M. D., announces the opening of an office for the practice of medicine and surgery, 403-404 First Huntington National Bank Building, Huntington, W. Va.

GOVERNOR CHOOSES NEW HEALTH COUNCIL

Charleston—Appointment of two new members of the public health council and re-appointment of another member have been announced at the governor's office.

The re-appointment came to Dr. H. G. Camper of Welch, while the new appointees are Dr. H. A. Barbee of Pt. Pleasant, and Dr. B. O. Robinson of Parkersburg.

Dr. Barbee succeeds Dr. V. T. Churchman of Charleston and Dr. Robinson succeeds his fellow townsman, Dr. Thomas L. Harris. The terms of the retiring members and of Dr. Camper expired on June 30.

That it was the governor's intention to re-appoint Dr. Camper became evident three weeks ago when the health council elected him president to succeed Dr. Walter M. Babb of Keyser.

Drs. Barbee and Robinson are widely known in medical circles and both are prominent politically. The former is a member of the republican state committee and for many years has been considered one of the leaders of his party in Mason county and the fourth congressional district. Dr. Robinson is spending the summer in Europe. He is treasurer of the republican state central committee and a close friend of Gov. Gore.

The three appointments are for four-year terms. Members of the health council draw no salaries but are allowed $10 a day during the council's sessions.

This body is now composed of, besides the four mentioned, including Dr. Babb, the following:

Dr. J. L. Pyle, Chester, whose term expires June 30, 1926; Dr. O. L. Jennings, Williamson, June 30, 1926; and Dr. W. T. Henshaw, secretary by reason of his position as health commissioner.

Wheeling—Plans for a four-year medical course at West Virginia university in place of the present two-year course were discussed recently by members of the state board of education, in session at Waddington farm, magnificent estate of Col. E. W. Oglebay, but beyond the statement that the change was expected to be made "within a few years," nothing definite was forthcoming.

Announcement was made of the appointment of Prof. Earl T. Bowman, head of the educational department of West Liberty normal school, to act as temporary president of the institution in the absence of Prof. Howard McGinnis, who will be absent for a year.

In its August report on state road conditions, the state road commission calls attention to the fact that several sections of road for the improvement of which contracts have been let, will be closed to traffic in the near future. Included will be the combination through highway north and south across the state, from the Pennsylvania line via Morgantown, Clarksburg, Parkersburg, and Charleston, to Bluefield, which has been open all this season. Due notice of the closings will be given when definite dates are ascertained, together with detours or alternative routes.

Changes on important routes since the July report include the completion of the paving between Clarksburg and Grafton, on the Northwestern Turnpike, and the completion of the paving project just west of Romney, on the same route.

Route No. 5 is now open to traffic, for the first time, from Spencer, through Arnoldsburg, Normantown, Glenville, Weston, and Buckhannon, to its junction with Route No. 56 near Elkins. Grading projects in Calhoun, Gilmer, and Lewis counties are not officially completed but present no serious obstacles to travel.

Completion of the project between Victor and Hico has opened the Midland Trail to continuous traffic from Kenova, through Huntington, Charleston and Gauley Bridge, to Ravenseye. Two detours make it possible to use the Midland Trail route all the way across the State, but for through travel the road via Huntington, Charleston, Glen Ferris, Kanawha Falls, Fayetteville, Beckley, Hinton, Alderson, Asbury and Lewisburg, is still recommended. The remaining construction on the Midland Trail is scheduled to be open for traffic about the end of September.

In the eastern part of the State, Route No. 24 with its detours may now be used between Lewisburg and Marlington instead of the county road heretofore recommended.

The road between Huntington and Williamson, which was closed temporarily, is again open and in good condition.

Lumberport.—L. C. Oyster is going to have his own one-man family reunion. He announces:

"When I read the long list of family reunions in the papers, it put it into my mind to have a family reunion of my own.

As I am the sole and exclusive owner of the name 'Oyster' in West Virginia, it will be but very little trouble for me to get the entire membership of my family together on short notice.

It will not take a very large grove to shelter me all, in fact, most any old tree will provide the shade, and cooking the eats will be a light task.

So I am going to select the 29th of February next as the date of my family reunion and I extend a cordial invitation to newspapermen to attend.

Bring a well filled basket and be prepared to stay all day.

If there are any more one-man families perhaps they had better follow suit."

N. B.: L. C. Oyster is a member of the West Virginia State Medical Association.

In response to a wide spread demand from our members we have carefully considered the matter of mutual automobile insurance. After complete investigation we have endorsed the Lumbermen's Mutual Casualty Company and the Central Manufacturers Mutual Insurance Company. These companies write all forms of automobile insurance at the stock company rates and pay 25 and 30 per cent dividends.

We have arranged for the insurance to be handled through our secretary, Sterrett O. Neale.

We particularly urge that our members co-operate on this proposition. We feel sure that every physician will want to fully protect himself as well as the public in case of serious accident. With the saving from these companies your cost will be low and reasonable.

Please fill in and return the enclosed card so that we may give you particulars as to premium charge and dividend saving.

Yours very truly,

Insurance Committee.

HEALTH AUDIT — AID TO LONGER LIFE

By CHAS. H. MAYO, M. D.
Rochester, Minn.

In the past twenty-five years more has been accomplished in medicine than in all the centuries before. Scientific medicine has done about all it can for the mass diseases, now practically gone, but which used to frighten and destroy the people by tens of thousands.

In the fourteenth century, fifty million people died of the plague. There was only one way of escaping it, and that was for people to leave their homes and run away to places free from it. In the eighteenth century many millions, probably one hundred millions, died of nothing but smallpox.

Today each man is dying his individual death, and it is up to us to see if we cannot reach him in some manner and persuade him that it is worth while, when he is still vigorous, to learn to keep his machinery from going to pieces from neglect.

In the sixteenth century, man had but twenty years of average life. It is fifty-eight today, and you wonder whether you will be able to reach

the three score and ten of the Bible. We hope to be able to do that from a medical standpoint within the next twenty-five or forty years.

It is coming. We know it is coming. Our problem is advancing the age of our people by teaching men, women and children the art of keeping well. There are thousands of deaths annually, which, with reasonable precaution, could be prevented. This means that society is not availing itself of the medical knowledge already at its disposal. Of the 3,000,000 people on the nation's sick list every day, one-fourth to one-third are needlessly so.

To combat this unnecessary suffering and waste of human resources, to induce better health and longer lives, a campaign of health education such as is now being undertaken by the Gorgas Memorial Institute is of the highest value.

An important phase of the work is the periodic health examination or health audit, the only known way of discovering certain incipient diseases before the individual realizes anything is wrong. In the beginning, Bright's disease, apoplexy, and high blood pressure are usually symptomless to their victim. But discovered in time by the health audit, the advice of the family doctor followed out, you are put on the road to recovery before your vital organs are wrecked beyond repair. Take as good care of your health as you would of your automobile and have your vital structures tested yearly to locate the enemy of your health.

A second vital function, which is truly preventive medicine, is teaching the individual the ill effects of wrong habits of living, which if continued, will lead to illness. Improper eating, and getting insufficient exercises each day are among them.

THE TREATMENT OF SYPHILIS

A working monogram on the treatment of syphilis has been prepared for the medical profession by the Dermatological Research Laboratories which will be sent with the compliments of the publishers to any physician requesting a copy. This booklet discusses the following in separate chapters:

Introduction, Syphilis today.

Arsphenamine vs. Neoarsphenamine.

Sulpharsphenamine.

Bismuth in Syphilis.

Mixed Treatment.

Methods of Treatment.
- The Primary Stage.
- The Secondary Stage.
- The Tertiary Stage.
- Neurosyphilis.

Intraspinal Injections.

Technic of Preparing:
- Arsphenamine.
- Neoarsphenamine.
- Sulpharsphenamine.
- Bismuth.

Possible Reactions.
- Sodium Thiosulphate.

References.

Requests for this monograph should be addressed either to The Abbott Laboratories, Chicago, or The Dermatological Research Laboratories, Philadelphia.

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SURGICAL INDIGESTION A CONSIDERATION OF THE DIFFERENTIAL DIAGNOSIS

ORATION ON SURGERY

Delivered Before the Fifty-eighth Annual Meeting of the W. Va. State Medical Association, at Bluefield, W. Va. Tuesday, June 9, 1925.

DR. ROY B. MILLER, Parkersburg

It is with a sense of great honor, which has been bestowed upon me by the Surgical Division of the State Society, that I have the privilege of addressing you at this time on an important surgical question, and it was with no little reluctance that I finally accepted the responsibility. I shall endeavor in as short a time as possible to detail, what I consider to be some of the outstanding points in a differential diagnosis of surgical indigestion.

It not infrequently occurs that accuracy of clinical diagnosis in medicine and surgery does not go hand in hand with an increase of scientific knowledge, and is too often accounted for by the fact that an individual test is regarded as a short cut to diagnosis, whereas the more painstaking investigation is too often omitted.

This, it would appear, is the position which has been reached today with regard to Indigestion. Too often is the history or the physical examination ignored, and an X-ray, or less frequently, a test meal, looked upon as the sole means of investigation. Entirely too often is a patient sent up with a note that gastric symptoms are present which have not yielded to two or three weeks' medical treatment, and an X-ray is asked for to determine whether or not an ulcer is present. It seems to have been lost sight of, that a careful history and physical examination will, in most cases, often make it evident that the patient is suffering from gall-stones,

or that a large abdominal tumor is present. This explains why, in spite of the large amount of work which has been done, probably more errors are made in this branch of surgery than in any other. Especial attention to all the details of these cases will, however, lead to an accuracy in diagnosis which can be surpassed in but few branches, and it is to some of these details that I particularly want to direct attention in this discussion.

There are in the main four methods of investigating these cases: the history, the physical examination, the test-meal, and the X-ray. Neither of these methods is infallible, but a carefully taken history is in the last analysis of the greatest value. In accuracy of diagnosis, the X-ray perhaps is second in importance, but it should be pointed out that this method of investigation requires special skill, and to have a patient fluroscoped, or even a film made, by one inexperienced in this field, is useless and often misleading.

The length of the history is a factor of very considerable importance, but it must always be remembered that some of the conditions will give rise to periodic symptoms, and the patient will always tend to describe only his last attack, so that unless care be taken a grave error may be made. Too much stress cannot be laid upon the fact that if a patient over the age of forty, who has previously been free from all dyspeptic symptoms, complains of persistent indigestion of over three weeks' duration, he should be regarded as a case of carcinoma of the stomach until he has been definitely proved otherwise. On the other hand, if the symptoms date back to early childhood in a girl, it probably is a case of ptosis. The characteristic periodicity found in the symptoms of a peptic ulcer, either gastric or duodenal, are so distinct from the long-continued, constant but slight discomfort of gallstone indigestion, that in a typical case no difficulty should arise. In practice, however, the mistake is not infrequently made of conflicting the two conditions, for notation is only made of the severe attacks of pain which are present with chole-cystitis or colic, and of overlooking the constant discomfort which occurs day by day between the attacks.

Viscerptosis, perhaps more than any other condition, in its milder degrees, offers greater difficulty of distinction, particularly from peptic ulcer or appendiceal indigestion. The carefully taken history will do more to differentiate these conditions than any other form of investigation, for the former is characterized by the presence of many attacks dating from early life, each of which lasts only a few days and is separated from the rest by a short period during which the patient has only incomplete relief. On the other hand, an uncomplicated peptic ulcer, will have had attacks of severe symptoms, each lasting for several weeks and separated from the next by a period of some months or even a year of complete freedom from all symptoms.

Careful attention to the nature of the attacks will often give a clear indication that some change has taken place in a gastric ulcer, for, with the onset of an hour-glass constriction, pyloric stenosis, penetration to some adjacent viscus, or carcinoma, the characteristic periodicity will disappear and be replaced by continuous symptoms.

Indigestion due to appendicitis will frequently show periodicity, but the severe attacks are relatively short, and it will nearly always be found that the relief in between the attacks is incomplete. The presence of a past history of an acute or sub-acute appendicitis is of extreme importance.

Pain in some form is complained of by most of the patients. Its position and radiation, the relation of the pain to the intake of food, and its severity often give a clue to the underlying disease.

Position and Radiation: The more acute gastric lesions give rise to pain, which, although widespread in the epigastrium, does not as a rule radiate beyond it. On the other hand, in the more chronic gastric lesions the pain will radiate widely to the back and shoulders. Such radiation will be more pronounced when the pain is severe, and it is usually increased if the ulcer becomes adherent to the adjacent or surrounding structures. If it is the pancreas which becomes involved, the pain often radiates to the left shoulder, while involvement of the under surface of the liver will usually give pain radiation in the right shoulder. Pain in the right shoulder is a frequent observation with gall-stones, abscess of the liver, and has been noted with hydatid cyst. Involvement of the small intestine, such as occurs in gastro-jejunal ulcer, is generally indicated by radiation of the pain downwards and to the left iliac fossa. Also indigestion resulting from a chronic appendix will at some time or other in its history give rise to a pain which radiates to the right iliac fossa. It is common for colonic pain, found with ptosis, to radiate through to the lumbar region.

Relationship of pain to the intake of food: The relationship which exists between the intake of food and the resulting pain is often very helpful in a differential diagnosis. With a benign gastric ulcer the time of onset of the pain is directly proportional to the distance of the lesion from the cardiac orifice. Usually the pain will be observed to come from one-half hour to an hour and a half following the ingestion of food. On the other hand, carcimona of the stomach generally gives a constant pain, although it may be increased to a certain extent by the taking of food. The discomfort of gall-stones, or advanced chronic cholecystitis, without stones, comes within the first half hour following a meal; also, the qualitative food distress with gall bladder disease is important, for the patient will often say that the fried foods, greasy foods, pork, or raw apples increase the distress materially, and frequently they will have to eliminate these articles from the diet. It is not uncommon for gall bladder cases to note distress in the epigastrium and have gaseous eructations before the meal has been finished. With visceroptosis there may also be a fullness immediately after meals, but it is usually fairly characteristic of this condition for the discomfort to be more pronounced towards the end of the day or when the patient is tired and, therefore, rest usually relieves the condition.

As to the severity of the pain, this is often estimated with difficulty, inasmuch as we must depend entirely upon the statements of the patient. However, it is helpful to bear in mind that a carcinoma of the stomach rarely gives severe pain unless there is associated involvement of some

other viscus or pyloric obstruction. On the other hand, chronic gastric or duodenal ulcer frequently gives rise to quite severe pain, and it is a well known fact that particularly duodenal ulcer may be associated with pain sufficient to wake the patient at night. Gall-stone colic is often of extreme severity, may double the patient, is often associated with collapse, and frequently requires a hypodermic of morphine to control. Pain associated with acute inflammatory lesions of the gall bladder and appendix is of a more persistent type and is associated with fever and a leucocytosis.

Vomiting: It should be first pointed out that the symptom of vomiting is absent in the greater number of the chronic or surgical lesions of the stomach. I believe that the common impression with many physicians and surgeons has been the reverse of this statement. However, when vomiting is a symptom, the character of the vomiting is of paramount importance and often is of great value in making a differential diagnosis. There are, in the main, two types of vomiting which should be differentiated; first, that which is due to an irritation of the stomach which is small in quantity and often frequently repeated; and, secondly, that which is due to some form of obstruction in the stomach or outlet which is larger in quantity and takes place at longer intervals, known as obstructive vomiting. Obstructive vomiting consists of returned food particles which have been ingested many hours or even days before; occasionally a patient states that he noticed prune skins in the vomitus and he knows that he has not eaten prunes during the past week.

Therefore, frequent vomiting of small quantities of material will usually indicate an acute gastritis, such as is more likely to be associated with acute ulceration, rather than with chronic ulcer. This will usually differentiate the acute from the chronic ulcer located in the stomach.

Duodenal ulcer practically never produces vomiting unless it involves the pyloric ring or extends into the stomach, or it has led to obstruction by ciccatrical contraction of the duodenal cap or pylorus.

Inflammatory lesions situated outside the stomach as in the gall bladder and appendix will only give rise infrequently to vomiting, therefore it is observed irregularly in these conditions.

In obstructive lesions of the pyloric end of the stomach, whether benign or malignant, the vomiting will be characteristically obstructive, large in amount with undigested food particles, so that there should be practically no difficulty in distinguishing it from that found in irritative lesions in the body of the stomach. With an hour-glass stomach when the proximal sac of the stomach is small, the vomiting may be more frequent and much less characteristic.

With chronic gastric ulcers and dilation of the stomach the relief obtained from vomiting is frequently complete. Such relief is not characteristic in visceroptosis, acute gastritis, and in carcinoma of the stomach.

Haematemesis and Melaena: The presence or absence of blood in the vomitus or stools is of course of very little value as a differential point. It is commonly observed in cases of acute ulceration which only require medical management, although it

should be borne in mind that haematemesis rather frequently occurs secondary to, and apparently dependent upon, chronic surgical lesions such as gall bladder disease, chronic appendicitis, chronic pancreatitis, and certain splenomegalies. On the other hand, large chronic ulcers of the stomach or duodenum, or even an extensive carcinoma of the stomach, may never show any visible blood in the vomitus or stools. The converse of this also obtains, in certain cases the smallest of gastric or duodenal ulcers of the chronic type have produced severe hemorrhage. It is, therefore, never justifiable to wait for the presence of haematemesis or melaena in order to make a diagnosis of chronic gastric or duodenal ulcer.

Appetite: Changes in the appetite of a patient are often very significant. If a man or woman over the age of forty complains of having had short dyspeptic symptoms and in addition a loss of appetite, it is very probable that he or she has a carcinoma of the stomach. On the other hand, patients with gastric and duodenal ulcers are often found to have a perfectly good appetite, although where gastritis is also associated the appetite may be lost.

Loss of weight: Loss of weight, when present, is a very valuable guide in diagnosis, but it cannot be stressed enough that a diagnosis should be made before the advent of considerable loss in weight. While it is often highly suggestive of carcinoma in adults past middle life, it is by no means restricted to that lesion, for a patient with pyloric stenosis from ulcer, obstruction of the common bile duct, or even chronic pancreatitis, may lose weight with striking rapidity.

Jaundice: When associated with other dyspeptic symptoms, jaundice is definitely significant of common bile duct obstruction, but the nature of the obstruction, whether from common duct stone, chronic pancreatitis or from pressure on the duct by an external neoplasm, can only be decided after careful consideration of other symptoms. On the other hand it is only necessary to mention here that jaundice may also occur in certain blood dyscrasias, referring particularly to hemolytic jaundice, which should always be considered especially when dealing with young individuals.

The Physical Examination: As a working rule, the general build of the patient is often suggestive of the underlying disease. A young female with well-marked ptosis habitus is very unlikely to be suffering from a chronic gastric ulcer; likewise a well-developed muscular man suffering from a long-continued dyspepsia is more likely to have an organic lesion of the stomach or duodenum, and a stout woman past middle age who has had long-continued indigestion for many years is often suffering from gall-stones.

The abdominal examination in these cases is, of course, very important. Often it may not be of any help in the differential diagnosis, yet the absence of physical signs in itself may be of very great value. An enlarged and palpable gall-bladder, a hard, irregular mass in the epigastrium, or a dilated and visible peristaltic stomach are manifestly physical signs of extreme importance. On the other hand it must be remembered that the absence of an enlarged gall-bladder does not show that stones are absent, or if there is

no tumor palpated in the epigastrium that there is an absence of cancer of the stomach, and a considerable degree of obstruction at the pylorus may also be present without giving rise to a palpably dilated stomach or visible peristalsis. One of the most important physical signs is superficial tenderness. It is to be remembered, however, that it is only an indication of distension of the viscera with stretching of the peritoneal covering, and when the peritoneum has been perforated, as in an acute perforative process, the superficial tenderness disappears to be supplanted by severe abdominal pain, marked rigidity and deep seated tenderness. Therefore, a widespread superficial tenderness in the stomach area, particularly in a young patient, is an indication of an acute gastritis and not of a chronic ulcer. Areas of superficial tenderness may be present with dilatation of the gall- bladder, caecum and appendix.

The Gastric Test Meal: The investigation of the stomach secretion is of great value when combined with a careful history and clinical study. There are two methods of studying the gastric secretion; first, the ordinary method of studying the test meal one hour after the meal, and second, the fractional method, studying the secretion at fifteen minute intervals, beginning from one-half to an hour after the meal, and taking fractional samples over a period of two hours or more. Of the two methods, there can be no question but that the fractional method is the better of the two. A fallacy of the first method is too often demonstrated when a patient who gives a typical history of a duodenal ulcer, but the test meal taken one hour after the meal, shows a very low total acidity and an absence of free hydrochloric acid (which necessarily throws some doubt on the clinical diagnosis, for we would naturally expect to find rather a high total and high free hydrochloric acid readings). On the other hand, an investigation by the fractional test meal method, may show the appearance of acid, or even high readings of each, in one and one-half or two hours following the meal, showing thereby that the secretion of acid was only delayed.

As a general rule, the total and free hydrochloric acid is high in peptic ulcer, whether gastric or duodenal, perhaps higher in duodenal, although recently occasional cases are being seen with little or no free hydrochloric acid. Notwithstanding the few cases which show low or no acid values, the findings of high acid values run so uniformly true with peptic ulcers that all cases of hyperacidity should receive thorough clinical investigation to rule out ulcer.

Carcinoma of the stomach usually gives an achlyia, although a few cases show free hydrochloric acid. It is very interesting, in this connection, that it has been found recently in the checking up of cases in one of the large clinics, that the patients with carcinoma of the stomach which showed free hydrochloric acid at the test meal examination, gave much better end results following operation and that the life expectancy was remarkably increased. In other words the cancer of the stomach which has not wholly interfered with the formation of hydrochloric acid in that stomach, apparently is destined to have a much better chance of survival and cure following a partial gastric resection, than the case

of gastric cancer without hydrochloric acid.

In ptosis, the acid is usually low, although it is often within the normal limits (normal, total acidity 50 to 75; free hydrochloric acid, 20 to 40—given in terms of the number of cubic centimeters of 1-10 normal sodium hydroxide solution that are required to neutralize the acid of the stomach contents). With chronic gall-bladder, appendiceal or pancreatic disease the gastric acidity should be little affected.

It will be manifest, therefore, that the presence of an achylia or hyperchlorhydria is not exact or clear evidence that any one organic lesion is present, and too much stress should not be laid upon this test unless the clinical history is suggestive.

It is well to remember that if a patient has had a chronic ulcer which has become carcinomatous, the acid for sometime may remain in the upper limits of normal, and in a doubtful case of carcinoma the test will be of little value, and should in no way be comparable with the value to be attached to a change in the clinical symptoms (for instance in benign gastric ulcer the pain and distress occurs in attacks of days or weeks, with intervals of weeks or months when there is absolute health only to have remissions of the same attacks, characteristically spring and fall, where as if the ulcer undergoes carcinomatous change the distress, pain and symptoms become more or less constant).

The Roentgenologic Examinaton: Unfortunately the pendulum of diagnostic proceedure has swung toward the X-Ray investigation of these cases in many instances with little regard for a thorough clinical study. There is no doubt but that the X-Ray examination is one of the most valuable pieces of evidence that can be obtained in arriving at a differential diagnosis, yet it should not be relied upon as the only means of making a diagnosis in these conditions. In fact, not only do doctors send cases for X-Ray examination with request to show whether an ulcer or gall-stones exist, who manifestly from their clinical histories cannot have an ulcer or gall-stones, but the public have also received the notion that an X-Ray is the only test, and it occasionally happens that a patient who has a distinct and characteristic history of an ulcer or gall-stones will refuse operation because the X-Ray is indifinite or negative.

Again, it should be remembered that an X-Ray investigation can only be carried out by one especially skilled in its use. The fluroscopic examination gives the most important evidence of lesions in the stomach and duodenum, when the barium meal is observed, whereby changes in the shape and movement of these organs can be carefully determined. In fact gastric films are almost useless in the diagnosis of diseases in the stomach and duodenum, and are only used by the best roentgenologists to fix certain special phases; therefore, a series of films taken by an amateur in this field gives very little positive evidence for or against a lesion. Moreover, an examination, even when made by one most skilled in this variety of work, is associated with many pitfalls. Surgeons should always be anxious to learn three things from the roentgenologist concerning any gastric or duodenal examination: these are, the position of the stomach and duodenum, their

movements, and their shape, for not uncommonly the indirect is of greater value than the direct evidence.

There are certain conditions, such as a large penetrating ulcer on the lesser curvature of the stomach, which will give an X-Ray picture which cannot be mistaken for any other lesion; it is a piece of positive evidence which cannot be obtained by any other procedure, and is of extreme value, for it occasionally happens that an ulcer of this sort will give a very atypical clinical history, so that symptoms may have been present for a few weeks or months. With such an X-Ray finding the clinical history would be outweighed, and the positive diagnosis of ulcer would be made. On the other hand, it must be remembered that this variety of case only makes up a small percentage of the total bulk of cases which present symptoms of indigestion.

A chronic ulcer may be present on the posterior surface of the stomach which shows no characteristic pit or depression by fluroscopic examination. In such a case the presence of spasm of the stomach at the site of the ulcer, unaffected by the administration of belladonna, will be a very valuable piece of indirect evidence, but the clinical history will here be the determining factor. Such a spasm is also found with those patients having ptosis, and is the one thing from which the chronic ulcer has to be diagnosed, belladonna relaxes this spasm.

Duodenal ulcer again may give rise to decided irregularity in the outline of the duodenal cap, but even if not shown, a diagnoss of duodenal ulcer may be strongly supported by the presence of increased peristalsis, rapid emptying of the stomach, and by the high position of the stomach.

Dilatation and atony of the stomach, depending upon pyloric obstruction, particularly if the obstruction is due to a chronic ulcer, may often be difficult to distinguish from the atony and delayed emptying found with a patient with ptosis.

Carinoma of the stomach will not infrequently give rise to a very characteristic picture, but occasionally, and more especially if the tumor is in the fundas of the stomach, the X-Ray examination may entirely fail to reveal it.

Gall-stones may give rise to a direct shadow, yet here again it must be remembered that only a very skilled investigator is likely to obtain positive results, when stones can be demonstrated. (The amount of calcium in gall-stones determines whether a stone will throw a shadow by the X-Ray; statistics of large clinics show that only about 15 per cent of gall-stones that are found at operation and at the post-mortem table show by X-Ray). Even if no such direct shadow is present, the clinical diagnosis may be supported by the evidence of indentation of the duodenum after an opaque meal has been given, and yet the presence of adhesions producing the deformity should be kept in mind.

It is, of course, very possible that I have placed too much stress upon the fallacies and difficulties of the roentgenologic examination, but it has been done with a defnite purpose in mind, because the great tendency of the day is to neglect entirely the history and to depend upon the X-Ray examination alone. A careful clinical investigation of these cases combined with the X-Ray study will

probably net an 85 to 90 per cent return in positive diagnoses, whereas reliance on the roentgenologic examination alone of the same cases will on the other hand only give perhaps a 30 to 40 per cent return of accurate results.

The aim of the discussion, therefore, has been to show that the diagnosis of any case of indigestion is attended with no little difficulty. The careful and detailed history is most essential; the patient should be thoroughly examined, and, after care in these two phases of the diagnostic procedure, the combined use of a fractional test meal and X-Ray will be found of extreme value, especially in the cases which do not present absolutely typical histories. There is no short cut either by chemical or X-Ray methods to the diagnosis of these conditions in the high percentage of cases and a correct diagnosis can hardly ever be arrived at by slipshod and careless methods.

AGENCIES THAT WOULD CLIP THE WINGS OF MEDICAL PROGRESS.

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Read before the Fifty-eighth Annual Meeting of the West Virginia State Medical Association at Bluefield, W. Va. Wednesday, June 10, 1925.

My Friends, these are the days of some apprehension. This is not spoken to inspire fear nor dread nor contention. Furthermore, the words are but arranged in a sentence, probably every man or woman here tonight has used in his every day speech, not once but many times in the last year.

Tonight I use them but to express the outlook as regards that necessary procedure the "Healing of the Sick". It is difficult to bring the whole subject into focus before you tonight because it involves so much, goes back into history so far. Must take account of human frailty and ignorance and make allowance for it: Must remember ingratitude is common, and in the last analysis take cognizance that for some reason Right must always battle for its very life. I do not know and perhaps you do not either, why every good thing must fight so hard for every thing it gains while the false and unsound, even if in the end they do fail, go on at times with the ruthless sweep of a prarie fire. You learned, you know, away back in school days that

"Truth crushed to earth shall rise
again.
The eternal years of God are hers,
While Error wounded writhes in pain
And dies amid his worshippers."

It is a fine poem. A noble gesture. But if you are practical, you will recall that while Truth is lying crushed, a whole lot of innocent persons can go their way to dusty death and never live to see the admirable sight of Error dying amid his worshippers.

This paper wants to arouse your interest in these lives that go out each year as a sacrifice to the slow process with which Truth is again triumphant over Error. As you see false doctrines arise and sweep over the populace cannot you also see that there is a toll of the innocent that necessarily takes place while things are righting themselves again.

Is there no way of stabilizing Science, especially the Science of

Medicine, so it will be clear to all concerned that it is as nearly exact as it can be at present and its failures are in the lack of adequate understanding of unseen, unlearned powers that sooner or later will be seen and learned rather than in fanciful schemes popularized, so to speak, over night.

Let us take the Spinal Column by way of example. It has been studied for many years, under every conceivable circumstance. It is not a major organ in any sense of the word. No one need take any one else's word for it. A little personal study by any layman here tonight will repay the effort. By thousands and thousands of cases studied carefully and scientifically, of degenerations like ataxia and paralysis; of injuries in accidents and of malformations, its use scientifically has been easily demonstarted to be that of a conduit on one hand, and an upright support of the body on the other. The telephone wires repose under our streets in a simliar enclosure. The analogy is complete. Rarely, if ever, is your telephone trouble, in any sense to be referred to the conduit.

It is conceivable, it could have injury-say by water in a flood, yet it almost never is. Most, if not all, your telephone troubles are at your central office or in your own phone. Just so your Spinal Column may have an injury but unless it is by direct disease or accident your spinal colunm will not be affected by any thing save what a simple conduit could have. Knowing this to be a fact the Medical Profession, with all its years of study, stands back aghast, when it sees a body of untrained men gather together, make the little holes in this conduit and this minor organ, the actual basis of a complete system of healing and with an artful campaign and more artful propaganda, sweep a legislature off its feet: Make a Governor, borne into office with high praise, actually let it pass by him like the Levite, on the other side, and become the law of the state as an accredited Scientific Fact.

You say, Truth Crushed to the Earth will arise again. Yes, but she will arise slowly. We all feel this cult cannot last, it makes no difference if it makes every Governor in the United States as was ours, and makes every Legislature in the Country as contemptuous as was this last one of the Medical Profession of the State of West Virginia.

What is going to happen to the innocent, while the system is being tried out? Who answers for those? Will it be those Senators and Legislators in our last legislature who informed the Medical Profession that it stood in the way of wonderful new curative agents like other herds and masses had blocked progress before, and also had interfered with Personal Liberty? No it will not. They shake off their resposibility on the last day of the session and they never recall it again—these Legislatures. The Medical Profession is powerless to change this attitude for the simple reason that every move it makes is attributed at once to self interest. It makes little difference to a careless Public that the Medical Profession is the one that has developed Prophylaxis, which includes Public Health and Sanitation and that these measures directly contract its own revenues. Oh, but it is a careless Public. I do not blame the resentment in the average doctor. Do

you hear of a grocer trying to find ways so you will not eat so much? Do you find a railroad trying to devise ways and means to make it so you will not have to travel so often? Do you find a lawyer advising you to make no legal effort to gain your point? He may advise compromise but he collects his fee.

It would be good business for a doctor to let Typhoid Germs swarm by the trillions. It would be good hard headed commercialism for doctors not to vaccinate. Self interest would say, depreciate Health Officers. But that is not the fact is it? Yet not withstanding all this past showing a legislature and its Governor, allow a system we hope is tried out some where in an epidemic on its own merits have equal footing with an honored Science in the name of Personal Liberty. My friends in the laity, it is upon your shoulders that the task of leading the careless out of the wilderness rests. You must train yourself to know, to understand, to interpret, so that when the opportunity arises you will do your duty and we of the Medical Profession must find a way to come to you and teach you. But you must have faith that we are sincere, you must look back on our own activities in your own home, among your own dear ones, then you must look back into the history of our Science and see how slowly and see how carefully and laboriously it has worked up to where it is today. You must examine our willingness to protect you against the very ills that, did you have them, would react to our pecuniary benefit. You must see how nearly exact we have appropriated facts and statistics and experiences into a great Profession and you must learn for yourself, how little that is flamboyant and blatant and unsound, even though remunerative to us, we have allowed to remain in our Science.

Sadly then, the members of the Medical Profession must hand over to its friends its own honor to defend, not that it does not want to fight, it does. Not that it has lost heart nor courage nor strength. It has not. But it finds itself grossly misunderstood. Perhaps it does blame itself some for not imparting to you laymen more knowledge of what it was doing and how it was being done. But being busy itself and you occupied it made the mistake of taking it that you preferred not to be bothered but just to have us go ahead and take all the burden.

It wants you to understand it now. It is going to see that you do. It will try and take the doubting ones and patiently teach them the error of their ways, especially the intelligent doubters.

We were present the other day when a prominent lawyer seated at luncheon, offered the explanation that he had not gone upstairs to the weekly luncheon and meeting of his club because it was Doctor's Day and that he was so tired of hearing how many people out of every hundred died of something or other, that he regarded it mournfully these Doctor's Days and he came to hold the same rather dubious attitude towards them as he did to funerals, attendance at which he was free to admit, was not among his predispositions.

There is, let us remind ourselves, a humorous side to everything. It developed later, that Raymond Hitchcock, the actor, being by chance in town, did the honors in fine fettle

and our lawyer friend missed his guess. We can see this lawyer's attitude very plainly. More so because he is an essential Christian Scientist, leans to antivivisection and will wax exceedingly warm and oratorical when the subject of vaccination or serums happen to be mentioned. We know him as one who collects clippings out of the papers where some medical men have declared X-Ray plates far from infallible and where some other doctor was sued for malpractice, or will dwell on Cabot's statistics of how often Doctors fail in a correct diagnosis, (although he has been told time and again that merely means an exact diagnosis—something difficult many times to attain and in no way compromises the reading of signs and symptoms, which after all, are what enables relief of a patient). This lawyer friend is a man of means, an extremely liberal man, a good barrister with corporate leanings. He has received a very wide education and is altogether an intelligent man. His attitude did not prevent him from having his daughter have her appendix properly removed at a critical time and we personally have seen a foreign body removed from his eye. Yet, nevertheless he remains a typical half way antagonistic element of the Medical Profession and as such he has a number of fellows who not only think as he does but carry on their objections to the point of actual obstruction. Men a little more rabid than he have had laws passed in several states and being possessed of means have seriously effected the onward progress of medicine.

There may be some here tonight—doubtless there are—who belong to this, rather large element who believe Medical Men curtail their personal liberty and they view them as something akin to the picture the Wets draw, of the way the Volstead law has extracted all the liberty the Constitution so happily allotted to them. This attitude has, to say the least, confused the great body of the Medical Profession. Busy men, as a rule, with duties piled up for their consideration, they view with dismay, the gross disregard and misconstruction, hurled at their efforts. They helplessly say, look what we have done for you for years. Don't you understand it? Don't you appreciate it? And the answer comes ruthlessly, "We paid you well for it." "Paid you well." Skeptics or any one else may have paid the required fee for the immediate administration of relief, but no one has ever paid or ever will pay the earned requisitions of the investigator or the discoverer of all that looks so easy to give. For many of them gave their youth in patient diligence, gave up the happiness of life and its pleasures to grub along painfully in an uninviting laboratory, while a goodly number went down to death by being inoculated with deadly germs as certainly for mankind as ever did a Christian Martyr on Cross or in Arena.

So we started out in this Public Health Discussion realizing it is classed among the so called uninteresting subjects and one of the kind men sometimes desert luncheons not to hear or have presented to them. We have talked on this subject many years and we've written in Journals about it, and always we've hinted at this one little thing and we admit no one ever paid much attention to it. The seemingly little thing was this, that when you countenanced an on-

slaught on Medicine and as they say "Let 'these adversaries' get away with it" you gave them the wonderful chance of attacking the general orderly scientific procedure of every thing else. We have told our well meaning lawyer he would be nothing more nor less than a Marie Antoinette going to execution in a cart some day because well meaning citizens such as he was, decided that the law was a selfish calling that interfered with their personal liberty and ought to go and so tried to end it.

We were in Charleston recently trying to make an aggregation of all wise Senators see the inconsistancy of trying to mix Chiropractic with the Science of Medicine. We were not exactly jeered but we were not highly regarded. As we were crucified we had enough humor left in us to see plainly that before the sun went down other crosses would be raised and on a few of them some of these same self-satisfied lawyers would hang, martyrs to the self same theory that they too were in the road against a wild orgy of so called liberalism of thought which so help me, is any thing but liberalism but is rather the looking of Lot's Wife back on the fires of Ignorance. And it will come to all the other Professions of Arts and Sciences that have been slowly and painfully reared.

Who are the ones under fire now? Those who believe in Evolution. Out in California they pass laws against Vivisection. Down in Tennessee, they prohibit the instruction of Evolution. It is all the same restless antagonism. Stop something, prohibit something. And the axiom of the Shining Mark makes those things that have made the most orderly progress the first to be engaged.

Somewhere Galsworthy said "Life in a series of conquests and defeats. If you are not experiencing these you are already dead and it were better you were buried." These are in no sense his exact words, but they will serve.

It would appear then that there can be no complete happiness here on earth. And most of us have accepted this as fact. And whatever is true for the individual is no doubt true for the body or congregation or as they say nowadays—"The Herd" to which he belongs. And if that be so then the Profession of Medicine must expect to have too its conquests and defeats and if it be not having them it too is already dead and had better be buried.

The sum and substance of this then is "Fight" and the explanation of the word Fight in this sense is to Explain, and the lesson from it all is that the explaining is not all to come from we doctors but also from you intelligent laymen who see clearly through us, understand us, have faith in us, Believe In Us.

We speak tonight, in behalf of the American Association for Medical Progress, which is just a gathering of laymen who do all that we have said is required. We shall not go through the tedious recital of mentioning all the illustratious men who head its pages but we could pick one here and there to carry to you its import. There is Charles Elliot, its honored president, and among its honorary vice-presidents, Honorable Charles Evans Hughes, Rt. Rev. Alex Mann, Cardinal Daugherty, Earnest Seton Thompson and Owen Wister. It may give you heart to know that at last stretching its helpful hand is a powerful layman's order pledged

to undo part of the results of ignorant propaganda. We should like to feel that some of you were staunch enough friends of us to become at least an Associate Member of this wonderful organization because the literature you would receive would fortify you in the facts you would want to possess to intelligently discuss this growing problem and menace, not only to us but our sister professions.

Because that's what is in the air. You might term it the communism against Science. As far as we are concerned we believe Medicine has received the brunt of this ignorant onslaught and whatever the other professions receive they will have some guiding principles to go on, simply by carefully studying the vicious attacks that the Profession of Medicine has had to endure.

Physicians who, for the most part, are somewhat acquainted with history both general and medical know only to well that everything that is worth while has had first to be misunderstood. It would seem as if it was necessary that a thing be misunderstood before it is understood. Contrary to the general belief most everything the Public has flouted has later been accepted by them as truth.

Patience and long-suffering have been the parents of all scientific truth. We find Columbus doubted, Harvey jeered, and the Wrights smiled at. We find in Ibsons Enemy of the People, the doctor crucified because he dared to say the water in the springs at the Watering Resort contained that which was inimical to health. Pasteur, Behring, Koch, Roentgen all have had to patiently prove to a big doubting public that which later saved millions of lives.

Everywhere about us then are people ready to oppose the existing order. It used to be the ignorant only, now it is found in the so called ultra-intelligent who frequent the parlor conversations. They are especially violent if they feel pretty safe that the existing order is not going to really cease to exist. So they are revolutionists if they know they are surrounded by conservatives.

They will see a chiropractor now and then if they are sure a regular doctor is nearby in case of emergency. They will talk about serums and vaccination and vivisection like my lawyer friend if they can have, when the occasion arises, a surgeon remove an offending appendix in one of their family or if they by chance get a foreign body in their eye they will only be too glad to consult an occulist but when all is well again, back they go to their Diatribes against the existing order. It is quite easy to attack an age old institution like medicine,—easy like the proverbial celerity of staining a fair lady's name. Innuedo will do it. So we find men, like my lawyer friend, referring to the horrible cruelty to animals in a laboratory or that such and such a person lost an arm or even his life by vaccination or that their wife's sister knew a colored girl who had a cousin whose brother worked in a house where another servant lost his life with great convulsive effort by the introduction of the poisonous diptheretic anti-toxin into his otherwise lilly pure system.

The task of running these down ends as it always does end by finding it started in straight out and out gossip and what was one crow grew

to twenty as the story went on and while it may be true in rare instances that such things may happen about 99 per cent carefully run down find the rumors groundless. But while the running down is going on, the ladies' reputation probably suffered damage and while the horrible case is being investigated to its bitter end, lives will have been lost because the ignorant took the gossip as they so often do, for its face value.

So if we know that it was elected that the ignorant must be made to understand and if we are conversant with history sufficiently well to realize that a certain number of blatherskites are alloted to each decade whose mission is as hard to understand as why we must have venemous reptiles on the earth then it will serve to hearten us to go on. Yes, go on and explain to those awaiting that there is a definite reason behind all the scientific endeavor and that while the technical procedures about medicine may be difficult to comprehend, the general principals and their action—Are Not.

It behooves the medical men of this day and age therefore to explain things to you laymen, and it must be done in plain language. The day for the popular lecture on medical and surgical subjects to be full of medical phrases formed by hitching together long terms Is Past. Furthermore, some of the best medical literature addressed to doctors only has ceased to have so much of them. There is nothing in Medicine or Surgery to be mysterious about. Most of its procedures are more easily explained than those of other sciences. So through this agency I represent here tonight and others of our own individual making we intend in the future to make you conversant with what we are doing and this writer for one has no doubt of the result.

Of course you can see then it is almost humiliating for us to go about lobbying in legislatures, standing up before some senator in a legislature who may be pork packer, or the owner of a filling station and having to answer his questions put like Pilate did to Christ—Well what have you done? Aren't there a lot of graves in every town due to you and your crowd's mistakes? Then he will probably tell an electric belt cured a woman in his village after all else, including every doctor, had failed.

The Medical Profession is just as helpless too in these situations as Christ was before Pilate. It knows it can't justify itself in a few minutes talk. It simply has to walk out and be crucified along with thieves and criminals.

Who are they who would clip its wings? And who are they that tramp along shouting and waving as the Medical Profession goes to its Calvary? First there are those opposed to vaccination. Parents who fight health boards and carry their cases up to the courts of last resort. People who smile and say they would rather have Small Pox. But my friends did you ever stop to think why these things are said and done? The answer is extremely simple. The procedure they are decrying. Vaccination, has made the civilized world so clear of Small Pox the average citizen is no more familiar with it than he is with Leprosy. Careless, heedless average citizen who could take any of his encyclopoedias down and read what Dr. Jenner did to save the world.

But sometimes those that are opposed to vaccination gain control of a legislature. California did in 1911. Small Pox at once began to gain ground. In 1918 they had over 1000 cases. In 1921 over 5000. They were dealing with an epidemic in 1924. In the first two months of 1924 they had 2,878 cases which was 849 more than the whole year of 1923. In 1921 Connetticut had a local option on it —rather foolish in the start off. In 1922 they had more cases than in the preceding 20 years. They had an epidemic in a school district where compulsory vaccination was poorly carried out—447 cases developed, 404 in people not vaccinated. No vaccinated children developed it. Massachusetts has a strict law and since 1917 never had over 40 cases annually.

I do not like to burden you with statistics. They are tiresome. But this is to warn you that attempts will be made in the next two years to put us out of the class of Massachusetts into that of California. I shall be vaccinated, as will my family and I daresay all my colleagues as well. But you of the laity where will you be?

Who are the members of the shouting rabble that sneer so in the journey to the Medical Calvary? They are the anti-vivisectionists people whose affections are centered on the frogs and rabbits and dogs and cats. Do you know I have seen a few of these and read about many more and I always had a longing to see if dogs would really recognize them as friends and go up to them.

Do you think doctors do not love animals? Do not half the doctors you know have dogs and treat them devotedly? I once saw an investigator in a laboratory hurt an animal and he pretty nearly caused a riot. I was in it and I know. But when it comes to a choice between animals or children there can be no choice! The little discomfort and practically no pain they suffer is a matter of regret but it must be. Now the humorous part of this all is that more animals have been saved by hundreds of times through these investigations than ever suffered even trivially. These pseudo-enthusiasts could be better employed looking up some abbatoirs, investigating how furs are obtained, and why some people come back with car loads of quail and ducks.

But no, there is no glory in that and some danger, so they pursue their hobby in safer channels.

Some day soon these anti-vivisectionists will visit our legislature—doubtless with success. Next we have shouting in derision the various cults, and "pathies." Some reserve a special belief in Christ which they aver has developed into a science and with grand acclaim they profess to have healers who have delved deeper into what Christ meant than other Christians. They thank God they are not as others are.

Some play upon some part of the body as a special accomplishment and make the same kind of a preachment that would come from the player of a French horn in a big orchestra were he to get up and say the whole music of the symphony depended on his manipulation of his keys and that all the exquisite rhythm and harmony you heard would cease if he failed to be there at all times—at least watching the score. Some would stop all medicine and go back to nature (what

ever they mean by that) and give you uncooked food and regale you on acorns and leaves and grass.

Some would have your bodily sins washed away in waters of wondrous origin. Some would merely lay on their hands.

They may appear foolish in their claims but for this writer every one of them have a menace. Every one of them will sooner or later reach out to have his particular method recognized. Each one has its favorite method of attacking the medical profession. Each one has its fanatics with clever brains and persuasive tongues. Each will have adherents in the law-makers' place and in the end a veritable tower of Babel in cures will result.

None of these agencies are new. Back of each one of them is a regular procedture that perhaps was in vogue thousands of years ago. There is a part of everyone of us that is ever open to suggestion. Did you ever notice a fellow exhibiting something in a show window? It may be only a way to use a new kind of dumbbell, but it will serve to get a crowd. In many a man this credulous portion is ruled by a belief that he is not really well. The distractions and encroachments of a highly competitive world makes the mere living of life wonderfully complex. The pavement may require rubber heels for our feet—so far no shock absorbers have appeared for our mind or its perceptions. It is shocked and worried until many a time a part of it rushes into a panic of doubt as to its own health. It might be said 25 per cent of supposedly ailing people are like this. They have no real disease at all.

Whoever can come along with any kind of a cult or scheme that is virile enough to superimpose a stronger notion that this panicky part of the mind possesses, cures this individual. It may be the click of his manipulated spine as it is supposedly adjusted. It may be reading a label on a patent medicine bottle. It may be the scientific reading by a clever reader of the age-old scriptures of the New Testament. It may be a new climate or a sea voyage. It may be the sudden appearance of a bull in a field making a man who thought he would never use his limbs again not only adjust himself with celerity, but scale the wall or the fence in a manner creditable to an Olympic game contender. It is all the same. We began with charms and amulets and idols—it has included the sun and the planets—it was centered on every conceivable scheme and contrivance—and it will probably ever be with those that continue to inhabit this globe.

Each new generation will have to fight it in some form or other. At any time you tear off its mask and look it in the face; it will always bear the same half-malignant, half-inviting countenance—for it is always the same evil being and its name is ignorance. And since time began any charlatan who could dress it up so he hid the malignant part could with high-sounding, blatant words and oily tongue make it look inviting and gain a big following, say he has a new cure and succeed, exactly like the fellow showing off his dumbbell in the window.

Satan had the actual audacity to lead Christ up into the mountain and believe he could find a credulous side to Him and offer Him the whole

world. He was so used to seeing intelligent, so-called wise people led astray he thought surely there must be something weak like that in Him too.

Every time this writer sees a lot of people flocking to a new cult he thinks of that. Every time we see the wise, oily ones gaining the ear of a lot of thoughtless people to believe vaccination, diphtheritic serum and medicine is only a scheme of doctors to pour poison in their blood; we see Satan pointing to the whole world and saying, "It's all yours—health, wealth, happiness. Its all yours if you just see it my way."

What is the most popular opera? The answer is probably Faust. People like to go and see what they do themselves dressed up in a fanciful morality play. Especially does it appeal to those who love to read the advertisements on patent medicines. Satan says, "Faust, believe this and do as I tell you and you'll be young again." He puts it up to him straight forwardly like a gland fakir or a plastic mud clay surgeon would. The credulous, panicky side of Faust says, "Why not try it once. It can't do any harm." You know the rest. It is as sad and tragic as the death of some modern woman poisoned from using a hair dye; she read on the label of the bottle that contained it, "Absolutely harmless."

A big portion of the lay population must be taught the principles and practices of medicine and surgery. Then when some clever charlatan leads them up into his handsome office on the top story of some big sky scraper and says, "Believe in me and you'll be as well as the best man walking the street down below," they'll know themselves that it isn't possible and that the maker of the offer is only insulting their intelligences. It must be done. The agency I spoke to you of is doing its part and extending its influence. Become a part of it or if you think you know of a better way—do it. It is a question of making a man to know himself in health and disease and doctors everywhere must help in every way they can.

What this writer fears is that before it comes that a great many of the medical profession will grow weary of the struggle — and that would be a calamity. Constantly heckled, jeered at in law making bodies, forced to continually defend what needs no defending it would be small wonder if many a doctor did not grow as mercenary and as commercial as his low-grade competitor. God forbid. Where would your Canal Zone rid of yellow fever; where would your war time surgery; where would your social welfare; where would your thousand agencies against plagues and pestilences; come from then? Think what the world would be like deprived of the sun for a week or think what it would be like if by some strange agency you could have no medical profession for six months. Think of its dead for six months. You that decry it, picture a world with not a doctor in it for six months. The baby is suddenly ill! The mother is crying out in the advent of another child! A man has just been shot! Down the street a young woman, bitterly moaning, has all the symptoms of having an appendix about to burst. In the depot a negro has been taken from the train with small pox. An automobile has just collided with a street car and some twenty are badly in-

jured. Two nations are at war and the injured lie about everywhere—moaning and shrieking. Diphtheria has taken charge of a town in Alaska. Five men are all but drowned at Atlantic City. Twenty young girls in the flower of life, have been rounded up by the police department with venereal disease. Some one wants to know how to prevent a bigger epidemic of typhoid fever. A king has the pneumonia. A child has a nickel lodged in its wind pipe. Two trains are wrecked. The President is ill!

People go up and down the streets hammering at doors, ringing bells, gesticulating, some are on their knees praying. All is pandemonium. Out come men who would adjust spines. Here are two women who would read from a Christian Science manual. A neuropath offers to go to the automobile accident. Two osteopaths are willing to go to the woman with appendicitis. A man who has a suit against the Board of Education for vaccinating his children at school has ridden ten miles in the same seat with the negro having the small pox and he is a little worried. An anti-vivisectionist has kicked three dogs in an effort to make his way to try to get something at a drug store for his baby's croup. What she has is diphtheria but as he talked loudly against "poor horses" losing blood they never felt the loss of, it is doubtful what he will want to do.

The world is in an uproar. Will the sun come up tomorrow? Yes. Yes. But where are the doctors gone? No one knows except that like in the case of Elijah the heavens opened and lifted them up unto itself. All are gone and have taken their alleged poisons and serums, and surgical instruments with them. The populace has its dearly beloved cults, and patent medicines and chiropractors, but they cannot deliver to these emergencies what they seem to need, and must have at once.

My friends, all this last picture is fanciful like Sindbad the Sailor, or Cinderella. There are other ways of destroying the relief that doctors give than by taking them up into the heavens. Will you see that they never happen?

ETHER INTRA-MUSCULARLY IN TREATMENT OF PERTUSSIS

By GEORGE M. LYON, B.S., M.D.
Huntington, W. Va.

Read before the Fifty-eighth Annual Session of the W. Va. Medical Association, at Bluefield, W. Va., Wednesday, June 10, 1925.

The intra-muscular injection of ether is said to have a beneficial effect in the treatment of pertussis. In order to arrive at a true impression of its value as a therapeutic agent in this condition, it is necessary for many cases to be observed critically and thereafter a critical and conservative analysis of the cases made. Undoubtedly during this coming summer and fall there will be many reports similar to this one, each adding to the total number of cases studied and by next winter we should have a rather accurate idea of the value of ether injected intramuscularly in the treatment of pertussis.

It was the author's privilege in 1919 and 1920 to observe a most extensive series of pertussis cases treated with vaccines and controlled

by patients with pertussis not treated with vaccine. This work was done by Dr. W. C. Davison at the suggestion of Dr. John Howland, a member of the National Council on Pharmacy of the American Medical Association. Dr. Davison reported this series to the American Medical Association, and it appeared in the Journal.

This series was a great help in studying the present series and has offered as a comparison, in the author's mind at least, of the comparative value of ether injections and vaccine therapy in pertussis.

The following classification is made to facilitate the study of the cases, as it seems that there may be a reason why such diverse impressions are gained concerning the value of ether in the treatment of pertussis.

Classification:

1 Mild uncomplicated cases.

2 Moderately severe uncomplicated cases.

3 Severe uncomplicated cases.

4 Severe complicated cases.
- a Bronchopneumonia.
- b Otitis media suppurative.
- c Cardiac damage predominating.

The manner of treatment has been as follows:

1. A fresh can of Squibb's Anesthesia Ether was used at the beginning of each case. The small bored Luer hypodermic needle about ¾ inch long was found to be most satisfactory. The syringe and needles were always sterilized as for other intra-muscular injections. After cooling the ether was carefully drawn into the syringe and a site chosen that would give a maximum muscle depth over the gluteal muscles. The needle was introduced as deep as possible at right angles to the skin and as deep as possible into the muscles. It is best to inject the whole amount at one level rather than withdrawing it partially and injecting half of the amount at a higher level as is often done with anti-toxin. Vigorous deep massage is then carried out and if there is any blanching of the skin over the site of injection a hot water bottle or warm applications are applied for one half hour. These seemingly trivial precautions are taken to avoid the painful and troublesome (as well as embarrassing) sloughs that occur when injection is made too superficial.

The dosage is usually as follows:
1st day, 0.5 c.c.
2nd day, 1.0 c.c.
3rd day, 1.5 c.c.
5th day, 2.0 c.c.
and at times it may be necessary to repeat the 2.0 c.c. dose every second or third day until eight treatments have been given.

Treatment is usually stopped as soon as the number of paroxysms falls to less than 10 per 24 hours. In some cases it may be necessary to repeat an injection or two as late as a month afterwards as some children catch cold and will have a relapse of their severe paroxysms after this time.

2. Antipyrin, codein, sodium luminol and sodium bromide are usually given in suitable doses, as we feel we should do all possible for these kiddies.

3. Rest in bed, freedom from exertion, a room with not too chilly air in it, solid rather than fluid foods and the usual hygienic and dietary regulations are also followed out in so far as possible.

Effect on the disease:

Paroxysms are usually greatly decreased in frequency and severity. This is often most striking.

Vomiting is very rare after the second injection and in the thirty-five cases studied it has occurred only twice after the first injection.

General condition is greatly benefitted with return of appetite, better spirits, more playful and a better physical condition generally.

Complications did not occur in any of the cases treated with ether following the first injection. It seems to have a definitely beneficial effect in preventing complications as well as soothing the severity of the disease.

Complications existing at the time of beginning of ether treatment seemed to respond to their individual forms of therapy more rapidly than otherwise. For the bronchopneumonia it has seemed to act almost as a specific.

Disadvantages in its use:

It is undoubtedly painful to the patient. Parents are often very unco-operative because of the fuss made by the kiddies. This is best overcome by using a small bored needle and injecting carefully. Careful massage afterwards is most comforting to the patient.

Often a busy physician feels that the confusion and trouble is not worth the effort expended. He jumps at conclusions and does not give the ether treatment a fair trial because he will not take the time to follow up his case. One slough from hasty haphazard technique and he refuses to give any more ether injections.

Sloughs occur in some cases perhaps inevitably, but in most cases they can be avoided by careful attention to the details above given. It is also very important to have the patient firmly held so that he can not slip away from the needle thereby getting a superficial injection. The injections must be deep into the muscles. The massage must be carried out religiously and where necessary a warm application applied to promote absorption.

Effects on the patient are remarkable otherwise in that there is a free liberation of ether on the breath in three to six minutes after injection. There is in some cases a mildly soporific effect that is usually most welcome to the little fellows. Outside of the occasional slough no untoward effects have been noted in this series.

DISCUSSION OF IMPRESSIONS DERIVED FROM THIRTY-FIVE CASES

1. Ether injected intramuscularly seemed to have a beneficial effect in almost all cases of pertussis. In some cases it was more evident than others and in some cases it amounted almost to a miraculous cure.

2. In the cases of mild uncomplicated pertussis the results were not so dramatic. In two cases it seemed to stop it if not actually abort it in its beginning. In the cases of this group 30% were but slightly improved, 40% greatly improved and 30% completely cured in three to five days. In none of these did any complications occur.

3. In the moderately severe uncomplicated cases there has been good improvement in 20% of the cases and a marked improvement in 50% and a rapid cure in 30%. No complications occurred in any of this group.

4. In the severe uncomplicated cases there was a most striking improvement in about 90% of all cases seen. The other 10% showed very satisfactory improvement. No complications occurred in this group.

5. In the cases seen late with complications the ether injections had a most dramatic effect. There were thirteen cases in this group, mostly consultation cases because of the gravity of their conditions. Of these thirteen, nine have broncho pneumonia, two had both broncho-pneumonia and otitis media purulent, one had otitis media purulent, and one had otitis media purulent with severe myocarditis. These were the findings when first seen and previous to beginning of ether injections. In every case the results were most striking. In most cases inside of 24 hours so great a change had occurred that the parents were anxious for them to have their second injection as soon as possible. It has seemed almost a specific in the cases of the broncho-pneumonias complicating pertussis. 100% of these complicated cases had had a marked improvement inside of 48 hours and all had rapid convalescence from a most troublesome condition. Their period of convalescence was also much shorter than similar cases seen in previous years and of a distinctly similar character. In otitis media complicating pertussis and seen late in the disease their general condition improved rapidly under treatment and four weeks after first seen all cases had healed drums and were in good physical condition with little or no evidences of their preceding sickness. In the trachycardias and asthenia accompanying and following pertussis the ether in some manner seemed to exert a beneficial effect as final check ups four weeks after discharge show all the patients in unusually good physical condition to have just gone through an attack of pertussis. In all cases the check up at the end of four weeks showed all hearts to respond to functional tests normally and to have normal rates.

6. It is best to combine the ether treatment with suitable courses of bromides, antipyrin, codein or sodium luminol in combinations or plain. All the hygienic and dietary aids that can be secured may be done so to advantage as in treating any infection.

7. The writer feels that ether intra-muscularly, combined with sedatives by mouth offers much more in a therapeutic way in pertussis than vaccines or than drugs by mouth.

8. Ether injections seem to be more effective in the severe and complicated cases than in the mild or moderately severe cases. This is a most redeeming feature as I have found it a great friend in need for these little fellows to whom in the past I have been able to do little.

In its efficiency in these severe cases I feel it has its most redeeming feature—something that has seemed to act with almost specific action at a time when it is most genuinely needed.

9. In all cases in which it was used, no complications occurred subsequently and this in spite of the fact that in a few of the moderately severe cases there was only a slight decrease in the severity and frequency of paroxysms.

10. No harmful or untoward effects have been observed except two

cases of slough (the second and third patients so treated.)

11. The duration of the attack is in most cases greatly shortened.

CONCLUSIONS

Ether has a definite value in the treatment of pertussis in that it seems to decrease the severity and frequency of the paroxysms, decreases occurrence of vomiting, tends to lessen occurrence and severity of complications, shortens the duration of the disease, and it is especially effective in the cases complicated with broncho-pneumonia.

DISCUSSION

Dr. Robert M. Hood, Clarksburg:

I think we are greatly indebted to Dr. Lyon for the paper. Of the group of diseases which we usually see in children, pertussis is probably the only one for which we have no preventive. In diphtheria we have antitoxin; in scarlet fever we have the antitoxin which the Dicks are developing; and mumps and chicken pox are relatively mild. Up to the present time all treatments of pertussis have been comparatively unsatisfactory. In reviewing the literature, we find that the writers rather agree that no one treatment is really the treatment of choice. In this article he did not give much prominence to the injection of ether, which is a newer method. This method of injection was developed by the Italians, and then taken up by the Germans. Personally I have not had enough experience to speak either for or against it. With our new health officer, our cases of whooping cough have been very few during the last year or two. I saw three last year. I think we do not realize what a severe disease pertussis may be. Dr. Lyon seems to have something which is of value. Of course, as he says, we should use the other methods of treatment at the same time. Sodium bromid, codein, etc., have their effect, though I do not know how far we should go in using them. I think it may be very well to try Dr. Lyon's method. This is a contribution which we should take seriously, for pertussis is a thing in which we need help.

Dr. Oscar B. Biern, Huntington:

If there is anything in the way of drugs and treatment that will prevent the harmful complications seen in adult life from pertussis I think we should use it, and I want to make a plea not to discard this method too hastily. This is rather new in this country, and has not been given the chance of trial that we generally give most therapeutic procedures. I do not see many children, though occasionally I treat some. I have used this in four cases of diseases characterized by spasms, two of epidemic hiccough, and two of encephalitis lethargica with clonic spasm. In those it proved of value.

I should like to ask Dr. Lyon, in closing, to tell us what is the method of action. Pertussis, we know, is caused by bacteria. Encephalitis and hiccough, we think, are end results of influenza. Is the effect caused by bactericidal action?

Dr. J. Howard Anderson, Marytown:

Does Dr. Lyon know of any series of cases treated by ether alone, not given any other treatment?

Dr. G. W. Ferguson, Kenova:

I should like to ask Dr. Lyon another question, that is, if the action of ether is antiseptic or anti-spasmodic, and whether rectal anesthesia would not be preferable to hypodermic injection.

Dr. Lyon, closing the discussion:

In answer to Dr. Biern's question about the theory of action, I think that is undoubtedly a very interesting thing. I am absolutely at a loss to give any really good explanation of what actually does happen. I have been interested in it from the standpoint of a busy practitioner who wnats to give his patients something that will help them, and have not gone into it. There are three different explanations. The first is that, being a powerful antiseptic and germicide, and being liberated in the lung tissues, it has some bactericidal effect there which will act on the original bacilli causing the pertussis and also on the secondary infection following pertussis. I think this because it has been of use in cases of broncho-pneumonia. In six cases of children with broncho-penumonia we have treated them in much the same way as the children with pertussis. It had much the same effect, but it was much more prompt. It knocked it out in forty-eight hours, so that makes me wonder whether it has some antiseptic effect as well as anti-spasmodic. We do know that ether will stop abdominal colic if injected intramuscularly. I have been at a loss to know whether the effect comes from its being a sedative or from its anti-spasmodic effect. I have been disappointed in some cases that were mild; it did not seem to benefit them much. Still, on the other hand, they stayed mild, and this may have kept them from getting worse. When you can take 25 cases of uncomplicated pertussis and carry them through without complications, that does say something for ether. I should like to know myself what the theory is.

As to treating cases with ether alone, we thought it is best not to rely upon ether alone, but to give them the best treatment we know of, because we were doing this from a standpoint of practice, not theory. I may say also that I have not attempted any originality at all in this treatment, but have simply gone after the thing in a pessimistic sort of way. I did not give any injections until I was forced to, in a doctor's family. Dr. ..... reported 27 cases about two years ago in the A. M. A. Journal. I have gone at it very critically, because I think only in that way can we find out what good it is.

As to giving rectal injections, it has been used that way. Lane(?) a good many years ago reported good results from rectal administration and from inhalation. In a personal communication from Dr. Mason he said he did not feel they got the same good results from rectal administration that they did from the intramuscular injection.

OPERATIVE TECHNIC OF SURGERY OF THE GALL-BLADDER

By WADE ST. CLAIR, M. D., F. A. C. S.
Bluefield, W. Va.

Read before the Cabell County Medical Society, Huntington, W. Va., April 23, 1925.

Surgery of the ballbladder dates back to 1868 when John Stough Bobbs of Pennsylvania did the first

successful cholecystostomy for the removal of stones. He was followed by Marion Simms who did the same operation 10 years later in 1878. The first record we have of excision of the gallbladder was by Karl Langenbeck in 1882.

In a period of less than a generation, from a beginning where operation was resorted to only rarely and in desperate cases, surgery of the billiary tract has undergone an orderly evolution of procedure. The earliest conception of disease had in mind the mere presence of stones and operation was performed primarily for their removal. Great respect was had for entering the peritoneal cavity, and for a time it was the practice to attempt operation extra-peritoneally, accomplished usually in two stages. The gallbladder was sutured to the parietal peritoneum in the first stage of the operation and four or five days later, when the free peritoneal cavity was sealed off, an opening was made in the gallbladder through the exposed wall in the abdominal wound and the stones were scooped out. The procedure seems crude enough now but no doubt represented good surgical technic in its day. It gradually developed that with reasonable care there was no great danger from contamination, and surgical endeavor as applied to the biliary tract in general became greatly enlarged until present day efforts utilize excision of the gall-bladder, drainage, duct exploration and various reconstruction measures.

Hand in hand with the development of surgical technic our knowledge of the nature of infection and resulting pathological change has increased immeasurably and has had much to do with the transition from one procedure to another. It is now a conceded fact that infection is practically always hematogenous and that the seat of disease is in the gallbladder wall. Calculi develop secondarily and by their mechanical presence undoubtedly give rise to pain and many serious crippling complications, but a persisting cholecystitis is looked upon as the dominant factor. For the reason then that an operative measure must remove as far as possible the main pathology of disease when no vital function is destroyed, and because we know by experience that better results follow such a measure, no one can deny that total extirpation of the gallbladder is now the operation of choice and that drainage alone can be practiced to a good advantage only in certain emergency situations where local pathology or the general condition of the patient makes the least amount of operating imperative. As illustrating striking evolution of procedure it is interesting to note that in the first three years of available statistics at the Mayo Clinic (1907-1909) the ratio of drainage operations to removal of the gallbladder was more than 3 to 1, whereas a review of a later three years (1913-1915) shows the operations done in a ratio of 1 to 4. The present practice in the same clinic is excision in all cases where the operation is possible within reasonable safety.

A description then of operative technic as modernly applied in surgery of the biliary tract will have in mind largely the operation of cholecystectomy, although the fact is not lost sight of that cholecystostomy has to be restored to in certain emergencies, and that corrective measures

fairly often include duct exploration and rarely reconstruction. Except in acute processes, rupture or some severe inflammatory condition which will not let up, operation can nearly always be an interval measure and should be done reasonably far away from active disease. For this reason there is generally no excuse for not carrying out every measure of preoperative precaution and thus reducing greatly the element of risk.

The prospective patient, except in acute situations already referred to, is tided over any ordinary attack of active symptoms and is put on a full diet eventually, which is maintained for several days at least and kept up to the day of operation. A certain number of cases for obvious reasons are digitalized over a varying period of time. In order to reduce to a minimum any disturbing influence the usual clearing out with a dose of castor oil is accomplished a couple of days prior to rather than the night immediately preceding operation. A preliminary hypodermic of morphine and atropine is administered and anaesthesia is induced by gas-oxygen and maintained by ether. In exceptional cases gas-oxygen is used throughout, and in very doubtful risks it is surprising how many cases can be done under regional novocain. The position of the patient on the table is important and the elevator under the back should come up at the proper place. If elevated at too low a point, more harm than good is done since the liver is tilted towards the diaphragm away from the field of operation.

The operation begins with the incision made into the abdominal wall, and it is pertinent to state here that throughout the operation the master word, as in surgery elsewhere, is simplicity (Monihian). One of the commonest mistakes is inadequate exposure, and jokingly judging the caliber of the surgeon by the size of the incision he makes is especially applicale in efforts directed in the gall-bladder area. It is of common occurrence to see operations ordinarily of a simple nature made immeasuraly difficult by too small an incision. This situation therefore should be anticipated and the incision extend from the ensiform cartilage downward to the right well opposite the umbilious or below. As soon as the abdomen is opened the diagnosis of a gallbladder condition is verified by casual recognition of any gross pathology, and a general abdominal exploration is gone on with to determine if there is disease of the appendix, of the pelvic organs, or of the stomach and duodenum. Associated appendicitis is of known common occurrence, and the appendix is usually removed regardless of the absence of pathological change, provided of course the condition of the patient justifies it. The transverse ligament of the liver is now divided, and with traction made by clamping its lower end and the fundus of the gallbladder at the same time, the liver can usually be delivered well into the abdominal wound, when examination of the biliary tract is gone into in detail. It is well to emphasize here that undue speed may make haste poorly if not slowly, and that deliberate work constitutes a great element of success. What may appear to be a brilliantly executed operation may in reality be quite incomplete through hurriedly assuming a gallbladder full of stones

to be the only existing pathology and overlooking other lesions of more serious import. With the liver held in the position as indicated, the position sometimes requiring packing behind the liver, a sheet is carried down between the gallbladder on one side and the stomach, duodenum and colon on the other, when the latter structures can be retracted and held out of the way by the assistant's left hand. In this way an excellent exposure is usually possible of nearly all of the biliary tract. The presence of calculi in the gallbladder or any pathological change in its walls is noted, including adhesions to adjacent structures. Any lymph nodes, especially along the course of the common duct, are felt for and the head of the pancreas is palpated to determine any enlargement. The cystic and common ducts should be examined thoroughly for stones and actually explored if the absence of calculi cannot be determined otherwise.

Excision of the gallbladder begins with isolation and ligature of the cystic duct and artery and the removal of the gallbladder from below upwards. There are no hard fast rules of procedure, and it is the usual practice to free the gallbladder and the cystic duct by an incision made in the peritoneum along the upper or left border of the gallbladder. We have found the approach to the cystic duct and its isolation much easier in the opposite direction, and for this reason we have developed the practice of making the original peritoneal incision in the last two inches of the lower or right border of the gallbladder and carrying this incision on below the cystic duct. In this way we have been convinced that the cystic duct and artery are brought more readily into view and their ligation accomplished with much less danger of doing injury to a normal or anomalous hepatic or common duct. The cystic duct and artery thus isolated and clamped, are divided and the usual procedure of dissecting the gallbladder away and closing the resulting rent is done.

The question of drainage in recent years following gallbladder surgery has attracted a great deal of attention. Where there is evidence of active inflammatory processes in any palpable degree we are in the habit of playing safe and inserting a Penrose drain. In certain clean cases, however, there is no reason why closure without drainage should not be done, and we have found such practice entirely satisfactory in well chosen cases. In borderline cases the practice seems sound of bringing the ends of the ligature tied to the cystic duct out of the abdomen and cutting just below the skin surface, by means of which any unanticipated drainage may be directed to the outside with safety. Where operations have included common duct exploration, drainage of course is a necessity and is accomplished by a catheter or a T-tube placed in the duct and coming to the outside through the abdominal incision.

In duct reconstruction operations it is obvious that individual pathology calls for originality of procedure in each separate case. In one case of damage to the hepatic duct resulting in complete obstruction to the flow of bile and any escape into the duodenum, we were able to establish connection between the proximal divided end of the hepatic duct and

the duodenum according to the proceedure worked out by W. J. Mayo and in this way restore normal function. In another instance, in the presence of increasing jaundice due to carcinoma of the head of the pancreas in a patient who a short while previously had had cholecystectomy done, jaundice was relieved completely by a lateral anastamosis effected between a greatly dilated common duct and the adjacent duodenum.

In acute processess there is likewise no fixed rule to follow. In a case of ruptured gallbladder all we could do was simple abdominal drainage in what appeared to be a general peritonitis. Strange to say, this patient recovered and apparently did well afterwards. In gangrenous cholecystitis a part of the devitalized gallbladder wall may be removed and the case left to the fate of drainage. The simple operation of cholecystostomy permits of no elaborate technic. The peritoneal cavity is protected as far as possible from bile contamination and exploration of the gallbladder is made by making an opening in its fundus. Stones are usually present and are removed and a tube sutured into the gallbladder for drainage.

At the Beckley meeting of the West Virginia Medical Association in May 1923, I reported an analysis of 100 consecutive operations on the biliary tract. Since the period covered by this series we have been able to add 47 additional cases making a total series of 147. Of the total, cholecystectomy was done 119 times. In these cases of exicision of the gallbladder drainage of the common duct was an additional feature 8 times, resorted to in 6 instances for the removal of calculi and in 2 others for simple exploration. Cholecystostomy, by reason of local pathology in 7 instances and on account of the general condition of the patient once, was practiced 8 times. "Ideal cholecystotomy," exploration for carcinoma, duct reconstruction, and anastomosis on account of obstruction were each done once. Two deaths occurred in the total series. One of these deaths followed in a simple drainage operation and the other in a gallbladder excision.

As substantiating the contention that excision of the gallbladder is now the practice of choice and represents a more certain chance of ultimate recovery, I am taking the liberty of quoting a paragraph in a former paper of mine appearing in the October, 1923, issue of the West Virginia Medical Journal.

"For some time prior to the period which includes this series we had adopted the practice of removing rather than draining the gallbladder. In persisting in this practice now we are not unmindful that the last word in gallbladder surgery has not been spoken, and a plan which seems logical enough at this time may be modified materially in the light of future developments. Adding force to the insistence upon some operative measure which retains the gallbladder and preserves possible function, a suggestion made that a dilated common duct following extirpation of the gallbladder may be a prolific source of stone reformation. Removal has been practiced now for a considerable number of years, and we do not believe that this sequel has been observed to any alarming degree up to this time. A case of ours operated on

5 or 6 years ago recently developed colic associated with jaundice and this case no doubt represents such an incidence. On the other hand, in 100 operations, it is a significant fact that 10 of the operations were directed to the relief of symptoms persisting or recurring after the operation of drainage had been previously done. Removal has not escaped secondary operation altogether and in two instances we had occasion to open abdomens with absent gallbladders. In neither instance, however, was the existing pathology at secondary operation of a nature that could possibly affect the status of the primary operation if properly chosen and properly performed. One of these cases, a patient whose jaundice did not improve following removal of her gallbladder some months previously in another hospital, was relieved temporarily by an anastomosis affected between a greatly dilated common duct and the duodenum for an obstructive cancer of the head of the pancreas. The other case, a patient of our own at both operations, required duct reconstruction on account of a permanently injured hepatic duct occurring when removal of the gallbladder was done."

Since the publication of the paper, from which the above paragraph is taken, we have had no occasion to depart from the practice of excision as set forth. Operative efforts have been directed in 3 additional instances where a previous operation of drainage was done, making a total of 13 such cases out of the 147 of our whole series. Immediate and end results have continued to be exceptionally good in our practice of excision.

PROGRESS IN THE TREATMENT OF DISEASES OF THE THYROID GLAND.

By Chas. A. GROOMES, M. D.,
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Read before the B. R. T. Medical Society.

The literature on the thyroid gland is so extensive, the studies and observations of able men so numerous that it will not be possible in a paper of this sort to go into a detailed discussion of the various phases of the subject. I will be content with touching upon the important points relating to the progress made in the management of cases with disorders of the thyroid gland.

As early as 200 B. C. goiter was recognized but was considered as one of the manifestations of an "evil spirit" and treated accordingly. Caesar made mention of the frequent occurrence of "big neck" among the Gauls.

In the early part of the 16th century, Paracelsus, a Swiss physician, was the first to emphasize the relationship between goiter and Cretinism. In 1793 Fodere's essay on Goiter and Cretinism appeared and since then numerous other publications.

The economic and sociologic importance of the goiter problem was recognized about the middle of the last century and in 1864 a commission was appointed by the French government to investigate it. This commission reported that over half a million people in France were afflicted with goiter, and its findings seemed to indicate that goiter was a water-borne disease. Since then Various other countries have appointed commissions to study the cause

and prevention of endemic goiter and numerous surveys have been made in the United States.

Parry in 1825, Graves in 1875, and Basedow in 1840 published descriptions of cases of enlargement of the thyroid gland in connection with palpitation and exophthalmos but none of these observers interpreted their findings in terms of function of the thyroid. In 1874 Sir William Gull published the first important observation of the function of the thyroid and in 1880 and 1881 his observations and interpretation of the etiology of myxedema were confirmed by Kocher and Reverdin. As a result of this and later work preparations of thyroid extract were given to myxedematous patients and definite therapeutic results obtained.

The ash of burned sea sponges was used in the treatment of goiter by the early Grooks, but they did not realize that it was the iodide content of the substance which was responsible for the good effect. Iodin was first used knowingly in the treatment of goiter in 1820 (by Coindet), but the fact that iodin was a normal constituent of the thyroid gland was not known till discovered by Baumann in 1895. Our knowledge of the chemistry of the thyroid has increased rapidly since that time, Oswald showing in 1901 that the iodin is bound with globulin and contained for the most part in the colloid.

In 1907 Marine emphasized the fact that iodine is necessary for the normal function of the thyroid and that in active hyperplasia the iodine store is reduced. Later experiments of Marine and Lenhart showed that iodine is stored mostly in the colloid tive and an inactive form, and that a hormone is elaborated from the inactive iodine. The excess of active iodine is stored mostly in the colloid or globulin of the alveoli and if the store of iodine falls below 0.1 per cent, active hypertrophic and hyperplastic changes in the thyroid begin. No goitre, therefore can develope if the iodine store in the thyroid is maintained above 0.1 per cent. They showed also that this iodine store may be increased by the administration of exceedingly small quantities of iodine by inhalation, by cutaneous application or by mouth, and that hypertrophy may be arrested.

After the finding, by Baumann in 1895, of iodine as a constituent of the thyroid gland, Kendall, in 1915, separated, as a pure crystalline substance, the organic compound which contains the iodine and this he called thyroxin (the thyroid hormone). Plummer, in the observation of thousands of cases of goiter, showed that the rate at which energy is produced by the animal organism is controlled by the amount of thyroxin which is acting within the cells of that body. While this is not the only factor influencing the rate of energy production it likely has more to do with it than any other substance. Plummer showed that the basal metabolic rate is raised by the activity of the thyroid, and lowered by the non-activity of the thyroid and that a high rate in the exophthalmic patient is lowered some after ligation of the thyroid arteries and still more after partial thyroid-ectomy. His observations have bee nconfirmed by Boothby and Saniford and others.

The greatest advance in the management of simple goiter has been in the methods of prevention. At present there still are a few who consider goiter as a primary or idiopathic en-

largement of the thyroid gland. McCarrison and Shepard consider it a water-borne infectious disease, but most scientific investigators of this country consider it a deficiency disease, there being a lack of iodin in the organism, the remote or fundamental cause, however, being unknown.

The fact, as stated before, has been brought out in animal experimentation that if the iodine content is above 0.1 per cent, no anatomic changes toward goiter formation can take place. In making a practical application of these facts prophylactic, as well as curative, treatment has been carried out in many schools, dispensaries, hospitals and large industrial institutions. One example of this was the work done in the public schools of Akron, Ohio, by O. P. Kimball and his associates beginning in 1917. 0.2 gm. doses of sodium iodine were given daily for ten consecutive school days, repeated each spring and autumn. Examinations were made at regular intervals and accurate records kept. The figures are too numerous to be given here, but there was a marked difference in the group taking iodine and the group not taking iodine, both in the prevention of enlargement and in the decrease in the size of existing enlargement at the time treatment was begun.

Since this experiment at Akron, the same procedure has been carried out in numerous other places with corresponding results. Crile has expressed the opinion that a few generations hence endemic goiter will be almost unknown in every civilized nation.

Another important advance has been in the treatment of exophthalmic goiter and adenomata with hyperthyroidism. The relation of the adrenal glands to thyroid activity has been brought out clearly. Adrenalin causes increased metabolism, increased thyroid activity, increased blood pressure, pulse and respiration, leukocytosis, increased sweating, dilation of the pupils and diversion of the blood to the surface. But it is the thyroxin (or thyro-iodine) that sensitizes the tissues to adrenalin. As Crile has expressed it, adrenalism increases hyperthyroidism and hyperthyroidism increases adrenalism.

So far the only proved function of the thyroid gland is the production of an organic compound (the chief element of which is iodine) which exercises a basic control over the bodily processes. In true exophthalmic goiter the activity of every tissue and organ is accentuated. Marine and Aldin Graham have shown that adenomata of the thyroid also perform the characteristic thyroid function and that frequently in these cases of adenoma symptoms develope which are identical with those of exophathalmic goiter. This is shown by the fact that in these cases frequently there is a development of symptoms which are precisely like those characterizing exophthalmic goiter and that these disappear after the removal of the adenoma just as they do after partial thyroidectomy for exophthalmic goiter. In these cases of hyperthyroidism due to hyperactivity of adenoamata either iodine or thyroid extract may cause the symptoms to be aggravated. Crile expresses the belief that clinical symptoms of toxic adenomata, therefore, are due to the thyro-iodine which is produced by the adenoma rather than to the physical degeneration of the adenoma. This belief is also substanti-

ated by the fact in these cases of "toxic" goiter there is often a sensitization of the organism to adrenalin identical with that present in cases of exophthalmic goiter (a hyperplastic goiter associated with exophthalmos), and that all the other symptoms of exophthalmic goiter, such as increased basal metabolism, tachycardia, nervousness, and emaciation may be present, except the exophthalmos.

Crile has called particular attention to cases of high blood pressure, of myocarditis, or of neurasthenia, in which the only evidence of thyroid involvement was the presence of a goiter, yet in many of these improvement has followed partial excision of the thyroid. He concludes that the various types of goiter should be regarded as varying degrees of the same or similar processes and that as far as treatment is concerned, no differentiation should be made between the exophthalmic goiter with hyperplasia and the toxic adenomata or some of the atypical forms of the disease. He says also that the varying phenomena which have been called toxic goiter should be regarded as varying degrees of iodism or hyperhtyroidism rather than a toxemia. In the cases of partial hyperthyroidism the adrenalin test and basal metabolism estimations may be negative.

John Phillips has called particular attention to marked Cardiac disturbances which appear in middle life or later in patients who have had Adenomatous Goiter for many years. In these cases the cardiac disturbances frequently overshadow all the other toxic symptoms from the goiter. They may have a continuously high pulse rate, with occasional attacks of intense tachycardia brought on by emotion, excitement or exercise. But at the end of these attacks usually the slowing of the pulse rate occurs gradually rather than abruptly as is the case in ordinary attacks of paroxysmal techycardia.

Frank H. Lahey and his associates have paid a great deal of attention to this group of Cardiac cases and have observed in a considerable series that decompensation is brought about largely by the underlying hyperthyroidism and for this reason they do not respond well to medical treatment. They have termed these cases thyrocardiacs.

The diagnosis of hyperthyroidism, as the underlying cause, is made difficult by the fact that the obvious clinical picture is that of cardiac failure, as well as by the fact that the picture of thyroidism in this group of cases is frequently atypical. In some the thyroid gland is not only not enlarged, but may be smaller than normal.

These patients frequently are not activated as is usually the case in toxic goiter. They are apathetic and frequently show a bronzing of the skin. They may retain the eye stigmata of past thyroidism or may have no eye signs at all. The basal metabolic rate remains persistantly high and they have usually lost large amounts of weight not otherwise accounted for, but this may not be readily observed because of the presence of edema. With proper preparation and care patients in this group have been found to stand surgical procedures well, even in the presence of partial cardiac decompensation; and the results of partial thyroidectomy have been excellent.

Two cases reported by Phillips have been of particular interest to

me and show markedly the relation of cardiac disturbances to hyperthyroidism.

The first, a woman aged 47, who for four months had had palpitation of the heart, vomiting, shortness of breath and swelling of the feet. She had had a goiter for thirty years. Her eyes were prominent and she had a positive Stellwag's and Von-Graefe's sign. Her thyroid was enlarged and nodular. The cardiac sounds were irregular both in force and rhythm, the heart rate was 174, while that of the pulse was 120. The liver was enlarged and there was a small amount of free fluid in the abdominal cavity. There was marked edema of the lower extremities. The extended fingers showed a fine tremor. The urine showed a trace of albumin and a few hyaline and granular casts. The diagnosis was adenoma of the thyroid gland with toxic symptoms, chronic myocarditis, auricular fibrillation and cardiac decompensation. With limitation of the total daily quantity of fluids, restriction of salt in the diet and administration of bromides and digitalis, the edema disappeared, the pulse dropped to 100 and became regular, and the vomiting ceased. During the following year there were periods of temporary improvement, but a lasting cardiac compensation never became fully established.

During this time she had 4 attacks of paroxysmal tachycardia lasting for 30 min. to 36 hours, the cardiac rate varying from 180 to 200.

The onset and termination of these attacks were abrupt. About 13 months after her first medical treatment a sub total thyroidectomy was done, the gland showing adenomatous masses with some degenerative changes. After the operation the patient gradually improved and cardiac compensation became well established.

A report from her at the end of three years showed that she was able to be about in comfort and do a considerable amount of work, and that there had been no return of the paroxysmal tachycardia.

The second case was one illustrating the association of attacks of Angina with the presence of a goiter showing comparatively mild symptoms. She had all of the signs and symptoms of exophthalmic goiter, the heart was slightly enlarged and pulse rate 104; blood pressure 140 systolic and 80 diastolic. There was considerable improvement after a rest in bed for 3 weeks and the pulse rate dropped to 80. About 2 months later she began to have attacks of precordial pain which was also referred to the left shoulder and down the inner side of the left arm. These attacks, with blood pressure usually 180-100, kept recurring and at the end of 6 months there seemed to be no improvement, so a partial thyroidectomy was done. Following the operation the patient had no recurrence of the anginal attacks and at the end of 3 months she had gained 19 lbs. in weight and her blood pressure had dropped again to 140-90. A report at the end of 7 years indicated that she was still in good health and leading a busy life.

Outstanding among the tests for differential diagnosis of hyperthyrodism are the adrenalin or Goetsch tests, the Kottmann speum test and estimation of the basal metabolic rate.

In the adrenalin test 6 minims of adrenalin chloride, 1:1000, being in-

jected subcutaneously and observations made, at 5 min. intervals, of the blood pressure, pulse rate, respiration rate, nervousness, tremor of the fingers, hyperhydrosis, size of pupils, pallor or flushing of the skin; having first made these observations on the resting patient before adrenalin is given. It is based on the fact that adenalism increases hyperthyroidism and hyperthprodism increases adrenalism.

The Kottmann serum test has been used to differentiate hyperthyroidism, hypothyroidism and normal condition of the thyroid gland. It is thought by some to be even more reliable than the adrenalin test. The technique is more elaborate than (though not difficult) that of the adrenalin test and will not be given here.

While most of these tests are positive in the majority of hyperthyroid cases there are some which show a negative reaction.

Also many cases known to be normal have shown positive reaction, therefore while they may be considered a valuable aid in the differential diagnoses of border line cases a positive diagnosis cannot justly be made on these findings alone. In fact, as in most conditions, the diagnosis is made chiefly on history and physical examination, the results of various tests being only confirmatory.

More valuable than either of these tests is the estimation of the basal metabolic rate. It has been found that in most cases of exophthalmic goiter and adenomata with hyperthyroidism the basal metabolic rate is increased, and in most cases the degree of the increase gives a fairly acurate index of the severity of the disease. In some, however, which clinically are seen to be very severe the metabolic rate is increased only slightly.

The greatest value of the estimation is in the doubtful case in which some of the classical signs and symptoms are absent. To be of value the measurements must be made under proper conditions and made repeatedly and carefully.

The basal metobolism measurement during the course of treatment of hyperthroid cases are of considerable value in estimating the progress of the disease and the treatment may be determined largely, though not wholly, by the variations in metabolism.

There has been considerable controversy as to the comparative value of surgical treatment and X-Ray treatment in hyperthyroid conditions but the majority of observers feel that surgery is the safest and most satisfactory form of treatment with the present methods of preparation, operative technique and post operative care.

C. H. Mayo in discussing the subject writes: "With X-Ray treatment remissions may occur just as remissions occur without treatment or with several other methods of treatment. Our experience has been failure or temporary benefit. It is possible that the Ray treatment may destroy the glands and produce hypothyroidism. It is difficult to regulate the dosage and its use adds to the difficulties of operation."

The most important advance in the surgical treatment of hyperthyroid cases has been substitution of the multiple stage operation for the early

single stage operation, increased care in the pre-operative management, selection of suitable anesthesia, development of operative technique and postoperative care, the recognition of the thyrocardiacs and the use of Lugol's solution "or other Iodin" in the pre-operative as well as the post-operative management of these cases.

As to the use of Lugol's solution there is considerable difference of opinion. It has been or is being tried out in practically all the important thyroid clinics in the country. Some are very enthusiastic over the results obtained by its use. Others, who apparently have not had as good results, are skeptical and still others are willing to give it a fair trial.

In the light of present statistics practically all are agreed that it should not be used as a substitute for surgery but rather as an aid in preparing the patient for operation, and that it should not be used as a substitute for pole ligation.

In estimating the good effects of iodine, namely drop in pulse rate, decrease in metabolic rate and increase in weight, the usual good effect of rest in bed without iodine should not be overlooked, because this is usually very marked.

From the summary of Plummer and Boothby on cases of exophthalmic goiter treated with Lugols solution at the Mayo Clinic they conclude that two thirds of the patients with exophthalmic goiter will be greatly benefitted with iodine, one-fourth slightly benefitted and the remainder (about one patient in twenty) will not be benefitted by Lugol's solution. The probability of iodine doing harm is less than one in six hundred. Many cases which formerly were too bad to be operated are put into an operable condition by Lugol's solution. It reduces the pre-operative death rate, as shown by the Mayo statistics.

In the years 1918 to 1922 when iodine was not being used, an average of 15 patients each year died before operative procedures were possible. During the first 9½ months of 1923 when iodine was being used the same clinic reports that only four died. They have found it also of considerable aid in the post-operative management of cases as a safe guard against the post-operative hyperthroid crises.

In most thyroid clinics now the surgical mortality of simple goiter cases is almost nil and that of hyperthyroid cases has been reduced to about one per cent. This has come about by the extreme care exercised in the preoperative management; by doing pole ligations to test the patients susceptibility to reaction; by avoiding too extensive operation at one sitting, only doing as much as the patient can be expected to stand without the occurence of severe reaction, based on his reaction to previous operative procedures, by doing the operative work in such a manner that it can be interrupted at any time if there is indication that his condition is not good, thus avoiding reacton and completing the operation later when the danger is past; by intelligent handling of post operative reaction when it does occur; and by the valuable and guiding information obtained from estimations of the basal metabolic rate made throughout the entire course of surgical treatment.

SIGNIFICANCE OF THE COLLOIDAL PROPERTIES OF GELATIN IN SPECIAL DIETARIES.

By
THOMAS B. DOWNEY, Ph. D.[1]

An examination of the dietetic possibilities of gelatin from a chemico-physiological standpoint reveals a number of properties which should make this unique food product a valuable addition to special dietaries, particularly those in which milk form the sole or major portion. In such dietaries gelatin functions as a protein food to the extent of the utilization of its amino acids by the body and in addition possesses marked activity as a protective colloid and emulsifying agent. Practical observations in clinics and hospitals as well as experimental work in laboratories indicate that these characteristic properties of gelatin as a colloidal substance exert a most significant influence in promoting digestion and absorption of certaain types of foods.

The importance of this colloidal activity of gelatin where fed in conjunction with dairy products has been demonstrated by the writer in feeding tests with the albino rat. Shortly after weaning the young from several litters were divided into two groups; one group received pasteurized whole milk as its sole diet, the other pasteurized whole milk containing one per cent. of gelatin. Observations extending over a period of six months showed that the growth and physical well being of the group fed on gelatinated milk was markedly superior to animals fed on the plain milk diet. The increased growth was accomplished on smaller food consumption. In fact, during the early growth period for equivalent gains in body weight the animals on gelatinated milk consumed about 23 per cent. less food than the group on plain milk.

Another striking illustration is found in the writer's experiments with ice cream. Over a period of seven weeks it was obesrved that a group of rats fed on an exclusive diet of ice cream containing one per cent. of gelatin gained no less than 25 per cent. more in body weight than was the case with their brothers and sisters whose diet was plain ice cream. For equivalent gains in body weight, the food consumption of the group fed on the gelatin containing ice cream were much less. Smaller percentages of gelatin resulted in proportionate improvements. It is important to note in this connection that the better nutritional status of the gelatin ice cream group after a number of months on the diet was reflected in continued health and growth, and in increased bone development and reproduction in several cases.

It should not be presumed that the observed improvements of the dairy products are entirely due to the added protein value of the gelatin, but possibly more to the protective colloidal and emulsifying effects that it confers. The digestive processes are essentially colloidal phenomena, whereby fats, carbohydrates and proteins are ingested in the colloidal conditions and changed by the various enzymes to degradation products capable of absorption by the body. To accomp-

lish the formation of these simpler substances, the enzymes must come into intimate contact with the food particles. If, perchance, the food particles are present as large tough masses, as is the case with cow's milk coagulating under the influence of the hydrochloric acid and rennin in the human stomach, the contact surface of the enzymes with the food is limited and gastric digestion is delayed or impaired. Various specialists have described experiments in vitro as well as with humans which show that the coagulation of cow's milk by acid and rennin is prevented or modified in character in the presence of relatively small amounts of gelatin. This effect is spoken of as protective colloidal action and it is interesting to note that gelatin is one of the most efficient of all known protective agents. Gelatin is also a good emulsifying agent and it is quite probable that is aids the secretions of the alimentary apparatus in the emulsifying of fats.

In discussing the digestibility of milks, Chapin says that those animals whose stomachs form the larger percentage of the digestive tract and as their digestion is largely gastric produce milks that form tough curds, as for example, the cow. In contrast is the human whose stomach forms only about 20 per cent. of the digestive tract. Human milk curdles in light flocculent masses. It has been pointed out by Alexander that human milk contains a natural protective protein in large amount,which is present in small amount in cow's milk. It would seem, that the addition of such a protective agent as gelatin to cow's milk would make it particularly suitable for infants, and such has been found to be the case, as is testified to in pediatric literature.[2]

In like manner, gelatin has been shown to be of value in other dietaries composed largely of dairy products. For example, Hawk reports that the addition of gelatin to the milk-egg diets of tuberculosis patients resulted in decided nutritional improvements with the majority of the cases tried.

The experiments described suggest the advantages that are to be derived by the utilization of gelatin in other dietaries. The protective colloidal and emulsifying action of gelatin promotes the digestion and absorption of various types of foods. It is also misleading to assume that gelatin as a protein is of insignificant food value.

Feeding tests by McCollum and by Osborne and Mendel have shown, that with certain cereal grains, gelatin is exceptionally well utilized, presumably through its high content of the amino acid lysine. Also, with milk proteins gelatine is of value, as has been found by Sure. In combination with milk in the liquid form, it is believed, however, that the colloidal properties are of greater significance.

REFERENCES

1. Senior Industrial Fellow, Mellon Institute of Industrial Research, University of Pittsburgh, Pittsburgh, Pa.

2. See, for example; Jacobi, "Industrial Diseases of Infancy and Childhood," 1887, p. 79; Starr and Westcott, "Diseases of Children," 1900, 23; Griffith, "The Care of the Baby," 1908, 386; and Friedenwald and Ruhrah, "iDet in Health and Disease," 1923, 295, 466. On the utility of gelatin in chronic intestinal infection, see Herter, "Infantilism from Chronic Intestinal Infaction," 1908, 101.

ACUTE PYELITIS

By
DR. E. R. LOGAN, of Omar, W. Va.

Read before the Logan County Medical Society, May 12, 1925.

In presenting this paper I wish to call your attention to a very common though frequently overlooked condition, which we all meet every day.

According to the stage and the causative factor inflammation of the pelvis of the kidney may be divided into four classes, acute catarrhal and suppurative pyelitis, pyelonephritis and suppurative nephritis. Of these, the latter two represent extensions of the inflammation into the kidney proper, with destruction of renal tissue and abscess formation, the treatment of which is strictly surgical and for that reason will be omitted from this paper.

ACUTE CATARRHAL PYELITIS

This is a condition frequently overlooked by the medical man, although it is overworked by the kidney remedy venders who claim that all pain in the back is due to kidney trouble. In fact, so extensively have the quacks advertised that fully fifty per cent of your patients will diagnose their trouble for you by saying, "Doc, my kidneys are troubling me."

Until the extreme frequency of acute catarrhal pyelitis was called to my attention a couple of years ago I would disregard this easy, evident diagnosis handed me on a silver tray by the patient himself, and delve into the intricate realms of myalgia lumbalis, sacro-iliac strain, faulty weight bearing, genital infections and neurasthenics. After so long the patient recovered possibly in spite of the treatment and I would say, "Well done, thou good and faithful servant, pocket thou the coin."

I now feel that fully fifty per cent of these cases were due to acute catarrhal pyelitis and recovered either spontaneously or by therapeutics directed at some other hypothetical abnormality.

As to the etiology it is frequent in the common colds or following overexertion. Abnormal urine, hyperacidity, polyuria and urine containing oxalate or other crystals may produce irritation of the pelvis of the kidney or certain of the more common drugs when given internally will produce the same condition.

Usually at some time during the course of acute infectious disease, pyelitis obtains due to toxins of the disease being excreted through the kidneys, but the symptoms are usually so well masked by the symptoms of the disease that it is impossible to recognize them.

The onset and course of catarrhal pyelitis is marked by slight fever, aching especially in the lumbar region and burning of meatus on urination. The urine is high colored, high specific gravity with sediment of epithelial cells.

If the pyelitis is due to an irritating condition of the urine the bladder and urethral symptoms predominate with pain in the small of the back and general malaise.

As before stated these cases usually recover spontaneously but a little well directed treatment will hasten recovery and lessen the danger of extension and relapse.

Counter irritation over the kidney, purge and sedative astringent drugs excreted by the kidney as Buchu or Urva Ursa will work wonders in the common catarrhal pyelitis due to colds, over-exertion and occurring in the course of acute infectious disease. When due to hyperacidity or uric acid crystals this condition must be corrected by alkalies as sodium acetate or bicarbonate and attention to the diet and bowels. However, care must be exercised not to render the urine too alkaline nor to keep it alkaline too long or ammoniacal decomposition may result which in itself causes pyelitis. If this should occur, the urine must again be rendered acid by the use of benzoic acid its salts or mono basic sodium phosphate which in my opinion is the remedy par excellence.

Suppurative pyelitis may result from progression of catarrhal pyelitis, from an infection extending upward from bladder or urethra or endogenous infection from blood or lymph streams or extension from contiguous structures as from a perirenal abscess.

Its onset is marked by a definite chill followed by a marked elevation of temperature reaching in several instances 104 degrees F. and persisting for several days, of an intermittent character.

The urine is scanty, loaded with pus, epithelial debris, blood and bacteria, containing a trace of albumin, dark in color, cloudy, and of high specific gravity.

The patient complains of a severe backache and there is marked tenderness over the kidney. If the disease is bilateral we may have symptoms of uremia so marked that we may be tempted to diagnose acute nephritis.

In the treatment as in most diseases there are a thousand and one to select from with plenty of evidence to support their use back of any one of them if we look for it. The reason for this is if we put the patient to bed, open the bowels, limit the diet and give plenty of water the majority of these cases will get well without direct treatment.

The best means at our disposal for the local treatment of this condition is of course the injection of an antiseptic solution such as argyrol 25%, silver nitrate 2% or mercruochrome 2%, directly into the pelvis of the kidney by means of a cystoscope and ureteral catheterization. However most of us are not equipped to give this treatment so we must resort to the administration of drugs by mouth which are excreted by the kidneys in a bactericidal form such as hexamethyltetramine, santalwood oil, balsam copaiba, cubebs, buchu, uva-ursa, benzoates and salol.

It is a far stretch to imagine that any drug given by mouth can be excreted by the kidneys in strong enough solution to be germicidal to the urinary tract and it is my opinion that the beneficial effects observed from the administration of these drugs in this condition are due to the increased amount of urine excreted, washing out the infected material and thereby allowing nature to overcome the infection.

Whatever the method of action may be there is no doubt but that remarkable results may be obtained by administering hexamethylamine 15 grains, with monobasic sodium phosphate 10 grains every two hours for

48 hours and changing to sodium acetate 15 grains every two hours for an equal period and so alternate.

Of the newer antiseptics acri falvin, mercurochrome, and brilliant green, great claims are made and substantiated by many excellent men but fully as many equally able men deny their value or claim injurious results from their use. In my own limited experience I find brilliant green given in 20 grain doses every three hours renders the urine inhibitive to bacterial growth though not bactericidal.

Just recently Sharp and Dohme have perfected a new compound of hexamethylamine known as hexaresorcinal, which, when given by mouth will produce a urine which will kill the colon bacillus in a test tube in ten minutes.

I have tried this preparation in one case and the results seem to justify the claims made for it but I feel we should not place too much faith in this new drug until more evidence of its value can be had.

In closing I wish to urge the simple chemical examination and if possible the microscopical examination of the urine in all cases of pain in the back and the administration of common sense in large doses mixed with our therapeutics.

SEPTIC ENDOCARDITIS

REPORT OF A CASE

E. S. DUPUY, M. D., Beckley, W. Va.

PERSONAL HISTORY

Mrs. R. White, age 36½ years, born in Virginia, reared in Tennessee. Lived in West Virginia for the past 8 years. Married in 1908—17 years ago, has two children, ages 8 and 15 years, no miscarriages. Had the ordinary diseases of childhood only. Husband and children living. Lived in Beckley for the past 5 years.

CLINICAL HISTORY

She suffered for the past 15 years. from bronchial asthma, and for the last 5 years, I saw her at arre intervals in the attack, and administered ¼ gr. of morphine hypodermatically. I gave her all the known remedies for asthma, but without relief. During the summer of last year I gave her 15 doses of proteogen No. 4 (Merrell), which she said greatly benefited her. It was given according to instructions in small ascending doses, the patient being first alkalinized preceded by a brisk calomel and salts purge.

PRESENT CONDITION

On April 18, 1925, the patient came to my office and asked to have more proteogen administered, since she had felt very much relieved from some given her 1 year ago, and accordingly I gave her a full dose, at the same time giving a calomel purge followed by salts, advising her to start on milk of magnesia which she did. In all she received 5 full doses at 3 day intervals. The full dose was decided since there was no reaction from that given last year. I did not see the patient between doses. On April 30—the day she received the last dose—she complained of some pain in her left arm, which I thought was a slight neuritis, and for which I prescribed some salicylate of soda. I also examined the teeth, and asked her to see a dentist and have them X-rayed. This she neglected to do. On May 3. I was called to see her,

and on finding a temperature of 101, I put her to bed. She rapidly developed a marked arthritis of the right wrist, later the left wrist, but less marked, also right knee. Dr. J. E. Coleman was called in consultation one week after I put her to bed, and on the same day we called Dr. T. C. Moorefield, who found two infected teeth. After discussing the advisability of extracting these teeth in the presence of fever, we all decided it would be better to get them out, so two were extracted.

Three days later the patient had a severe chill, followed by a temperature of 103. Dr. Coleman was again called. She did not complain of her mouth, nor was there much to see. The joint condition was marked and afforded much discomfort. The heart, lungs, tonsils and kidneys were found negative, and there was nothing to attract you to the abdomen or pelvis. A blood count was made by Dr. Coleman's nurse, but nothing much out of the ordinary was found. I put her on salicylate and bicarbonate of soda, and later Upjohn's citrocarbonate. Locally I applied compound tincture of benzoin, and oil of wintergreen. Three days later I found a mitral murmur, the other symptoms remaining the same. and I diagnosed endocarditis. The following day Dr. A. H. Grigg was called and he concurred in my diagnosis. He administered at three day intervals 10 C. C. of gentian violet (this was also advised by Dr. Coleman), and following this, 2 doses of mercurochrome. I neglected to state that on the day of Dr. Griggs' first visit we had Mr. Madden, of the Beckley hospital, make a Wasserman and Widal blood examination, which were found negative. The patient appeared to improve after each dose of gentian violet, but as it did not seem to arrest the trouble, the mercurochrome was administered. The pulse ran 120 per. minute, temperature 101 to 103, and following one dose of mercurochrome ran up to 107. On June 17th. after a period of a week or ten days of apparant improvement, she was suddenly taken worse, moved to the Beckley hospital, where Dr. Grigg and Dr. Tieche gave her a transfusion of 1 pt. of blood taken from her husband, this being the most suitable specimen found after Mr. Madden had examined that of her brother and daughter. The following morning she died, from acute dilatation of the heart. This occurred June 18th or about six weeks from the time she took to her bed.

Summary: What part did the proteogen play in the case? Should the teeth have been extracted?

THE WEST VIRGINIA MEDICAL JOURNAL

JAS. R. BLOSS - - - - - - - - - - - - - *Editor*

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C. A. RAY, Charleston
HARRY M. HALL, Wheeling } - - - - - - - - *Associate Editors*

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All original articles for The Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all parts of the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

Advertising forms will go to press not later than the tenth of each month.

All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

Should be made by check, draft, money order, express order or registered letter to Sterrett O. Neale, Executive Secretary, 211 Smallridge Bldg., Charleston, W. Va.

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The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

GETTING RESULTS

In a recent issue of "The Red Cross Messenger,' house publication of Johnson & Johnson, manufacturers of physicians' and surgeons' supplies, there appeared a slogan "Your Druggist is More Than a Merchant, Try the Drug Store First," which was quickly adopted by retail druggists throughout the country as a "catch" window advertisment and displayed in many city pageants on occasions of local publicity having the endorsement of the said Johnson & Johnson.

Recognizing at once the injustice to ethical physicians and surgeons,

and the duplicity of the general public by such methods of advertisements by a reputable firm like Johnson & Johnson, an active member of the W. Va. S. M. A. who is not only a successful physician and surgeon, but a man who devotes much time to promoting the welfare of the profession, entered into a correspondence with Johnson & Johnson, protesting in a polite, fair, but positive manner against their proposing or conciliating advertising methods of this nature. After several letters and telegrams were exchanged, Johnson & Johnson agreed that hereafter, "Try Your Drug Store First" would be eliminated from all their business solicitations, thus renewing their good relations with the profession.

Wthout going into detail, a few minutes of sober thought will convince any physician of the unfairness to the profession and great wrong being done to an unthinking public by such slogans in the hands of unscrupulous prescribing druggists and our Association is indebted to our young friend for his promptness, courage and success in settling this one of many problems facing the medical profession at this time.

Who will be the next volunteer to compromise a pending disaster or storm the fortifications of a cult or fakir, and "cary on" until he gets results?

C. A. R.

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1 9 2 5

Two-thirds of 1925 has passed into history for the West Virginia State Medical association. Under the leadership of our efficient president, great progress has been made toward the betterment of conditions pertaining to medical profession.

The office of our executive secretary has been installed, is working 100 per cent. efficient and if the members are not taking advantage of its benefits it is because their wants have not been made known.

Our automobile insurance proposition, saving our members more than 25 per cent of the expense of their coverage, is working out finely, many policies already having been written.

The professional relations committee has been organized and is working enthusiastically with the voluntary support and assistance of doctors from all sections of the state.

The most satisfactory annual meeting in our history was held at Bluefield where the scientific program was excellent and the social features were so well-planned as to make us all long for the time to return there.

The committee on public policy and legislation did not accomplish all it set out to accomplish but its members have been active, the people are thinking, and defeat is not acknowledged.

With the January, 1926, issue of the Medical Journal, its size will be enlarged and its text improved to the extent of the assistance and cooperation given the editorial staff by members of every component society.

The present editor has kept the Journal going at a great personal sacrifice and the new publication committee will not accomplish much without the support of every member.

Criticisms are to be expected but if you have a criticism to make, the publication committee hopes your ideas will be communicated to one of its members. Constructive suggestions will be acceptable at all times. We will be willing to tear down if we can build up again on a more solid foundation.

The legislative committee wants to hear from any member who has an idea or a policy he would have promulgated.

Notwithstanding the increase in dues the paid-up membership as this is written is 962, according to the executive secretary's files. The total number in 1924 was 1064. An effort is being made to exceed 1100 before the close of the year.

All of us want things done but we venture the assertion that not more than 250 of our members are doing the real work of the association with a real spirit of doing good for his neighbor.

Now, there are 500 doctors in West Virginia who, we presume, are eligible for membership. Missionary work needs to be done. If you are one of the members who have been "letting George do it!" won't you start in now to work, think, write and join our missionary society.

We want to make 1925 a double banner year. We want the medical profession 100 per cent. organized by December.

United we stand, devided we fall!"

C.A.R.

THE CASE HISTORY

As we have gone over the Oration on Surgery, as presented by Dr. Roy Ben Miller at the last meeting in Bluefield, we have been impressed.

The particular thing which has impressed us is his emphasis of the importance of the history in this examination of patients suffering with Indigestion. In this particular address we have "Surgical Indigestion" taken up for exposition,, yet it can well be read thoughtfully and studied by all physicians.

We fear that most of us, in the past few years, have shown a tendency to adopt the short-cuts to diagnosis, as he terms them, namely the X-ray, test meals, tests for occult blood, etc. It is not only possible, but very probable, that all of us are neglecting to make a careful study of the history of the case.

If we will go carefully into the history from the onset of the first noticeable discomfort suffered by our patient and follow the gradual development up to their consultation of a physician, it is generally possible to arrive at a diagnosis. This takes time and study. Two things that is to be questioned if the physicians of today, with their laboratories and other scientific diagnostic aids, give, or have the training to give, as did the physicians of the generation which preceded us.

It is particularly true, we fear, that too many physicians are depending upon laboratory reports, x-ray findings and so on, made by the inexperienced technicians. This is especially true, we believe, of x-ray studies. It takes thorough training to enable a technician to properly examine a patient fluoroscopically and to make films of any diagnostic importance or of value in assisting the internist or surgeon to reach a correct diagnosis.

The laboratory, the x-ray and all the other aids are to be commended and employed but the findings can only be intelligently interpreted in conjunction with a carefully taken history thoroughly studied.

THE CANCER PROBLEM

One following medical literature can not but note the prominent place that cancer is at present occupying

in all of the discussions of the profession.

At this time this disease is being studied as never before. Out of this intensive study it is certain we will learn much. Whether or not it is a disease due to a specific organism, as is maintained by some, is as yet to be proven. Certain investigators believe that this is the case. Some recent work done by bacteriologists support this view. Yet these results are not generally accepted as conclusive.

There are other facts to be investigated in this connection. For how are we to explain the rare occurrence of cancer among primitive peoples? For example among the Indian women of North and South America cancer of the breast is practically absent. Yet among the women of Great Britain it is ten times more frequent than those of Japan. May it not be that something may be discovered in connection with the diet that possibly has some bearing upon this variation in the incidence of malignancy among various races.

In the midst of this study and discussion certain facts are pertinent and should be borne in mind in our efforts to educate the laity.

Cancer at the beginning is usually painless and its onset for this reason is especially insiduous and dangerous. It is at first a small local growth which can be safely and easily removed by competent surgical or other treatment.

Cancer is not a constitutional or "blood" disease. It is not contagious. It is not, practically speaking, hereditary.

Every tumor or lump in the breast should be examined by a competent physician.

A persistent abnormal vaginal discharge or bleeding is suspicious. Sores, cracks, lacerations, lumps and ulcers which do not heal, and warts, moles or birth marks which change in size, color, or appearance, may become malignant unless treated and cured.

Probably sixty per cent of cancers of the rectum are first regarded as piles. Insist upon making a thorough examination. Continual irritation in some form is the usual determining etiological factor of cancer. It very rarely, if ever, results from a sudden injury.

A physician who treats these suspicious symptoms without making a thorough physical examination of the patient is certainly remiss in his duty to that patient and his own profession.

PUBLICATION OF CASE REPORTS

As one continues practice over a period of years, he realizes more and more that his most important medical education is derived from his own experiences in the treatment of patients. The recent graduate rightly believes that he has received invaluable instruction from his professors, laboratory work and hospital internship, but later discovers that the most vital and abiding knowledge obtainable is secured through his successes and failures in the treatment of patients on his own initiative. It is well recognized that the most valuable teachings from private practice are not all obtained in the experiences of the city practitioner. No man has the variety of cases which test his own capabilities as fall to the lot of the busy country practitioner.

The most instructive feature of the average medical meeting is the discussion of the formal paper, with the recital of personal experiences on the part of physicians from all walks of medical life. Yet few of these personal experiences with their richness of details, many of them being of thrilling interest, reach the body of the profession. The average practitioner seems to believe he cannot publish an account of his own doings unless he elaboratees from study of textbooks and supports it by the latest scientific investigations. But often a brief presentation of the facts of one's personal cases adds value to the general fund of medical knowledge. It is not necessary to adorn such reports with elaborate researches. The description of the case, with the individual treatment of the same, oftentimes suffices to produce something well worth while and of interest to the profession at large.

This discussion is intended as an appeal to the average reader to present for publication reports of cases of unusual interest. Such will be received and offered to the readers of this journal with the knowledge that they will be appreciated and recognized for their value. It is confidently believed that all will endorse the expansion of this feature of the journal. It is hoped that this request will meet with a response from many physicians in this Northwest section, who will feel disposed to contribute such reports.—*Ed. Northwest Medicine.*

STATE AND GENERAL NEWS

Due to the shakeup in the Federal Prohibition Enforcement Department, West Virginia doctors and hospitals hereafter will make their applications for alcohol withdrawal permits direct to R. A. Fulweiler, Federal Prohibition Administrator, Roanoke, Va. Heretofore the Federal permits have been obtained from the office of Mr. J. H. Gadd, Charleston, W. Va.

State alcohol withdrawal permits will be obtained in the future, as in the past, from W. G. Brown, Prohibition Director, State Capitol, Charleston, W. Va.

Information as to how these permits can be obtained in the state was secured by the Executive Secretary's office, because of the vast number of inquiries. The only change in the procedure is that Federal permit requests are to be directed to Mr. Fulwiler instead of Mr. Gadd.

August 20, 1925.

Dear Doctor:

You are invited to participate in a sheep barbecue and corn roast for doctors only at my farm on the Sissonville road, Tuesday, August 25, at 6 o'clock p. m.

Program: Leave Charleston (Kanawha Valley Hospital) at 4:30 p. m. and take left-hand road at Melton's Store. Photographs "with the bull" at 5:30. Supper in nature's dining room at 6:15. Return when you are capable of driving.

To be sure that your dozen ears will be prepared, please call Capitol 5250, and advise me of your acceptance.

Fraternally yours,
C. A. Ray, M. D.

Don't get scared, Dr. A. L. Amick has taken unto himself a wife. Dr. Amick is a very prominent and well liked physician in Charleston. The

bride was Miss Thelma Mary Dickerson of Barboursville, West Virginia. This comes as quite a surprise to all Dr. Amick's personal friends, as he had become listed as a confirmed bachelor. All his friends sincerely wish him a successful voyage on the sea of matrimony.

KANAWHA VALLEY HOSPITAL

Property of Dr. McQueen was sold recently. The organization is Dr. C. A. Ray, manager; Dr. G. C. Schoolfield, president; Dr. G. B. Capito, vice-president; Dr. W. W. Point, treasurer; Dr. E. F. Gott, secretary and Miss Anna H. Bessler, superintendent. The personnel of this organization guarantees it a continued success as under Dr. McQueen. Every one hopes them a successful career.

Dr. George McQueen has opened his office in Charleston fo rgenerla practice and general surgery.

Dr. H. H. Howell of Danville has returned from his trip from the American College of Surgeons abroad. He reports a most enjoyable and instructive trip. Dr. Howell announces that the time and money spent on the "Clinics" in Vienna was a most pleasant and instructive pastime.

Dr. McMillan is touring abroad.

Dr. M. V. Godbey has opened an office again for practice. Welcome back doctor.

A joint meeting of Logan, Kanawha and Boone County was held about the 22nd of September at Madison. The first part of the evening was devoted to games and a barbecue dinner was served at which time a scientific program was arranged. We think this is a capital idea. No one person knows a great deal of the other peson until they are together for a while. We think it would be a good idea for other parts of the state, try it out.

Reporter,
Kanawha Medical Society

The second Tri-County meeting was held September 18th in Fairmont. Dinner was served in the Presbyterian church, and following this the Scientific Program was presented to the doctors while the ladies were being entertained by music and a playlet in the Masonic Temple.

Dr. S. L. Cherry of Clarksburg read a paper "The Principles Underlying the Treatment of Diabetes."

Dr. B. C. John of Morgantown took up "The Treatment of Diabetes."

Both papers were thorough and covered all phases of the subject.

Following this program a dance was held in the Masonic Temple. A list of those present follows:

Harrison County Guests—Dr. and Mrs. S. L. Cherry, Dr. and Mrs. L. C. Goff, Dr. and Mrs. W. T. Cocke, Dr. and Mrs. E. F. Weber, Dr. I. D. Cole, Dr. B. F. Matheny, Dr. H. E. Sloan, Dr. W. M. Davis, Dr. and Mrs. John Folk, Dr. T. M. Hood and daughter, Dr. and Mrs. A. J. Kemper, Dr. and Mrs. J. E. Wilson, Dr. and Drs. Ludwig, Dr. and Mrs. C. O. Post, Dr. and Mrs. Langfitt, Dr. W. L. Thomason and Miss Marshall, Dr. and Mrs. J. E. Corbin, Dr. G. E. Paolozzi, Dr. B. S. Brake, Dr. and Mrs. Chester Ogden, Mary and Virginia Ogden, Dr. and

Mrs. A. T. Post, Dr. and Mrs. C. C. Cofferdoffer, Dr. and Mrs. R. S. Cofferdoffer.

Monongalia County Guests—Dr. and Mrs. R. Coale Price, Dr. A. E. Smith, Edgar Smith, Dr. and Mrs. W. A. Smith, Dr. and Mrs. B. H. Edmondson, Dr. and Mrs. C. B. Wylie, Miss McBee, Dr. W. C. Moser, Dr. and Mrs. B. M. Stout, Dr. and Mrs. C. F. Boyers, Dr. R. W. Fisher, Dr. and Mrs. E. B. Tucker, Dr. and Mrs. W. H. Howell, Dr. and Mrs. H. V. King, Dr. and Mrs. J. N. Simpson, Dr. and Mrs. S. J. Morris, Dr. and Mrs. J. P. Lilly, Dr. and Mrs. B. C. John, Dr. C. H. Maxwell and Mrs. Palmer.

Marion County Guests—Dr. and Mrs. C. W. Waddell, Dr. and Mrs. E. P. Smith, Dr. and Mrs. G. H. Traugh, Dr. and Mrs. L. B. Boyers, Dr. and Mrs. J. C. Collins, Dr. and Mrs. H. L. Horton, Dr. and Mrs. L. D. Norris, Dr. and Mrs. P. F. Priolean, Dr. and Mrs. L. C. Davis, Dr. and Mrs. K. Y. Swisher, Dr. and Mrs. H. L. Criss, Dr. and Mrs. C. M. Ramage, Dr. and Mrs. C. L. Parks, Dr. and Mrs. G. R. Miller, Miss Leathem, Miss Hogen, Dr. C. O. Henry, Dr. W. F. Boyers, Naomi Boyers, Dr. C. J. Coster, Mrs. Perkins, Dr. L. N. Yost, Miss Ann Yost, Dr. H. R. Johnson, Dr. A. L. Peters, Dr. J. E. Offner, Dr. W. J. Leahy, Miss Downs, Pauline Jamison, Mrs. Dora Jamison, Mrs Cook, Miss Hill, Mrs. Sterling, Dr. and Mrs. Carl Andre, Dr. and Mrs. J. R. Tuckwiller, Dr. and Mrs. H. S. Keister, Dr. and Mrs. L. D. Howard, Dr. and Mrs. Joe Yost, Dr. and Mrs. G. V. Morgan, Dr. and Mrs. E. W. Howard, Dr. and Mrs. A. J. St. Lawrence, Dr. and Mrs. L. W. Coogle, Dr. and Mrs. E. W. Strickler, Dr. and Mrs. C. L. Holland, Dr. and Mrs. J. M. Troch, Dr. and Mrs. H. H. Carr and Dr. and Mrs. J. B. Clinton.

—G. H. Traugh, Secretary

One of the prettiest home wedding of mid-summer was that of Miss Thelma Dickerson, of Barboursville and Dr. A. L. Amick, of Charleston, W. Va., which took place at the home of the bride's parents, Mr. and Mrs. H. J. Dickerson, of Pea Ridge Road. Rev. O. F. Williams, pastor of the First M. E. church of Charleston, reading the ceremony.

The bride is a graduate of Marshall College and since finishing her education has lived in Charleston where she has a host of friends. The groom is the son of Mrs. James Amick and is one of the best known physicians and surgeons in Charleston. Following the ceremony a wedding breakfast was served after which Dr. and Mrs. Amick left for a wedding trip to be spent at White Sulphur Springs and points in the east, and upon their return will make their home in Charleston.

Dr. A. B. York, who recently graduated from the University of Cincinnati with the degrees of B. S. and M. D., has opened offices in Huntington at 522 Fourteenth street, West, for the general practice of medicine.

Dr. York, whose family have resided in Huntington for a number of years, is a graduate of Marshall College, class of 1918. His family were pioneers in Wayne county and among the best known people of the Big Sandy valley.

During the year of 1924 Dr. York was resident physician in the Jewish hospital , in Cincinnati and the experience gained there has done much

in preparing him for a successful practice.

Dr. William Pinkey Bryan, prominent physician of 613 Buffington street, Guyandotte, died at the Chesapeake and Ohio hospital September 17, of heart trouble following a relapse from pneumonia. He was 79 years old.

Born in Union district, Cabell county, July 10, 1846, a member of a prominent Cabell county family, Dr. Bryan had practiced medicine for over fifty years in West Virginia. He was a member of the Southern Methodist church, Lawrence Chapel.

Dr. and Mrs. J. E. Rader and son, Clyde, of Huntington, attended the Rader family reunion at Summersville, Nicholas county. Dr. Rader, now the head of the Health Department of the city reports spending an enjoyable week's vacation at his old home.

The many friends of Dr. Charles S. Hoffman, of Keyser will be grieved to learn of his sudden bereavement in the death of his wife, Mrs. Annie M. Hoffman on Friday the twenty-eighth of August.

To our dear friend, Dr. Hoffman, and his children we extend our deep and sincere sympathy in the loss of their beloved wife and mother.

Dr. Jas. R. Bloss, Huntington, attended the annual meeting of the Association of American Obstetricians, Gynecologists and Abdominal Surgeons at Hot Springs, Va., September 16 to 18.

Dr. Baber, Huntington, is taking post-graduate work in Gastro-Enterology in the Clinics at Johns Hopkins and the University of Maryland under Prof. Hemmeter.

Charleston, W. Va.,—Announcement of the removal of all long detours on the Midland Trail, features the September report of the State Road Commission. By using the old road at two places, for 3,000 feet and three miles, respectively, the Midland Trail is now open all the way from the Kentucky line at Kenova to White Sulphur, a distance of 179 miles. Construction making possible the elimination of the detour between Ravenseye and Rainelle, and the one from east of Crawley via Meadow Bluff, Smoot, Blue Sulphur and Asbury, was completed recently.

At a later date, it will be necessary to close the road between Cliftonville and Alta for a period of three or four days. Due notice will be given. The two sections of old road mentioned above are passable and in fair condition. At Ansted, construction is in progress on the overhead crossing approach, but this does not interfere with traffic. Rapid progress is being made on Gauley Bridge, where the ferry is still in use.

It is also announced in the report, that State Route No. 21 between Shady Springs and Hinton, will be closed for paving the coming week. It will be possible to detour from below Shady Springs over Mount View Road to Jumping Branch, then over Madam's Creek Road to Hinton, but the Madam's Creek part of the route is in very bad condition, dangerous in wet weather, and is not recommended. It is recommended that traffic for Hinton, Alderson and intermediate points, use the Midland Trail to Crawley, thence via Smoot

and Blue Sulphur, connecting with Route 21 at Alderson. Through east and west traffic should use the Midland Trail.

Route No. 14, a link in the north and south combination through route, has been closed between Elk View and Clendenin, and between Spencer and Elizabeth. Dirt road detours are available, but for through traffic the route recommended is via Guyandotte, Glenwood, ferry to Ohio side, thence through Gallipolis, Pomeroy, Athens, Coolville and Belpre.

"Scholarships on the Oliver-Rea Foundation for graduate study in Medicine are available at the New York Post-Graduate Medical School and Hospital. Inquiries should be addressed to the Dean, 301 East Twentieth Street, New York City."

PHYSICIANS HOLD BARBECUE

Madison, W. Va., Sept. 22.—More than 125 physicians of Kanawha, Logan and Boone counties gathered here today for the first annual get-together meeting and good fellowship session which has ever been held in this county.

The success of the meeting today assured the holding of similar events in the future. The Boone county physicians constitute a section of the Kanawha Valley Medical association and the Charleston doctors are making plans to come here once or twice a year and meet with the local practitioners.

The doctors of Boone county did themselves proud in furnishing entertainment for the outing. The program included a baseball game, the reading of several scientific papers and an immense barbecue.

Of the various events, the barbecue was perhaps the most enjoyable. The meeting was held in the Madison baseball park and the mutton, pork and beef was barbecued on the grounds. The daughters and wives of the physicians assisted in the serving. Mammoth pots of string beans, potatoes, gallon jars of olives, a dozen watermelons ,huge pots of coffee, two quarters of beef, a lamb, a porker, five gallons of ice cream in individual bricks and dozens of loaves of bread were served to the guests.

In addition to the physicians, many of their wives and daughters were entertained.

The baseball contest was an interesting one. Teams representing Kanawha county on the one side, and Logan and Boone on the other, played a six-inning game, Kanawha winning by the score of 6 to 5. The wildness of Dr. George Grissinger, pitcher of the Kanawha team, was responsible for the Logan-Boone team's runs in the second inning. He settled down, however, and pitched an excellent game. Some claimed he had the help of Umpire R. K. Buford, but to offset this advantage, the other team had the aid of the base umpire. Dr. R. H. Dunn had a perfect batting percentage. He was hit by a pitched ball the first time at bat, and the second time up, he drove a home run over the left-field fence.

Dr. H. Lon Carter prominent Madison physician, presided at the meeting of the doctors in the grand stand. He gave a brief address welcoming the visitors and introduced the other speakers.

The first paper was read by Dr. J. R. Shultz, who discussed the workings of the professional relationship committee. He indicated that the as-

sociation is making plans for an educational campaign which will soon be started in the newspapers of the state.

Dr. J. B. Lawson of Logan county read an interesting paper on the important features of an acute abdomen. The subject was discussed by Dr. J. E. Cannaday of Charleston and Dr. B. F. Pauley of Jeffrey. They were followed by Dr. Minor of the U. S. veterans' bureau.

The last talk was given by Dr. A. A. Shawkey, who pointed out the importance of the proper food for children. Some children, he said, are given fried potatoes three times a day, and others are fed fried eggs, pork chops and other dangerous food. He declared that there was nothing so beneficial for a baby as mother's milk.

The road from Charleston to Madison is in excellent condition and the doctors made good time in coming here. The stretch from Kanawha City to Marmet has recently been scraped and it was in better shape than it has been in recent months. The rest of the road is graded and makes an interesting drive.

BOOK REVIEWS

Veneral Disease in the American Expeditionary Forces. By Geo. Walker, M.D., late Colonel, Medical Corps, U. S. A. Published by the Medical Standard Book Co., Baltimore, Md. Price $2.50.

This is a most interesting little book of 237 pages, written by a Hopkins man having the true scientific trend and exceptional opportunity for scientific investigation.

I occasionally run across a physician who tells me he reads his medical books with as much sustained interest as he does a popular novel, literally reads them through. At such times I am either overcome by a sense of inferiority or am spared this by a saving sense of humor and look on him as a member of the very numerous Ananias family. I have to confess that with two exceptions I have never yet read a medical book entirely through; Cathell's The Physician Himself and Dr. Walker's book.

After the return to America of Col. Hugh Young and Col. Edward Keyes the urological department was under the charge of Col. Walker until disbanded.

The time of Dr. Walker's service no doubt was that most favorable for an exhaustive study of this problem, one which no doubt was absent during the excitement attending the earlier days of the war.

The purpose in writing this book is well stated in the preface: "The object of this book is to record the experience of the American Expeditionary Forces in control of venereal disease. It is intended to show the methods which really proved effective and those which were found to be futile."

The facts as set forth in this book were not gained by hearsay, by sitting idly in an office chair and taking at face value reports submitted by interested parties. Rather by personal efforts and investigations that seemed at times to savor of those of a prosecuting attorney's office.

To correctly understand why there was so much venereal disease in our armies one must become acquainted with local conditions, must realize the temptations to which our soldiers were exposed. Unless presented in

detail this would be very hard for those of us who have never lived in France to understand.

The efforts of the American urological department were handicaped by the indifference and actual opposition of the French government. The French after a purely perfunctory examination licensed prostitutes by the thousands and insisted that they be housed near the American forces, alleging, among other reasons, that if this was not done their decent women would not be safe.

When our army put these houses of prostitution "out of bounds" as was to be expected, a cry was raised. The French government took it up and by means of an elaborate document proposed to improve conditions. This document set forth in detail the duties of the Madames, the kind of compulsory prophylaxis to be employed after each copulation etc. This document bore no less a signature than that of Clemenceau. All of which proves to my mind that a very great statesman can be made from a very poor physician. Conferences between the French and Americans were frequent but amounted to but little, the French seemingly to be utterly unable to comprehend the American view point. Whether the French were trying to put over a bluff, merely "stalling," trying to "save their faces" or were the victims of politics I know not.

Certainly one is amazed when reading of the farcial inspections, so called examinations which the French prostitutes underwent before getting their card. Dr. Walker tells us that he saw 59 postitutes examined in 60 minutes, that an unsterilized speculum was thrust into 20 women, that only the grosest lesions could have been discovered and that only about 25 per cent of the prostitutes got as much as this.

"It was truly a doleful spectacle to see these women in line, waiting to mount an examination table for a farcial inspection. It made one fairly shudder to know that representatives of the French government were giving bills of physical soundness to women who were fairly eaten up with disease-permeated through and through with gonorrhoea and syphilis."

After this farce they were given a card declaring them to be "clean." While the leper of old was compelled to stand aside and cry out "unclean, unclean" the French prostitute is allowed by law to declare herself "clean." If support was lacking from the French it was, happily, more than offset by General Pershing's attitude. Dr. Walker declares Pershings support to have been in every way most sincere. Unhappily this was not always true of his subordinates, of the lesser lights.

As an evidence of the thoroughness of Dr. Walker's work. I note that a study was made of 3069 cases showing percentage of disease, number of men intoxicated, where girl was met, where girl was taken, time of day, length of time with girl, amount paid to girl.

The number of sex contacts was almost unbelievable. An authentic record proved that in one house one girl served 43 men in 24 hours, another 45; another 57. During a period of ten days at St. Nazaire, an official French report stated that 60 women in four houses of prostitution served 15,000 Americans, 25 men per day per woman." Perversion is taken up in detail, a trained

worker was appointed who secured interviews with 2,337 prostitutes, practically all of whom made startling revelations. As the color line was not drawn in France naturally the colored soldier was in his glory and quite naturally suffered in proportion. In some commands as high as 31 per cent were grossly diseased and Walker believes that a microscopic examination would have made it as high as 50 per cent. Truth compels Dr. Walker to declare that not all the "burned" ones were black. At embarkation ports the drag net caught them from Brigadier General down, even chaplains, Red Cross and other welfare workers not escaping.

The various methods of treating venereal disease and the results attained, including the average time required, is taken up in detail and adds a very practical value to the book.

All good physicians must look to prevention first and one can readily see that this phaze of the problem has been given by far the most thought and effort by Dr. Walker. Dr. Walker believes in the prevention of illicit intercourse; believes the act to be neither morally right nor necessary to the maintenance of health; believes in educational measures; believes that the efforts of the clergy of all denominations, the Red Cross, the Y.M.C.A., the Knights of Columbus, the Salvation Army and others were all of immense value but he also believes that approximately 30 to 40 per cent. of men can not be reached by these means.

In other words it is a condition, not a theory that confronts us.

He believes that in adition to all the usual measures being taken for suppression of this disease we should have in the army and navy compulsory prophylaxis and for the public prophylactic stations, or at least prophylactic packages, where they could be easily procured. These measures he declares if taken within one hour are approximately 100 per cent. effective. "It is no Utopian dream to look forward to the time when venereal disease will be but rarely seen."

Can we educate our American public to see it this way?

In my opinion this book is a standard and will so continue for years to come.

A. P. Butt, Elkins,W.Va.

REVIEW OF "ARROWSMITH" BY SINCLAIR LEWIS

We have had "Arrowsmith" for several months in our possession, but for one reason or another did not read it,—one of the most potent reasons being the acrimony with which doctors of medicine every where assailed it,—some of our colleagues being in for suppressing it as well as its author. Being on a short vacation we decided to "down it," like a youngster with the celebrated procedure known the world over of "swallowing the castor oil all in one big gulp." Well we did it, and the result is anything but what we expected. To us Lewis is a combination of George Ade and Emile Zola. The same gift for slangy penetration of the so called everyday American the one had and the almost wearisome painstaking penchant for detail the other had. When you get through a long stretch of "Arrowsmith" you are just tired,—for of course a great deal of "Arrowsmith" is nothing but a tedious recital of well known in-

cidents to any well informed physician. You wonder how he wrote it even if he did have Dr. Paul H. DeKruif "planning of the Fable itself" with him. Imagine yourself writing a medical story if you were not a doctor, by just such help,—however good the help might be. Laying all criticism aside, it must have been a jolly performance for the two of them.

It is really a duty for every doctor to read "Arrowsmith" now that our main duty seems to be to acquaint the Public with what we mean to do for them in the near future,—for Sinclair Lewis has anticipated us, and not always to our advantage,—and in a book too that has been one of the "six best sellers" ever since it was published. On page 34 are two sentences which are key notes to the character of the book, one is when part of the class in the Medical College says "Urinalysis and Blood tests are all the lab stuff we need to know"—the other the now well known paragraph—"Take one half c·c. of the culture. There are two kinds of M. D.'s,—those to whom c.c means cubic centimeter, and those to whom it means compound cathartic. The second are the most prosperous."

This paragraph,—as before said now a famous one,—is a sample of the conclusion often drawn. As you know and we know,—IT IS NOT SO. The statement may hold as to actual money made in comparing medical men who work in laboratories and those who work in practice outside, but in net balances the cubic centimeter wins out the country over. Any laboratory man we know of (we are not now talking about technicians) makes more money net than those who are in the main relying on compound cathartics (for we take it he means the general practitioner).

The Anti-vivisectionist may extract some comfort from the book,—just where we cannot see because the last chapters of the book,—the plague in the West Indies,—justifies all experimentation.

On page 35 Gottlieb says "derife from it the calmness of laboratory skill." Many of the laboratory men we have met were anything but calm, and yet the statement is correct. Again Gottlieb says,—"You have craftmanship. Oh there is an art i nScience for a FEW. You Americans, so many of you—ALL FULL WITH IDEAS but you ARE IMPATIENT WITH THE BEAUTIFUL DULNESS OF LONG LABORS." We believe this is absolutely right, and is the only thing in the world that accounts for the many European discoveries· The idea hits us personally. We would never have the courage to give up "our lives" for a given investigation,—more so now when we ponder that perhaps after doing it and even finding a cure for something like cancer, a fellow like Palmer could come along and make a more lasting impression by having your great toe as a basis for manipulation thereby curing all existing maladies, cancer no doubt included.

"Arrowsmith" is nothing but a novel written around an American trying to square this problem of being an American Doctor who had the courage to try and follow this "beautiful dullness." He weighed himself down with about every mill stone that it is possible to find,—including the well known one of get-

ting married early. Yet he was married to one of the best women appearing in contemporary American Fiction. Only a medical man can appreciate Leora, her long hours of being neglected and forgotten, —yet to ultimately STICK TO THE END.

Every review we have read has talked about the futility of Arrowsmith's life. We can't see it. No doctor looks for finality. It never occurs anywhere along the line. To me Arrowsmith with all his many weaknesses,—his blustering lack of sympathy,—his inability to be a mixer, his absolute lack of tact and judgment,—won out in the end. Picture the other professions if you will going through the same battles,—take your clergyman, your lawyer,—your business man placed in all the different situations of Arrowsmith. Well, they would never have lived through it, that is all. He faced "Main Street' out West in a small town, — faced mediocrity. Took a drink, retained his idea— and passed on. Faced politics and The Flapper in a Purity Disguise in the City of Nautilus. Here he also faced the so called Fast Set, AND THE CLUBS AND MOVEMENTS. We are one who thinks there are too many Clubs and Movements. We shall never forget Pickerbaugh. He no doubt makes America what it is today but for us he is a stumbling block to real progress. Blindly and blunderingly he cuts loose here,— with a few drinks,—but he still has the "beautiful dullness" in his heart. Next he tries the "Clinic" idea. The real uselfulness of the Clinic has had no real trial as yet. But manifestly it can hardly be the resting place of an investigator who desires to be free. We have read of the acid criticism of the clinic idea in the book. We found very little of it. Arrowsmith passes on to the "Foundation Idea" and here the main battle rages which we think should be read by every physician. No doubt what goes on here is just as overdrawn and just as much matter of exaggeration as what appears elsewhere. But it shows that medical investigation should go on in a place financed by the Profession itself, like the Committee on Medical Reform in the A. M. A., although we well recognize Medical Politics could ruin this too.

Here in New York we find Martin doing his best work and subtly Lewis illuminates the hard work, the long hours investigators put in trying to find out things to help humanity better than anyone else has so far done it. Picture any other profession—except civil engineering, putting in any such hours. Of course investigators of all kinds spend long hours, but a money consideration is ahead of them all.

Then we go with him to the plague on the islands. Here the medical profession is glorified — Sondelius on th eon hand—Martin on the other. Here the question of whether a few human beings should be sacrificed for the good of the whole is beautifully worked out. Here Leora dies, "The best little sport" that ever lived. She is a character that will ever throw honor on that patient woman—the doctor's wife. Her death brought tears to our eyes, as did also that of Sondelius. Martin Arrowsmith comes back—is thwarted and disappointed at every turn and then finally makes the well known "rich mar-

riage." A doctor who is not successful particularly throws the "rich marriage idea" at one who has perhaps done it. Joyce Tanyon in her attitude toward Martin shows that any doctor who marries for wealth alone has tied another mill stone around his neck, and if he succeeds has got to rise above it. Joyce merely serves to show how great Leora was. We find a lawyer here glad to take Martin's place as a professional "Lounge Lizard" and cake eater after she obtains her divorce—and where my friends is the so-called drunken failure Arrowsmith at the end of the book—why, up in a shack in the mountains with another so-called failure—still working for his ideal. It brings old Ibsen's brand back to us, as well as his play the Enemy of the People. They say Arrowsmith drank too much. Not according to the standards of what we see going on about us everywhere. Even high school boys and girls seem to now and then equal Arrowsmith's capacity and he often worked at high pressure with many blinding perplexities. A good many medical pinheads appear in the book—but they all do their fair share of work and we'll bet at that they are not as "pinheaded" as the lawyers and business men with whom they have to deal.

As to the medical college which appears in the book. There is a whole lot of truth in the facts there presented. We've heard men out of school sizing up even their own colleges as having too much politics and not enough straightforward medicine.

Angus Duer is known to all doctors and the zealot Rev. Ira Hinkley has a glorious death as has many another much abused medical missionary. The warfare between Dad Silva and Gottlieb is an age old one. We all know it is going on. We hope it always will. We have our doubts if anyone ever suffers much from it. Certainly in the main the death rate is not elevated by it. It makes for progress. Painters and other artists recognize it too as the fight between the liberal arts and the so-called "Ideal Art." Gottlieb is the John the Baptist for Silva, and there the matter will always rest.

Irrespective of what Sinclair Lewis wrote his novel for—the net result is again to the medical profession. No one ever knew until now what a long grind a medical course is. No one ever knew so well until now how much hand shaking and log rolling having no connection with his work a doctor had to do to succeed. No one so well realizes the difference between a pussy-footer and a health officer who means business until Pickerbaugh was elected to Congress. No one knew how the big drug houses can work the game to their own advantage until Gottlieb went to Pittsburgh. No one knew what a dangerous calling real work in a laboratory was or is.

So, Mr. Sinclair Lewis, whatever your intentions were you have glorified the American doctor. We hope you meant to. If you did not —and meant to caricature them— you failed. More good will occur to them in the long run than from any one we've recently seen.

Doctors, read "Arrowsmith" — it will do you good.

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THE CONSERVATIVE TREND IN GYNECOLOGY

By P. BROOKE BLAND, M. D., Philadelphia, Pa.

Paper Read before the Fifty-eighth Annual Meeting of the W. Va., State Medical Association at Bluefield, W. Va. June, 1925.

Within the brief span of ten years, gynecology has passed from a radical surgical specialty to one that is almost ultra-conservative.

The end of the conservative wave is not yet in sight. It is destined to broaden and ultimately will embrace certain pelvic lesions which are still looked upon as surgical.

Ten years ago, or even less, certain pelvic diseases were regarded as almost wholly surgical. In this category fell the acute pelvic infections, infected abortions, uterine displacements, uterine myomas and uterine carcinoma. To these affections, operative therapy was routinely applied.

Time and methods have changed. The treatment formerly is vogue for the conditions named would not meet with sound therapeutic approval today.

In recent years, all departments of science have made phenomenal progress, and it is clear to all that the Science of Medicine has kept quite abreast of scientific progress in general.

Lynch says: "The advance made during the past forty years is the greatest in all Medical history, and completely outweighs all the discoveries and inventions that had been made in the 2350 years, separating twentieth century medicine from that of Hippocrates."

E. E. Montgomery, in a recent paper read before the Phladelphia County Medical Society, stated that greater progress had been made during the last half century than during all the preceding centuries combined.

In no department of Medicine has there been greater progress than in

Gynecology, which has advanced not because of radicalism, but because of conservatism. Progress has been so remarkable along conservative lines that even during the past decade, radical operative gynecology has decreased at least twenty-five per cent. Despite the teaching that it is dangerous to deal in prophecy, I believe that, during the next decade, operative gynecology will decrease to such an extent that it will cease to be the alluring surgical specialty it has been in the past.

Indeed, it is quite probable that only a few pelvic conditions will call for surgical therapy, for example, complete uterine prolapse, obstetric casualties in general, and large pelvic neoplasms. It is not beyond hope that even many of these, especially uterine growths, will rarely require surgery, because they will be early discovered and successfully treated by radiation before attaining surgical proportions. Gross obstetric conditions will be largely prevented by the practice of better obstetrics, "a consummation devoutly to be wished." The only lesions remaining to fall in the category of surgery will be the neoplastic diseases of the ovaries.

It is obvious that in no Department of Medicine is conservative therapy more important than in gynecology, a specialty dealing with organs fundamentally concerned in the propagation of human life. Gynecology has navigated its tempestuous current of ultra-radicalism with its all too frequent "tacking" of needless and sacrificial surgery. During the past two decades, the rudder has been progressively and irresistibly turning toward the side of conservatism. Many conditions heretofore regarded as surgical are now treated successfully by simple conservative means.

Victor Bonney states that Gynecology at the end of the last century, when viewed in the light of today, appears colored with a mixture of timidity and ruthlessness. He refers to this period as the time of savage surgery, though in so doing he does not intend to cast aspersion on the many able and conscientious men then practicing it. They acted, he says, according to their light and did their best at a time when the art was still groping in the dark.

To most of us, it is difficult to comprehend the attitude of many of our eminent predecessors regarding affections of the dominating organs of genital function, namely, the ovaries. The almost universal custom of excising these structures on the slightest pretext, a practice open to censure and still too frequently followed, is fortunately, no longer looked upon as sound surgical philosophy. In former times, and even to a certain extent today, insignificant lesions of the ovaries, for example, the omnipresent simple follicular cysts, were regarded as indications for excision. Indeed, even indefinite right or left pelvic pain was and sometimes still is ascribed to ovarian disease, even when palpable pelvic signs are absent. Pain, except in acute lesions or complicated neoplasms, is an exceedingly rare symptom of ovarian disorder.

Probably in no organ of the body is more discriminating judgment required than in ovarian therapy. I am persuaded that the interests of one's patients are best served by leaving rather than by excising organs so influential in initiating and maintaining genital function, to say

nothing of the vital role these, combined with other members of the endocrine group, play systemically. It is well said: "that the indiscriminate application of a ligature, followed by the snip of the scissors may add ten, twenty or thirty years to a woman's age." Personally, I cannot subscribe to the teaching that the removal of the ovaries occasions in certain individuals no profound local functional derangement and widespread psychic imbalance.

If we accept the teaching that the ovaries with their secretion are important constituents of the endocrine chain and through them vital processes, including the female characteristics, are initiated and sustained, their indiscriminate removal, manifestly becomes a question of some magnitude.

If these organs, as most of us believe, are fundamentally important in the body economy, it is obvious that their removal, without definite indication is fundamentally wrong. At any period of their functional activity or, in other words, between the age of fifteen and forty, unless grossly diseased, their excision is not in accord with logical surgical thought. The later in life removal is performed the less reprehensible the procedure. The earlier in life removal is performed, the more violent the systemic response and the more profound the local alteration.

Bonney, to whom I have already referred, says: "The ovaries should not be removed unless their retention means certain danger to life and health, and never for simple operative reasons." Total ablation of the pelvic organs simply to make an operation easier, he regards, as wholly wrong. This practice he compares to calling a plumber to repair a damaged pipe, who proceeds to clear away the whole plumbing system on the assumption that the householder will never need a bath.

The ovaries, formerly so frequently attacked and often needlessly sacrificed, were the first to attract attention to the possibilities of conservative effort. This naturally led to the practice of partial excision and further to the demonstration that portions of healthy ovarian tissue could successfully be transplanted in different parts of the pelvis or elsewhere with continuation at least of partial function.

Gynecology, as a specialty, has largely passed through its long period of unnecessary surgery, and, while there still is room for improvement, its dark chapter of ultra-radicalism has been sealed.

This is also true of most of the specialties, but there are still certain organs crying: "What shall I do to be saved?" This is especially true of the two inoffensive lymphoid masses anchored between the faucial pillars, and equally true of the guiltless "Chronic Appendix." This phase of appendiceal surgery has been considered by Eastman, though he does not regard the condition a "myth." He refers to an author who divided appendicitis in two types: "Acute appendicitis and appendicitis for revenue only." The statement regarding the tonsils and chronic appendix is not used in a cynical sense, but simply to emphasize the point that there are cavities calling for conservative work, apart from the female pelvis. Above all things, I wish to avoid even the spirit of criticism of my brethren in the other specialties. I, unlike Dr. Samuel Johnson, when

asked by Boswell what he thought of the Irish people, replied: "They are a very fair people, but they never speak well of one another."

In this introduction, I have endeavored briefly to portray the trend of conservatism in a specialty long held as radical, so much so that for a woman to place herself in the hands of a gynecologist was regarded as equivalent to the loss of some or all of her reproductive organs.

It may not be amiss to say that all or nearly all pelvic surgeons on more occasions than one have been granted permission to operate only after the exaction of a promise that every effort would be made to conserve rather than destroy tissue. Indeed, in many instances, this is the outstanding deterrent against operation today.

The methods pursued by the gynecologist of 1925 would be almost incomprehensible to the surgeon of 1900. As a noteworthy example of conservative work, I beg to direct attention to the acute pelvic infections. It is quite within the limits of safety to claim that by the modern method of simple expectant therapy nearly all acute pelvic inflammations will recover symptomatically, and a certain percentage functionally.

Formerly gonorrheal infection of the Fallopian tubes, for instance, was thought to cause hopeless functional damage, but even this theory no longer prevails. Gonorrhea is the most lamentable, the most destructive acute disease affecting womanhood, but, like syphilis, it apparently is becoming somewhat attenuated. It is not as destructive as it was in former times, and this may account to a certain degree for its more favorable response to simple measures. In most cases, however, it leaves its mark of structural alteration. When gonorrhea is given as much attention by our health authorities as German measles, fifty per cent or more of the destructive pelvic infections will disappear.

It now remains to speak of certain pelvic conditions, outlining in these the progress of conservative methods and the results obtained thereby.

PELVIC INFLAMMATION

Because of their frequency as well as the splendid results obtained by conservative means, the acute pelvic infections will be considered first. It seems almost superfluous to devote consideration to the trend of conservative treatment in these conditions. It is common knowledge that the methods of treatment in vogue a decade ago, are today obsolescent and considered wholly illogical. Ten years ago, acute pelvic inflammation was looked upon as a surgical emergency. It was treated as such with a corresponding high morbidity and a definite mortality, to say nothing of the long period of semi-invalidism which inevitably followed. The most noteworthy progress in conservative work has been accomplished in this condition, and even the physician in the most remote hamlet is familiar with the plan of therapy adopted and followed today. In this connection, the value of conservatism is exemplified in the following clinical histories.

CASE I.

Mrs. J.T.R., age 25, para 1. Referred by Dr. J. C. Flynn, of Philadelphia, Pa.

The patient was married at the age of twenty-three. She was delivered normally of a female child one year

subsequently. On February 2, 1924, she was admitted to the gynecological department of the St. Joseph's Hospital, suffering with acute gonorrheal infection of the pelvis. The trouble was contracted from her husband, and she was confined to bed for ten days prior to her admission.

On the day of admission, she appeared extremely ill. Her temperature registered 100; her pulse 110; and her respirations 24. The leucocyte count was 18,800.

Prior to admission, she was examined by an eminent surgeon, and an immediate operation was advised. This, both the patient and her parents refused.

On entering the hospital, examination disclosed gonococci in the vaginal smears, and the pelvic cavity was densely filled with exudate. The characteristic inflammatory fixation was encountered. Under an expectant plan of medical treatment, the active symptoms subsided, and the pelvic exudate gradually disappeared. The patient left the hospital on March 22, 1924, twenty-five days after admission. At this time, she was symptomatically and palpably well. She again came under observation on September 8, 1924. She stated that her last menstrual period had occurred on June 25, 1924, three months previously. Examination disclosed all the local and systemic signs of an early pregnancy. The patient was seen regularly thereafter, and her gestation ran an uneventful course. She was delivered normally of a male child on April 10, 1925. Her lying-in period was normal in every way. Both mother and child left the hospital in good condition two weeks after delivery.

CASE II.

Referred by Dr. John Sherbon, of Pottstown, Pa.

On April 15, 1921, I was called to operate on the patient for "acute appendicitis." I had not seen the patient prior to this time, and a pelvic examination made by the family physician was said to be negative. Accordingly a right rectus incision was made. The appendix was delivered, but it was not grossly diseased.

Exploration of the pelvis revealed both tubes swollen, turgid and injected. Compression of the tubal walls was followed by the discharge of thick, yellowish, green pus from their abdominal ostia. In this, the characteristic diplococci were found. The walls of the tubes were thoroughly "milked" and an attempt was made to sterilize their canals by instilling tincture of iodine (three and one-half per cent.) After a careful toilet of the pelvic cavity, both tubes with their correlated ovaries were dropped into their respective positions.

The appendix was then removed, and the abdominal incision was closed. The recovery of the patient was normal and she was discharged from the hospital twenty days after the operation. When examined on September 20, 1924, she complained of right-sided pelvic pain. This, the patient stated, became intensified during menstruation.

Pelvic examination revealed the uterus in good position and freely movable. There was no feelable enlargement of the ovaries or tubes.

The patient was exceedingly nervous and the pain was, therefore, ascribed to neurotic origin and not to organic disease. Failing to respond to simple medical measures, the pa-

tient consulted another pelvic surgeon, who, by some stretch of imagination, claimed he found an orange-sized mass in the pelvis.

The patient was advised that early operation was necessary. I was then importuned by the family physician to do the work. This was done very reluctantly. On April 4, 1925, a medial abdominal incision was made. The ovaries and tubes, except for a few delicate adhesions about the right side, were absolutely normal. There was no distortion and the canals were clearly patent.

CASE III.

Mrs. R. L. C., age 35, Para 4. Referred by Dr. R. Francis Taylor, Philadelphia, Pa.

The patient was admitted to the Jefferson Medical College Hospital on October 15, 1915, suffering with marital gonorrhea.

On pelvic examination, bilateral masses were found. Fixation was marked.

The acute symptoms having subsided, operation was performed on October 18, 1915. A median abdominal incision was made. The omentum and intestines were isolated with warm moist packs, and both appendages were delivered. The inflammatory process was more marked on the right side, and in this, the appendix was included. This organ, with the right ovary and tube, was removed.

The left tubal ostium was patent and from this, thick greenish pus was expressed. The canal was thoroughly "milked" and sterilization was attempted by the instillation of a twenty-five per cent solution of Argyrol. After cleansing carefully the pelvic cavity, the tube with its ovary was reposited. The post-operative recovery was uninterrupted, and the patient has since given birth to four healthy female children, the first on July 11, 1919; the second, December 24, 1920; the third on March 13, 1922, and the fourth on March 12, 1924. The four labors were normal, and the post-partal recoveries were uncomplicated.

The recital of the foregoing case records are not isolated instances of the value of conservative work. They are simply presented to emphasize its importance and portray its value, both from the aspect of symptomatic cure and functional restoration.

The drift of conservation in pelvic infection is further disclosed by a perusal of the current literature, both of this country and Europe.

At the present time, judgment regarding the conservative plan is not generally adverse, but almost wholly favorable. G. J. Newall, in writing on the subject, states: "With but few exceptions, pelvic conditions are no longer classified in accordance with the extent of their pathology, but more consideration is directed to a general study of the patient, especially with respect to the degree of incapacity and discomfort experienced." In acute infections, he states: "Only in extreme instances should an abdominal operation be performed."

T. E. Sellers, in discussing the treatment of pelvic infections, reviews a series of 3,667 gynecological patients treated in the Charity Hospital, New Orleans, during the years, 1921 and 1922, respectively. One thousand two hundred and seven, or about one-third of this number, were classified with the pelvic inflammatory diseases. From this study, the author made the following deductions:

1. Avoid abdominal section, if possible, by supplanting operation with rest and, in certain cases, vaginal drainage.

2. Conserve both the ovary and the tube for reproductive purposes whenever operation becomes inevitable.

3. In all cases, save as much ovarian tissue as possible for the sake of its internal secretion.

This author affirms that a large percentage of patients recover by simple rest treatment alone. Operation, he says, should never be undertaken until the temperature remains normal for two weeks or longer. The leucocyte count should continue normal and exacerbation should not be occasioned by simple vaginal examination.

H. R. Schmidt believes that laparotomy generally is contradicted in acute inflammatory disease of the pelvis. Expectant medical measures, he claims, are completely curative in more than fifty per cent of the cases. Of one thousand eight hundred and forty (1840) cases thus treated at the Bonn Clinic between 1911 and 1922, only one hundred and sixty-two (162) or 8.8 per cent were operated upon, and even, in this number, conservative surgery was followed in one hundred and twenty (120) and radicalism in forty-two (42) only. In this clinic, operation for adnexitis is not adopted until resolution treatment fails. Surgery, furthermore, is never permitted if fever be present, nor is it generally allowed until three months have elapsed after the initiation of the acute stage. Schmidt's figures show that the mortality in the conservative plan is lower than in the radical method, being only 1.8 per cent. Schmidt also studied 3,559 collected cases with regard to the relative mortality of the two plans. The death rate following conservative therapy was 4.2 per cent and, following radicalism, it ranged from 2 to 21.4 per cent.

G. P. Laroque states that nearly all patients with acute pelvic inflammation will recover almost completely without operation.

John O. Polak sums up the treatment of acute adnexitis is unmistakable language when he says: "No case of acute salpingitis needs operation." The fundamentals in therapy are: "Rest; Posture: Opium; Inhibited Peristalsis, and Time."

Lynch claims that surgery is now indicated only for the residues of pelvic infection, and rarely, if ever, during the acute stage.

UTERINE DISPLACEMENTS

All types of displacement of the uterus have formed a fertile field of activity for the gynecologist. *Probably no conditions in the human body have been so falsely accused of creating symptoms, both systemic and local, as innocent uterine displacements.*

For no other conditions have such manifold operations been designed and performed with almost uniform failure in affording symptomatic relief.

The uterine body is a freely movable structure and so long as it is normal in size and freely movable it may be as normal posteriorly as it is anteriorly. The teaching that the uterus is held in position by a combination of the pelvic ligaments is not physically nor anatomically true. Except during pregnancy, the pelvic ligaments do not act as stays or supports, as we have been taught so long. I have never observed, except in preg-

nancy, the round and associated ligaments to act other than in a simple passive capacity. Usually the round ligaments are found as two rounded or ribbon-like bands passively traversing the side of the pelvis from the internal abdominal rings to the uterine cornuae. Rarely are they seen in such a condition as to imply that they, in any way, act as a sustaining force of the uterus.

Fothergill states: "Though all the ligamentous supports of the uterus be severed, except the cervico-pelvic muscle bands, the organ will remain in normal position." *To coerce the round ligaments to assume a task which is wholly unnecessary is not in accord with modern surgical anatomy. Too much has been accepted because of custom rather than because of scientific truth.*

T. J. Watkins, in discussing the operative treatment of backward displacements, asserts: "It would seem that the associated pathology rather than the displacement itself is usually responsible for the symptoms described, and that an operation for the simple avowed purpose of correcting the displacement may be extremely difficult to justify, either by reason or by results." Watkins believes that *Backache* so often attributed to uterine displacements is not a very prominent symptom. Chipman refers to the statement of LaRochefoucald, who claims that pain is the greatest liar in the world, and of the painful liars we know, backache is the most perfect Ananias or Sapphira of all. Some one has tritely said that backache may be caused by anything from domestic infelicity to fibroid tumors. Watkins claims that it is more often due to physical and nervous fatigue or arthritis. *"Round ligament operations, he further states, seem to have ceased to be a subject of much general interest."*

Formerly these operations constituted at least ten per cent of the surgical work of the gynecologist. *Today the round ligament procedure in simple uncomplicated retrodisplacements I do not recommend or perform. I rely more on a reconstructive regime, consisting of forced feeding, rest, correction of irregularities of the bowel and bladder, manual reposition and postural means. In many cases, the retroflexion pessary, long regarded as obsolete, I find most helpful.*

Antedisplacements require no treatment at all and the operation of dilatation and curettement for acute anteflexion, I regard pernicious and fatuous. An ill developed anteflexed uterus will remain ill developed and anteflexed forever irrespective of any form of treatment. The only type of displacement which one can place legitimately in the category of a surgical displacement is the large chronically inflamed retro-adherent uterus, or the large pathologic prolapsed uterus. In this class of cases, considerably more surgery than simply shortening the round ligaments or fixing the uterus forward is called for.

The practice of major surgery for the correction of a minor condition is not good surgery and it is well to remember that all forms of surgery exact a definite toll of human life. The round ligament operation has played its part of "Shylock" and taken infinitely more than its pound of flesh.

Arthur D. Bevan has written editorially on the disasters following operations for retroposition of the uterus. This paper appeared recently and it would pay "all who run to read." In this article, Bevan records

two cases of complicating intestinal obstruction and one case of bilateral incarcerated hernia. These three cases came under his observation during the course of four weeks. To these, he adds fifteen or twenty others, which he has encountered in his work. This author aptly describes the true status of displacements in the following language: "Thirty years or more ago, as a young surgeon, I was very skeptical about the local and general symptoms ascribed to retroposition of the uterus. I could not understand how a movable retroposed uterus could excite symptoms any more than a mobile sigmoid which might fall backward or forward, or to the right or left. I soon found that patients, upon whom I operated and brought the uterus forward in the supposed normal position, were only not benefited, but many were made worse by the operation, so I, therefore, early discarded it as unnecessary and illogical." "Looking upon this problem", he says, "as a piece of scientific research, we are in a position today to state that uncomplicated, movable retroposed uteri produce no symptoms and that operative procedures on such cases must emphatically be condemned."

The retroversion problem has been most clearly set forth by Jaschke. In a study of 1,000 cases of retroposition, compared with 1,000 cases of anteposition, Jaschke found that the supposed characteristic symptoms of retroposition: menorrhagia; leukorrhea; backache; dysmenorrhea; constipation; bladder irritation, and sterility occurred just as often in the anterior as they did in the posterior position. This writer, therefore, concludes that an uncomplicated retroposed movable uterus "causes no symptoms of any kind, and no characteristic distress."

Alice Bloomfield confirms the statements already made by asserting; "Retroversion is not a disease in itself and that it never gives rise to definite symptoms."

Numerous operations for retrodisplacements (more than 100) have been devised and next to the procedure of dilatation and curettement, I am not familiar with any that has had less justification and done less good. Already, I have stated that up until ten or fifteen years ago, operations for retrodisplacements constituted at least ten per cent of the operative work of the gynecologist. Today, I am persuaded that the procedure could be decreased to one per cent and all that is needed to witness the consummation of this belief is a righteous surgical conscience. The measure may be used today as an operation of importunity or expediency, but rarely as a matter of right or on organic grounds.

OVARIAN CONSERVATION

I have already mentioned the importance of conserving ovarian tissue. At this time, it would not seem amiss to discuss briefly the subject apart from general pelvic infection. Ovarian infection is usually coincident with tubal disease, so what has been said regarding the treatment of tubal affections applies to ovarian disease as well.

When operation becomes necessary, the outstanding aim of the surgeon should be conservatism. Tissue always should be preserved, if possible, especially in young women.

It is of the utmost importance to direct attention, not only to preservation of tissue, but it is equally es-

sential that a course be adopted to insure adequate nourishment of the tissue retained. The operation of oophorectomy for so called indeterminate hemorrhage, is not in accord with modern therapeutic thought. Probably no operation has served more to bring discredit on the practice of gynecology than this. The procedure, today, would be regarded as almost criminal.

Thaler, in discussing ovarian infections, both from the medical and other conservative measures, states that he has often obtained good results by cuneiform resection, but even this procedure, he claims, must be reserved for very exceptional cases. In my hands fractional radiation has proved sufficient to overcome hemorrhage incited by the so-called hyperfunctionating or hyperplastic ovaries.

A statement should be made with respect to conservative ovraian surgery, especially as exemplified in the operation of transplantation or grafting. This work was started, according to Nicholson, by Knauer, July, 1895, It was first limited to animal experimentation. In this country, the practical application of ovarian grafting as applied to the human was first considered by R. L. Morris, of New York. This author reported twelve cases. Six patients were followed. All menstruated. One patient conceived, but aborted at the third month. There is abundant evidence to show that the menstrual function sometimes continues and even a few isolated instances of conception with full term gestation have been reported.

W. E. Estes, Jr., has performed with his associates a conservative operation on the ovaries in more than 100 patients. In 45 patients, from whom reports were obtained, four or 9 per cent became pregnant subsequently. Two of these were delivered of normal children at term. Two others miscarried at the third month. These two patients, though married for some years, had never been pregnant previous to the operation. In the forty-five patients followed, menstruation became regular in thirty-three or 73.5 per cent. Five or 11.1 percent menstruated irregularly: only 4 or 9 per cent failed to menstruate at all. The operation of Estes is somewhat unique. It consists of suturing the cortical surface of a section of the ovary over the cornual ostium of the tube following salpingectomy.

Raymond Petit devised a somewhat similar procedure. Following a double salpingectomy and a right oophorectomy, a fragment of the remaining ovary with its vascular pedicle was sutured to the left uterine horn. Following operation, the patient menstruated regularly. After an interval of 18 months, she became pregnant and was delivered of a normal child.

As regards conservative ovarian grafting, however, accumulated evidence seems to show that the work is unsatisfactory.

Franklin H. Martin, from a study of articles published from 1917 to 1921, claims that the evidence presented does not sustain the contentions of the earlier writers and that as evidence accumulates the claims set forth for the procedure become less and less substantial.

In concluding this chapter, I can do no better than borrow the words of Chipman, who said: "An ovary or a part of an ovary sufficiently normal to be transplanted is sufficiently normal to be left *in situ*." Finally, conversative surgery of the ovaries

should always aim to leave one whole ovary. When this cannot be done, the alternative of resecting the diseased portion of one organ and leaving a small healthy portion may be elected. This course should be followed for certain reasons:

1. To preserve the child bearing function, if possible.
2. To retain the ovarian secretion.
3. For menstrual and marital reasons.

Conservative surgery of the ovaries is obviously worth while only under certain circumstances. The patient must, of course, be of child-bearing age, and the uterus as well as the ovarian tissue to be retained must be healthy. Finally, I wish to remark that what I have just said must not be construed as a plea for the uncertain, if not spectacular, operation of ovarian grafting. If one decides on the conservation of ovarian tissue, the tissue preferably should be left in its natural environment and not transplanted to a foreign field.

ABORTION

The modern treatment of abortion, whether threatened, inevitable, or incomplete, is essentially conservative. Routine curettement is no longer universally used. The advantages of the conservative plan, both from the standpoint of economics and morbidity as well as mortality have been indisputably established. These I confirmed by a comparative study of a large number of cases under my care in the Jefferson Medical College Hospital. The conservative plan is being adopted more and more, both in this country and abroad.

A study of European literature shows that the expectant plan is indeed world wide. Alglare studied one thousand cases of abortion associated with post-abortive infection. Two of these patients died. The great majority of the patients were discharged well within two weeks after admission. They were all treated along simple expectant lines.

Emil Bovin follows a vigilant expectant plan in the South Stockholm Obstetrical Hospital. This author reports 3,806 cases of abortion treated during the past eleven years. Of this number 1,141 were uncomplicated. The results were uniformly good. Bovin contrasts the results of passive conservative treatment with the active course followed by Halban, of Vienna.

According to Bovin, Halban, who interferes surgically in nearly all cases, had, in ten years, seven cases of uterine puncture combined with perforation of the intestinal canal.

A. Pekonen reports 1,174 cases of abortion. In 330 febrile cases, active treatment was instituted and seven, or 2.1 per cent of the patients died. In forty-eight cases treated expectantly, there were no deaths.

E. Henrod also elects the inactive method in all uncomplicated febrile abortions.

Hillis reports one thousand cases of abortion and from this study, he claims that conservative treatment affords better results than active therapy, especially in febrile cases.

Gordon outlines the results of the conservative plan in 961 cases of abortion. Of the 961 cases treated, 18 died, a mortality of 1.9 per cent.

DILATATION AND CURETTEMENT

When I was asked by your representative to present a paper at this meeting, I selected the subject

under discussion, though at that time, I had no idea it would cover such a wide range of material. There is still much to consider, but I believe that a paper on the conservative trend in gynecology would not be complete without referring to the operation of dilatation and curettement. Indubitably this procedure has been more habitually practiced than any other in gynecological surgery. As regards the operation, I am, personally, not familiar with any procedure that has done so little good and so much harm. It is impossible to compute or even imagine the manifold pelvic infections, both minor and grave, that have resulted from this recourse. It is well known that the operation of dilatation and curettement not infrequently results in sufficient structural damage of the tubes to cause sterility, especially when performed as was the former custom, for post-abortal processes. *The operation is a minor procedure, but it is fraught with potential major complications.*

Infection of an apparently mild type, but of sufficient proportions to induce sterility is its outstanding sequel. It is easy for the observing surgeon, especially for one who zealously compiles case records, to note the frequency of sterility following the post-abortal operation.

Infection of a still graver character, associated with a frank collection in the pouch of Douglas, or gross lesions of the tubes, or the peritoneal cavity in general, while fortunately not common, is by no means rare. Indeed, the operation is pregnant with still more serious complications and occasionally, this simple recourse takes its toll in death.

It is safe to say that nearly all men active in pelvic work have observed this unfortunate catastrophe. The possible dangers of the operation are not recent knowledge. Its potentiality for harm has been cited on numerous occasions. Nearly thirty-five years ago Dr. Howard A. Kelly wrote of its hazards and reported a death from the procedure. Since that time, numerous similar calamities have been recorded, but probably a still larger number have never appeared in our literature. *To some the dilator and curette still hold out alluring bait. Some will not, and some cannot, resist the temptation to bite.*

In addition to the sequelae already mentioned, reference should be made also to the possibility of accidental abortion. How many babies are still unborn as a result of the procedure, only the Master of all knows. Deaths have not only resulted from the illegitimate use of the procedure, but from honest therapeutic work as well. For ten years or more, warnings have been broadcast regarding its danger and futility, but too often both have gone unheeded. Unquestionably, the operation is still being performed to an unjustifiable degree. By men of broad experience, the procedure, from a therapeutic point of view, is regarded as almost obsolete. There are still many men who practice the operation, not, it seems to me, because there are concrete indications for something to do, but because of their overpowering zealousness to do something.

The operation, today, is limited to the occasional removal of retained products of conception, but, in the main, it has lost its therapeutic aspect and now it is looked upon more

as a diagnostic aid. In concluding this phase of my subject, I wish to refer briefly to the operation as applied to that most obstinate pelvic symptom: Dysmenorrhea.

Formerly, for this condition, it was used almost routinely, but now, rarely. It takes unbounded faith to believe that the procedure, either alone or combined with an intrauterine drain, could possibly do any good, except in a suggestive way.

No specific therapy has been found for dysmenorrhea. In most instances, it occurs in young virgin women, who have no pelvic disorder and because they are virgins, could not have pelvic disease if they so desired it. It is common knowledge that most cases recover spontaneously after marriage with or without offspring. This result, in itself, indicates that the symptom, as a rule, is not organic. The birth of offspring is conclusive proof of its functional foundation. If it were organic, conception would not likely take place.

An interesting incident regarding the value of the stem drain will bear reciting. A virgin woman, 25 years of age, suffered for some years with obstinate menstrual pain. All sorts of medication were applied, both systemically and locally. The results were negative. The writer very reluctantly performed a dilatation and curettement, combined with the insertion of a drain. The patient was seen subsequently. Her period had occurred two weeks before, and was entirely painless. Examination revealed the stem free in the vaginal vault. For the relief it was assumed to have afforded, it was not disturbed.

The triumphs of surgery in patients who have no gross pelvic lesions are phenomenal. It is in these that the most brilliant results are sometimes obtained.

John O. Polak sums up the subject of dilatation and curettement in very pertinent language, when he says: "The operation has two purposes: first, the removal of retained products of aseptic incomplete abortion, and second, as a diagnostic means of determining the cause of uterine hemorrhage."

STERILITY

Sterility always has been one of the most trying problems of the gynecologist. With the exception of dysmenorrhea, no symptom has received so much illogical consideration. Too often the condition has been looked upon as a special entity and not as a symptom. Therapeutic measures of all sorts have been empirically directed to the relief of the symptom and not its cause.

Until recent years, it was almost a universal custom to direct attention largely to the woman, due to the erroneous belief that she alone was culpable. In more recent years the male, as the influential factor, is receiving the attention so long deserved and so long deferred. Woman, of course, alone may be responsible, but the biggest factor in marital sterility today is attributed to the male, from a direct, but more especially from an indirect standpoint.

Operative means for the relief of sterility are becoming less frequent.

The oft repeated, harmful as well as futile operations, such, for example, as dilatation and curettement, alone or combined with the stem drain, are becoming less and less popular. In intelligent hands,

no operative therapy is applied or any other form of treatment without determining first the party responsible; in man, by repeated examinations of the seminal secretion; in woman, by determining the patency of the Fallopian tubes, according to the plan of Rubin.

It is also essential before deciding on any plan of treatment, so far as the woman is concerned, to eliminate the possibility of an underlying endocrine factor, such for example, as observed in adiposo genitalis of Froelich. It has been variously estimated that from twelve to sixteen per cent of the barren marriages are due to the male.

Great as has been the progress in the understanding of the symptom, all must recognize that the most noteworthy work lies in its prevention.

Sterility from the aspect of therapeutics is one of the most unsatisfactory conditions the gynecologist is called upon to treat. In the majority of cases, the results are extremely uncertain. This applies to both medical and surgical therapy and especially to conservative tubal surgery. Conservative operations upon the tubes are uniformly unsatisfactory and tubal surgery could fittingly be used synonymously with the word failure. Operative measures on the Fallopian tubes for the correction of sterility, for the reasons named, have, for the most part, been abandoned.

The one glimmering ray of hope must come through the misty pathway of prevention of the most frequent cause of sterility, namely, the control and the eradication of gonorrhea. Except in endocrine dysfunction with genital ill development—a condition dependent on ductless gland imbalance—or inexplicable biological factors, sterility is largely a preventable condition.

CERVICAL LACERATIONS

Lacerations of the cervix are obstetric casualties. Primary repair is prophylactic. Unrepaired lacerations nearly always become complicated by infection, followed by endo-cervicitis or the so-called erosion. Palliation may be afforded by various cauterants and alkaline douches.

The laceration will remain despite any form of palliative treatment. The best plan of therapy for a tear of the cervix, irrespective of its extent or complications, is a conservative one-sided trachelorrhaphy. Occasionally a bilateral trachelorrhaphy may be elected.

Amputation is not a conservative operation. It is an operation of sacrifice and it should rarely, if ever, be performed in the child-bearing woman. Amputation is never reparative, but always destructive, both of structure and function. A unilateral repair will do all correctively that a bilateral operation or amputation will do without the dystocia either in conception, pregnancy or labor, that sometimes follows amputation.

To cite an outstanding instance of irrational cervical amputation, I wish to record the following case history:

Mrs. T. D., age 28. Referred by Dr. Louis Goldstein, Philadelphia, Pa.

The patient was married at the age of eighteen. She had one normal labor at term. At this time, she sustained an extensive cervical tear. For this, an eminent surgeon on November 12, 1918, did a high

amputation. Since that date, the patient has conceived five times and, though exceedingly anxious for children, all five pregnancies ended in abortion between the second and third month. The last abortion occurred on March 28, 1925.

FIBROID TUMORS

Certain types of fibroid tumors, which heretofore fell quite legitimately in the category of surgical diseases, are just as surely legitimately falling in the category of medical diseases.

Certain small inoffensive growths found about the menopausal years are so symptomless and so harmless that they need no therapeutic classification at all, either medical or surgical.

It is obvious to all that less and less are uterine myomas being referred to the surgeon and more and more to the radiologist. The reasons for the changed condition are plain. It has been demonstrated that radiation will do all that one can hope for from surgery without the danger which inevitably attends operation. Apart from the morbidity and mortality that follow operation, radio-therapy provides another worthwhile feature. Operation means hospitalization for a period of from two to three weeks. This, to a patient cared for in the public wards, is an item of some expense to the hospital itself, and to a private patient, the hospital expense today is always an item of some magnitude. While economics should not intrude as a problem with human life at stake, nevertheless, it is a problem from which we cannot escape. It is somewhat curious how quickly a special plan of treatment attracts the attention of the lay mind and radiation for fibroid tumors is no exception to the rule. This form of therapy is universally known, not only to the profession but to the lay people as well. The efficacy of radiation in the treatment of myomas is so familiar to the lay people that many patients exact free discussion of the relative merits of the two methods of treatment before submitting to any therapeutic plan.

I am fully convinced that by radiation ninety-five per cent of uncomplicated mural myomas of average size (not exceeding four inches in their greatest diameter or comparable in size to a foetal head) can be rendered symptomless, reduced greatly in size, and in many instances, made to wholly disappear. Surgery must be regarded as a secondary procedure and be held in reserve: First, for tumors of large or mammoth proportion; second, for submucous growths, and third, for those complicated by adnexal or other intra-abdominal disease. It is manifest, then, that surgery is becoming and will continue to become less and less applicable to uterine fibroids.

The growing popularity of radium is fully justified, not only because radium does all that surgery can do, but does it without morbidity and without mortality, uncontrollable and inevitable events that sometimes follow operation, events that always will follow surgery.

As to the immediate results of radium therapy. I have recently radiated and studied fifty-one consecutive cases. In this series, I can report but one failure. This patient received three 1500 mghr. doses. Despite the applications, the hemorrhage continued. A vaginal hysterectomy

was, therefore, performed. The tumors found were small and of the mural type, although three growths, the dimensions of clay marbles, approached the subendometrial variety.

In concluding the discussion of radium therapy in its application to uterine myomas, I wish to add that what has been said relating to this mode of treatment applies especially to patients approaching the menopausal years. In the child-bearing woman, as a rule, conservative myomectomy takes precedence over radiation.

CHRONIC METRITIS WITH MENORRHAGIA

The statement I have made with respect to radium therapy in uterine myomas with hemorrhage, applies equally to chronic metritis with menorrhagia, the so-called menopausal bleeding. Formerly in these cases radical hysterectomy was necessary. Now it would be absolutely unpardonable to apply any form of treatment save radiation.

CARCINOMA OF THE UTERUS

Cancer of the uterus, except the type arising in the uterine body, irrespective of its stage, has passed wholly from the realm of surgical therapy to that of radiation.

Radiation has proved superior to surgery. It, however, is not a specific. It falls far short of curing all cases, but it will cure infinitely more than surgery.

The ultra-radical operation of hysterectomy carried a notoriously high primary operative death rate, and cure from the procedure in the most favorable cases and in the very best hands, was not obtained in more than ten to twenty-five per cent of the patients so treated. From operation, then, recurrence seems inevitable in 75 to 90 per cent of cases.

By radium, these figures can be reversed and made to read 75 to 90 per cent of cures, and 10 to 25 per cent of failures. In real early cases, even these figures may possibly be reduced one-half or almost completely erased from the mortality record. In moderately early cervical cancer, a certain number of patients can be saved. In late, or moderately late cases, a precentage, though smaller, can be saved.

Furthermore, statistics snow that even in the hopelessly appearing cases (I do not use the term "hopelessly inoperable," for this, in the nomenclature of uterine cancer, is obsolete) a certain number get well. For those that do not recover, radiation is the best palliative measure at our command.

Radium, then, offers some prospect of cure in those cases heretofore inscribed in the doomsday book of palliation. Formerly, surgery was used in strictly operable cases. Radium is used in all with a high percentage of complete cure in early cases, and some hope of cure even in advanced cases. *So long as the cancer is a cervical cancer, radium offers more than an equal chance of permanent cure. When cervical cancer becomes parametrial cancer, it still offers something, but not much, though even in these cases, especially when combined with X-ray, notable results have been reported.*

In this connection, a word of warning should be uttered. One should not expect radium to do the impossible. The element is lethal for cancer cells only at a distance of one inch or a little more. Beyond that distance, it may be inhibitory, but it does not kill. Therefore, when the

disease is a secondary parametrial cancer and not a primary cervical cancer, it is not likely that radium or anything else will act effectively in a curative way, though, as will be pointed out shortly, when combined with low voltage X-ray, cures have been obtained even in wide-spread disease. Radium alone, in advanced cases may hasten the progress of the disease, and, when it fails, it is often unjustly condemned. Radium alone should not be used, then in cervical cancer associated with broad ligament extension, because in most cases it fails. In these cases, it sometimes makes matters worse and it may incite pain if this symptom had not been present before. In addition, it may char the bladder or bowel or both, and as a result, bring discredit not only on the method of treatment, but on the physician who administers it.

Recent statistics published both in Europe and in this country, indicate that radium is legitimately succeeding surgery in the therapy of cervical carcinoma. Figures show that radium is destined to accomplish far more than operation ever did.

Graves, from a series of studies with respect to the relative value of radium and surgery in the operable cases, says: "The results are encouragingly favorable to radium."

The teaching, however, that radium will render border line cases operable should not now be accepted as sound therapeutic wisdom. It is obvious that if it accomplishes so much, operation becomes unnecessary.

Formerly, I followed the plan mentioned, but changed as a result of the following experience.

Mrs. A. M., age 36, Para 2.

Referred by Dr. George Miller, Norristown, Pa.

An ulcerated squamous cell neoplasm widely invaded the cervix. A pre-operative 2400 mghr. dose of radium was applied, and a confirmatory biopsy was done at the same time. Four weeks later, a radical hysterectomy was performed, but no evidence of carcinoma either clinically or microscopically was found.

To portray the successful results obtained by the uses of radium in the treatment of cervical cancer, I beg to cite the experience of some clinicians both in this country and in Europe.

Clark and Block, in a series of 1,539 abdominal operations for cervical cancer, report five year cures in six hundred and eight or 39.5 per cent. From a study of the literature, they claim that radium provides a curability of 43 per cent as against 39.5 per cent of operative cures, even in the hands of the most experienced surgeons.

In 160 operable cases, studied by Bailey and Healey, in which radium was used, a five year cure was obtained in sixty-nine or 43.1 per cent. These investigators also report a five year cure in 9 per cent of inoperable cases.

Heyman reports his personal experience in five hundred and five cases of cervical cancer treated in the Radium Home, Stockholm, Sweden. All the patients were "followed up." In the operable and border line cases, a five year cure was obtained in 40.5 per cent to 58.3 per cent. In the inoperable cases, a five year cure was reported in 16.6 per cent.

Henry Schmitz reports a five year cure in 44 per cent of early cases, and

Howard A. Kelly, in from 40 to 50 per cent.

Doderline claims a five year cure in 80 per cent of early cases, provided the patients adhere to a full course of treatment. This investigator uses a combination of radium and X-ray.

The results obtained by radiation in the Memorial Hospital, New York, were presented by William P. Healey at a joint meeting of the Philadelphia County and the New York County Obstetrical Societies on April 15, 1925 By radiation alone, in early cases, a five year cure was obtained in 40 per cent; border-line cases, in 27 per cent; advanced cases, in 14 per cent; recurrent cases, in 20 per cent, and all cases combined, in 14 per cent.

By the combination of radium and low voltage X-ray, the results were much better, showing: in early cases, a three year cure in 93 per cent and in border-line cases, a three year cure in 73 per cent.

SUMMARY

1. Greater progress has been made in scientific medicine in the past fifty years than in all the past history of the world.

2. Progress has been made not because of radicalism, but because of conservatism.

3. Gynecology, formerly a radical surgical specialty, is becoming more and more a conservative medical specialty.

4. Within the brief span of ten years, gynecology has passed from a radical surgical specialty to one that is almost ultra-conservative.

5. In no department of medicine is conservative therapy more essential than in gynecology, a specialty dealing with organs fundamentally involved in the reproduction of life.

6. Nearly all the common pelvic lesions, including the acute infections, uncomplicated displacements, abortion, sterility, fibroid tumors of moderate size and cervical carcinomas are gradually falling in the category of medical conditions.

7. Operative gynecology has decreased at least twenty-five per cent during the past ten years.

8. The only pelvic lesions now regarded as truly surgical are: Obstetric casualties, complicated displacements, extra-uterine pregnancy, suppuration in the pouch of Douglas, ovarian neoplasms, large myomas and carcinoma of the uterine body.

9. Acute inflammatory diseases of the pelvis are nearly all amenable to medical means. Surgery, except in frank pus collections, is rarely necessary.

10. Uncomplicated uterine displacements require no treatment either medical or surgical. Since the uncomplicated type is by far the most frequent, the epidemic surgery of the round ligaments will soon be a thing of the past.

11. Uncomplicated fibroid tumors of the uterus of moderate size are legitimate conditions for medication, radium—and rarely operation.

12. Early carcinoma of the uterine cervix, up until five years ago, universally regarded as a surgical disease, is now placed in the category of medical affections. This applies not only to early cervical disease, but to cervical cancer, irrespective of its stage.

13. With still more progress, gynecology gradually will become more and more a conservative medical and less and less a radical surgical specialty.

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DISCUSSION

Dr. H. G. Steele, Bluefield:

Dr. Bland has brought us a wonderful paper, on something that we all like to hear, and that is conservatism in everything. This is conservatism in gynecology, and he speaks of something we desire to hear, because many times in the past our patients were taken to the operating table and deprived of things they should have, and operations have been done time and time again when more conservatism would have been the best plan. Dr. Bland's paper is rather lengthy, and I hope that you will all take time to read it. I have had an opportunity to read it, and there is a great deal of material in it for future thought. I hope such men as Dr. St. Clair and Dr. Gale and others will discuss this paper.

Dr. Charles T. St. Clair, Bluefield:

I think we are all very much indebted to Dr. Bland for bringing this very able paper to us. We are indeed fortunate to have this paper read before the medical section, so that the medical men and everybody could hear it.

I imagine that Dr. Bland has covered the subject of dysmenorrhea in his paper, but did not read that part, as he cut out a lot of it. I should like for him in closing to enlighten us a little on the treatment of dysmenorrhea.

Dr. Bland, closing the discussion:

I have a little note here regarding dysmenorrhea, and will read you what it says:

(Read from paper)

I do not know of anything that will cure dysmenorrhea. If, as Dr. Wer-

der of Pittsburgh once said, women would only keep the uterus in the pelvis and not get it in the brain, they would be alright.

A COMPARISON OF NITROUS OXIDE AND ETHYLENE ANAESTHESIA

Paper read before the Fifty-eighth Annual Meeting of the West Virginia State Medical Association, Bluefield, W. Va., Tuesday, June 9.

By DR. L. D. NORRIS,
Fairmont, W. Va.

Since Dr. Morton demonstrated Ether at the Massachussetts General Hospital in 1842 momentous changes have taken place, not only in the methods of administering this particular drug but in the discovery of other agents capable of producing anesthesia. Experiments on animals in the laboratory, and clinical usage, has taught us much concerning the physiological action of each, so that at the present time we are sufficiently well equipped to assure our patients that they may be carried through the stage of narcosis with almost a negligible amount of danger as to life. Hospitals generally, realizing the importance of this phase of the operation, are either employing nurses specially trained or have on their staff a physician who devotes part or all of his time to the work.

The progressive surgeon visiting large clinics is impressed with the fact that ether is not being used quite as much as formerly: He witnesses regional, spinal, colonic and gas anesthesia and sees some excellent results from each. It is only natural when he gets back home that he wants to offer his patients the advantages they could get elsewhere, hence the necessity of someone with training and experience, for instance, no one should attempt to give gas who is not so equipped, for even though the patient would go through in safety the resultant anesthesia would be but mediocre.

It is not the intention of this paper to underestimate the importance of any accepted method of anesthesia nor is it my object to overestimate the value of gas, rather is it my desire to bring to the attention of this association certain facts concerning gas anesthesia as well as to relate briefly some of my own experiences along this line. Two gases engaging our attention today are nitrous oxide and ethylene, two others, not anesthesia gases but having an important part are oxygen and carbon dioxid.

Although Priestly discovered nitrous oxid in 1772 it was not actually used as an anesthetic until 1844 when Colton delivered a lecture concerning it in Hartford, Connecticut. From this time, and for a number of years following, it was used and considered safe only for short operations such as teeth extractions, opening boils, etc. Dr. Andrews of Chicago in 1868 was the first to prove that this gas could be used continuously and over long periods by combining it with sufficient pure oxygen to support life. The much-dreaded asphyxial stage was a thing of the past. At that time apparatus for administering gas was crude but has been improved upon ever since until now we have some very efficient machines on the market. Nitrous oxid contained a number of impurities and considerable moisture which it is now free of.

Pure nitrous oxide is the most pleasant general anesthetic to take

because of the absence of odor and the ease and rapidity by which the state of unconsciousness is reached. It is followed by very little if any disagreeable after effects. Patients react with amazing rapidity even after several hours anesthesia, not partly awake but with complete orientation. Experiments in the laboratory and clinical use in the operating room shows that when combined with sufficient oxygen it is not irritating to the lungs and is harmless to the blood and organs of the body. It is only quite natural that we would want to use nitrous oxide almost exclusively, and we would but for the fact that it possesses certain disadvantages which impair its usefulness. The first and foremost is that nitrous oxid will not relax the muscles like ether, it is not a relaxant and cannot be classed as such, this is more or less objectionable in abdominal work where the surgeon is seriously hampered by rigid muscles. It is a light anesthetic and the strong, robust patients are often unsuitable types for nitrous oxide-oxygen, either remaining very rigid or moving about on the table. A certain amount of relaxation may be secured by supersaturating the patient with the gas and then going back to oxygen, but personally I cannot help but feel that such practice is dangerous. It is necessary for anesthesia to work at all times with a lower percentage of oxygen than is in atmospheric air, from ten to twelve per cent being the average.

Nitrous oxide-oxygen anesthesia can be much improved by the proper co-operation between surgeon and anesthetist. It is important that the surgeon should know something about gas and its physiological action, and it is no more than right that the anesthetist should realize that the surgeon needs a certain amount of relaxation for work in the abdomen. The proper preliminary medication should never be overlooked. Morphine is best because it inhibits metabolism and should be given in sufficient strength to do some good. As a preliminary to nitrous oxid-oxygen I like it best combined with scopolamine as this combination allays fear of the operation and better relaxation is obtained. One fourth of a grain of morphine with scopolamine one hundred and fiftieth of a grain is ordinarily not too much for the average adult case. Another good combination is morphine given in divided doses one hour and a half preceding the time set for operation, the morphine being dissolved each time in two c.c. of chemically pure 25% magnesium sulphate solution. I have had some well relaxed cases where this was used and think it is because magnesium sulphate inhibits nervous and muscular action. It also retards the formation of oxid morphine which is produced in the process of oxidizing the morphine in the body, therefore it seems to hold morphine in contact with the tissues longer producing a long pain free period. I made observations of eighteen cases at Cook Hospital where morphine was given in divided doses of magnesium sulphate pre-operatively and compared them with a similar number where only sterile water was used to dissolve the morphine, and found that the former went more than twice as long before the first hypodermic was needed. It has been our experience that while magnesium sulphate makes an excellent synergist with

ANAESTHESIA RECORD

Cook Hospital Fairmont, W. Va. City

No. 2121 WARD # I5 DATE April 25, 1924.

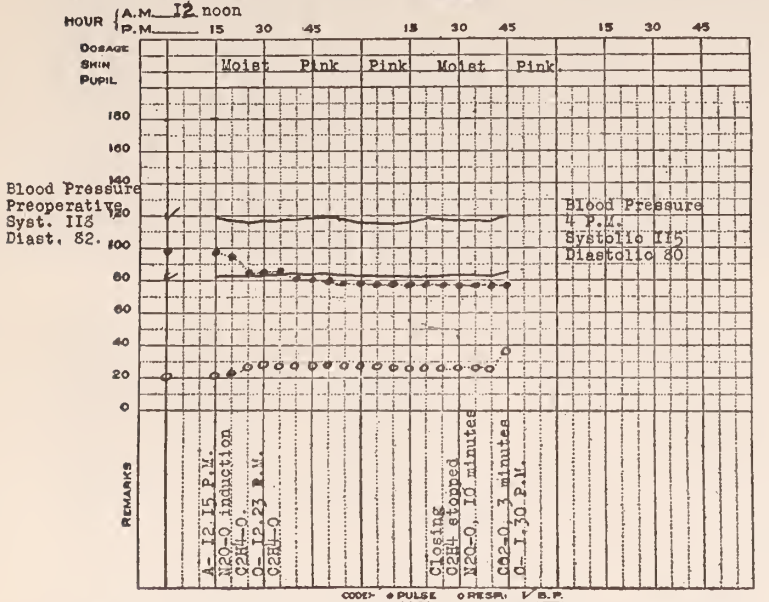
NAME Mrs B.M.C. AGE 33

Surgical Risk { A. # B. C.

OPERATION PROPOSED Amputation Left Breast

PHYSICAL FINDINGS NORMAL EXCEPT Carcinoma

PRELIMINARY HYPNOTIC Morphine I/6 Gr. Atropine I/I50 Gr TIME OF ADMIN. II.I5 A.M.



ANESTHETIC C2H4-0, N20 induction TECHNIC Gwathmey AMOUNT No ether.

SURGEON Dr J. E. Offner. ANESTHETIST Dr L. D. Norris

OPERATION Amputation Left Breast

REGAINED CONSCIOUSNESS AT I.38 P.M. O'CLOCK VOMITING { NONE SLIGHT EXCESSIVE # CIRC. DEPRESSION { 1ST None 2ND 3RD SHOCK

CONVALESCENCE NORMAL EXCEPT FOR Patient much pleased. Made excellent recover

ANAESTHESIA RECORD

Cook Hospital Fairmont, W. Va. City

No. 3100 WARD #9 DATE Decomber 2, 1924

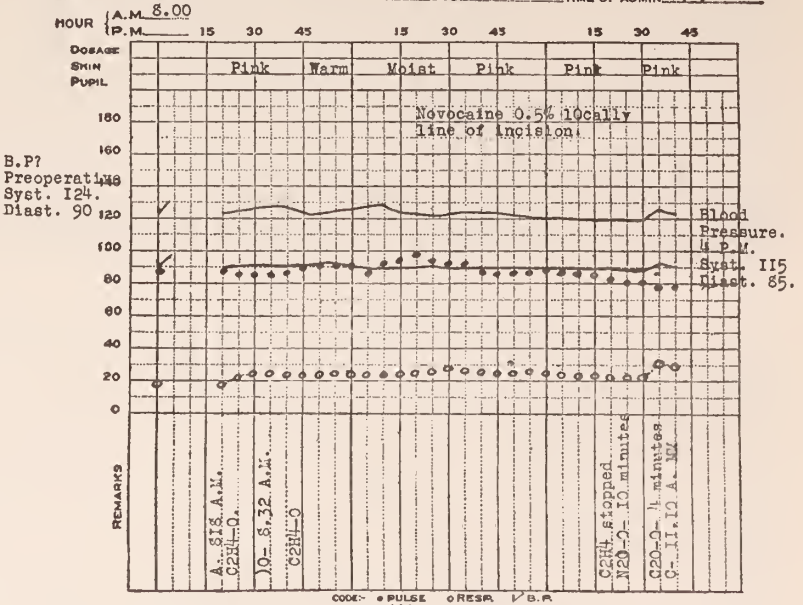
NAME Mrs. M. M. AGE 42

Surgical Risk { A. # B. C.

OPERATION PROPOSED Left Nephrectomy

PHYSICAL FINDINGS NORMAL EXCEPT Cystic degeneration of left kidney

PRELIMINARY HYPNOTIC Morphine I/6 Gr. Atropine I/200 Gr TIME OF ADMIN. 7.30 A.M.



ANESTHETIC C2H4-0, N20 Induction TECHNIC Gwathmey AMOUNT No ether

SURGEON Dr. L. D. Howard ANESTHETIST Dr. L. D. Norris

OPERATION Left Nephreotomy

REGAINED CONSCIOUSNESS AT II.I5 A.M. O'CLOCK VOMITING { NONE SLIGHT EXCESSIVE # CIRC. DEPRESSION { 1ST 2ND None 3RD SHOCK

CONVALESCENCE NORMAL EXCEPT FOR Vomited small amount of bile stained fluid that afternoon. Catheterized once afterwards...ade a wonderful recovery.

ANAESTHESIA RECORD

Cook *Hospital* Fairmont, W. Va. *City*

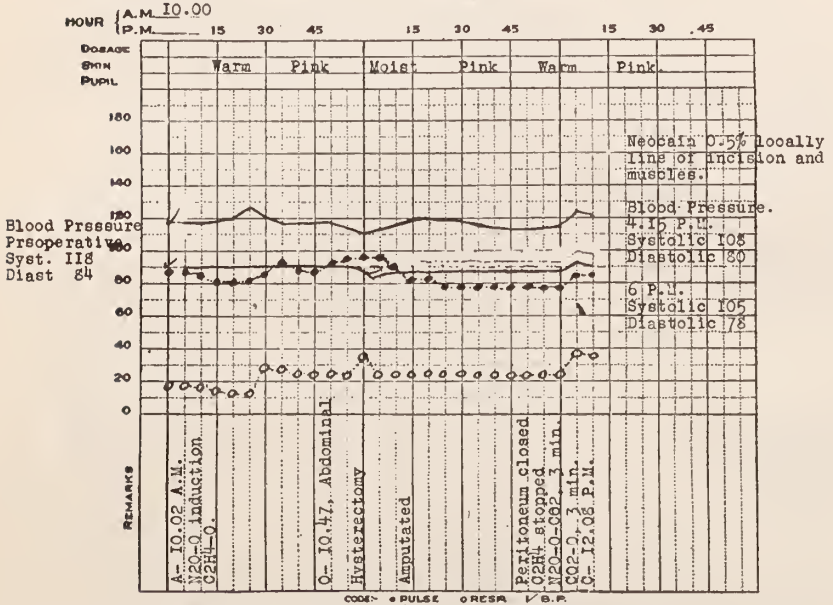
No. 3791 WARD # 44 DATE May 19, 1925 SURGICAL RISK A # B C

NAME Mrs C. AGE 35 yrs.

OPERATION PROPOSED Tracheloplasty, Perinsorraphy, Supra vaginal Hysterectomy

PHYSICAL FINDINGS NORMAL EXCEPT Prolapsed Uterus, "Fibroid"

PRELIMINARY HYPNOTIC Morphine 1/4 Gr. Atropine 1/150 Gr. DOSE TIME OF ADMIN. 9.30 A.M.



ANESTHETIC C2H4-O, N20 induction TECHNIC Gwathmey AMOUNT Ether 1 dram

SURGEON Dr E. P. Smith ANESTHETIST Dr L. D. Norris

OPERATION Tracheloplasty, Perineorraphy, Bilateral Salpingeotomy
Supra vaginal hysterectomy.

REGAINED CONSCIOUSNESS AT 12.13 P.M. O'CLOCK VOMITING NONE SLIGHT EXCESSIVE # CIRC. DEPRESSION 1ST First deg. 2ND 3RD SHOCK

CONVALESCENCE NORMAL EXCEPT FOR First degree shock afterwards patient did well.
No nausea or vomiting and in splendid condition next day.

ANAESTHESIA RECORD

Cook *Hospital* Fairmont, W. Va. *City*

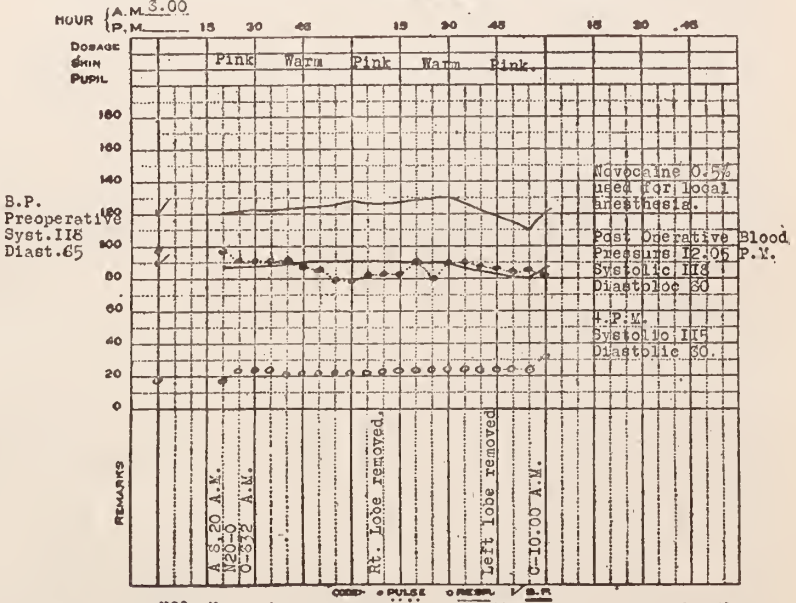
No. 3302 WARD #II DATE May 22,1925 SURGICAL RISK A # B C

NAME Miss V. L. AGE 20 yrs.

OPERATION PROPOSED Thyroidectomy

PHYSICAL FINDINGS NORMAL EXCEPT Large cystic adenoma of thyroid gland. Both lobes involved. Beginning toxic symptoms.

PRELIMINARY HYPNOTIC Morphine 1/6 gr. Scopolamine 1/100 DOSE TIME OF ADMIN. 7.15 A.M.



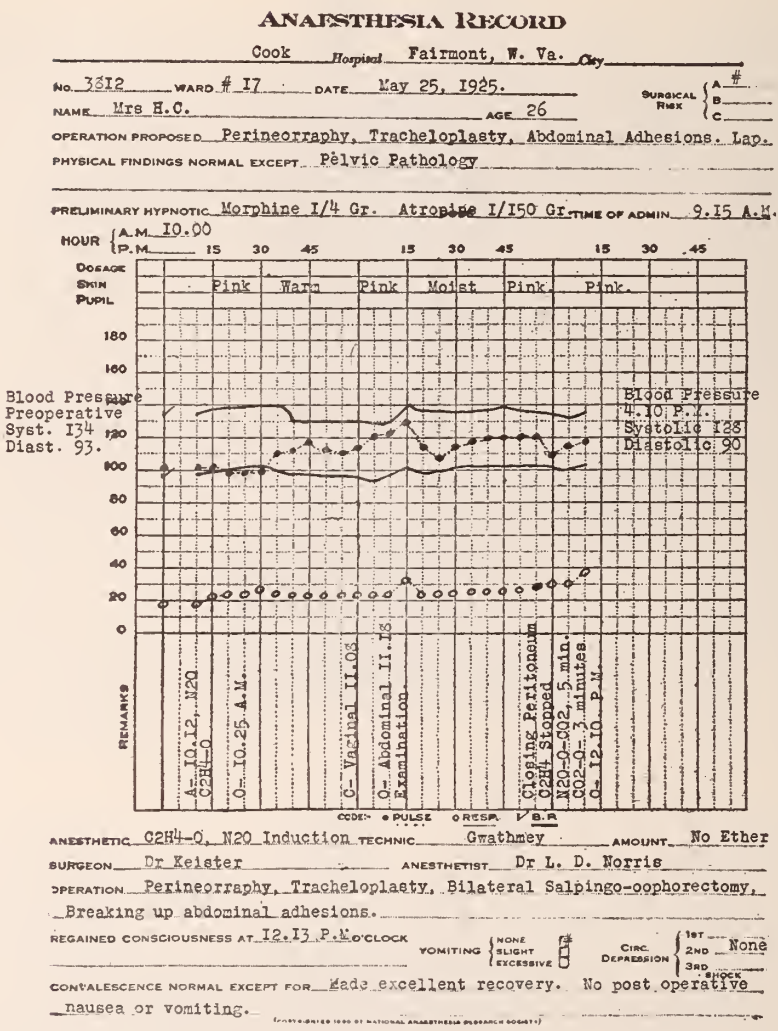
ANESTHETIC N20 Novocaine TECHNIC Gwathmey AMOUNT No ether

SURGEON Dr. Keister ANESTHETIST Dr. L. D. Norris

OPERATION Thyroidectomy

REGAINED CONSCIOUSNESS AT 10.05 A.M. O'CLOCK VOMITING NONE SLIGHT EXCESSIVE # CIRC. DEPRESSION 1ST 2ND None 3RD SHOCK

CONVALESCENCE NORMAL EXCEPT FOR Splendid recovery without shock, nausea or vomiting.



ANAESTHESIA RECORD

Cook Hospital Fairmont, W. Va. City

No. 3812 WARD # 17 DATE May 25, 1925. SURGICAL RISK A # B C

NAME Mrs H.C. AGE 26

OPERATION PROPOSED Perineorraphy, Tracheloplasty, Abdominal Adhesions. Lap.

PHYSICAL FINDINGS NORMAL EXCEPT Pelvic Pathology

PRELIMINARY HYPNOTIC Morphine I/4 Gr. Atropine I/150 Gr. TIME OF ADMIN. 9.15 A.M.

HOUR A.M. 10.00 P.M. 15 30 45 15 30 45 15 30 45

DOSAGE SKIN PUPIL: Pink Warm Pink Moist Pink Pink

Blood Pressure Preoperative Syst. 134 Diast. 93.

Blood Pressure 4.10 P.M. Systolic 128 Diastolic 90

180 160 140 120 100 80 60 40 20 0

REMARKS: A- 10.12, N20 C2H4-O. O- 10.25 A.M. C- Vaginal 11.03 O- Abdominal 11.18 Examination Closing Peritoneum C2H4 Stopped N20-O-002, 5 min. C02-O-3 minutes O- 12.10 P.M.

CODE:- ● PULSE ○ RESP. V B.P.

ANESTHETIC C2H4-O, N20 Induction TECHNIC Gwathmey AMOUNT No Ether

SURGEON Dr Keister ANESTHETIST Dr L. D. Norris

OPERATION Perineorraphy, Tracheloplasty, Bilateral Salpingo-oophorectomy, Breaking up abdominal adhesions.

REGAINED CONSCIOUSNESS AT 12.13 P.M. O'CLOCK VOMITING NONE SLIGHT EXCESSIVE CIRC. DEPRESSION 1ST 2ND None 3RD SHOCK

CONVALESCENCE NORMAL EXCEPT FOR Made excellent recovery. No post operative nausea or vomiting.

morphine it is more irritating to the tissues locally than is water and liable to cause an occasional abscess.

Another great help in abdominal cases with nitrous oxid is novocaine solution 0.5% injected in the line of incision and well back into the muscles, this blocks off the field and in itself aids in securing relaxation. Some of our surgeons use adrenalin along with it, about six minims to the ounce and others don't on account of the tendency to after bleeding. Personally I like the adrenalin added because the surgeons who have been using it for the past several years have never complained of hemorrhage afterwards and the combination gives longer anesthesia locally with slower absorption of novocaine.

In spite of biologic strategy and all else we can do however, nitrous oxid is not the ideal anesthetic for abdominal surgery, some cases will relax, others will not, but a little ether added to the latter will usually solve the problem, so little is needed that the patient seldom knows it was used. I have personally administered over six thousand

nitrous oxid oxygen anesthesias during the past eight years for nearly all sorts of operations in the manner described above, my greatest difficulty being in the failure to relax one hundred per cent of abdominal cases.

Ethylene is one of the hydrocarbon gases with the formula C2H4 and is made by extracting a molecule of water from alcohol, it has the odor of old sorghum or wet matches, or as described by some the odor of garlic. It is inflammable and very much like acetylene in its chemical properties. For this very valuable anesthetic we are indebted to Dr. A. B. Luckhardt of Chicago who did an immense amount of experimental work and used himself as a subject before trying it in the operating room.

Ethylene is given in precisely the same way as is nitrous oxide, namely, with oxygen which is used in higher percentage with ethylene, the usual proportions being ethylene eighty or eighty-two percent and oxygen eighteen or twenty percent. This high oxygen content together with the characteristic color of ethylene hemoglobin gives to the skin a bright pink or cherry red appearance, in fact, one seldom ever sees cyanosis with this anesthetic when properly given. While the chief disadvantage of nitrous oxid is rigidity of the musculature, the main advantage of ethylene is a more profound relaxation closely approaching that of ether anesthesia, as a consequence of which it is more suitable for abdominal surgery. Nitrous oxide causes less shock than ether, especially in prolonged operative procedures. Ethylene is superior to nitrous oxid because patients seem even less shocked when the former is used: It has a tendency to slow the pulse rate and this is more noticeable with a rapid pulse. On respiration where no rebreathing is used ethylene will often have a slowing affect, but where rebreathing is used it is a little more rapid than normal, although not so frequent as with nitrous oxide. Ethylene has little if any affect on normal blood pressures, but in cases of hypertension a marked drop is not infrequently noticed. I have seen patients with a systolic of one hundred and eighty drop thirty or forty points under ethylene and appear in better condition. Instead of a disadvantage all these things seem to be of advantage and some of my best anesthesias have been given to patients who were in very poor physical condition, quite often they react in apparently better shape than before the operation was performed which leads me to believe that ethylene-oxygen is the best general anesthetic to give to cases of poor risk.

Ethylene may be given either with oxygen alone or used as a synergist with nitrous oxide, ether may be added if desired and in small quantities if better relaxation is required without any ill affects, in fact, ether is a better synergist with this gas than with nitrous oxide. It is possible and sometimes desirable to use a little ethylene along with nitrous oxide and oxygen, the ethylene acting somewhat like ether in the combination. I have found this procedure most satisfactory in operations like curettments and short vaginal examinations because for some reason or other it has been my experience that ethylene- oxygen alone causes more nausea in these types of cases

than when ethylene is used as a synergist with nitrous oxide and oxygen.

Authorities differ as to the percentage of nausea and vomiting following ethylene anesthesia. It is my personal belief that very little if any nausea is caused by pure ethylene, although it is more apt to cause after sickness than is nitrous oxide. The manufacturers seem to be unable to produce a uniform grade of this gas, as for instance, one shipment may smell rankly of garlic and patients are not only liable to gag during the induction but are apt to do the same thing right in the middle of an operation, sometimes with an explosive type of vomiting. With this sort of ethylene one may look for post-operative nausea and vomiting quite similar to that following ether. I have had a few cases nauseated for as long as forty-eight hours simply due to impure or bad ethylene. With this sort of ethylene I have often noticed a bile stained vomitus. Thanks to the painstaking efforts of the manufacturers, however, we are getting better and better ethylene right along, the gas now is dehydrated, has much less odor, and causes less trouble all around. I believe in due course of time that we may obtain ethylene that will be perfectly satisfactory.

Some have reported that there is more oozing with ethylene than with other anesthetics. I have not experienced this in our work at Cook Hospital, at least, I believe if this is true that the danger is negligible. In cases where there seemed to be more oozing than normally I have changed to ether or nitrous oxide and there seemed to be just as much bleeding as with ethylene.

Patients react generally within a few minutes after ethylene is stopped, not quite so rapidly as from nitrous oxide, and there seems to be a longer stage of analgesia; even when apparently awake they often feel no pain, a tooth may be extracted and they may not notice it, making it a more valuable gas than nitrous oxide for dentistry.

The chief danger of ethylene lies in the fact that when mixed with oxygene it forms an explosive mixture, therefore it should not be given in the presence of an open flame. The actual cautery should not be used in the operating room during ethylene-oxygen anesthesia, likewise all electrical connections to lights, etc., should be tight and well insulated. One or two fatalities have occurred from neglect of these precautions. There is another danger from explosion that is more difficult to control and that is sparks from static electricity caused by the passage of dry gases through dry rubber tubing; rubber, being non-conductable, can hold this generated static electricity until someone happens to touch the tubing when a spark may result. Several such explosions have occurred at the Presbyterian Hospital of the City of Chicago and although no one was hurt, ethylene was temporarility discontinued at that hospital until means could be found to eliminate this danger. The presence of moisture retards to a great extent the development of static electricity. I have selected the new model Gwathmy apparatus, either the Lundy or Seattle model, as not only a very efficient and satisfactory machine for gas anesthesia,

but the safest as far as the development of static electricity is concerned. This machine bubbles the gases through a water mixing chamber and some moisture is collected which increases the humidity of the gases. I don't believe there has been an explosion from static electricity with the Gwathmy machine. I have given nearly nine hundred ethylene anesthesias with this apparatus at Cook Hospital and can highly recommend it.

Carbon dioxid is an important and valuable gas for its physiological affects during anesthesia, and after using it for about eight months I am thoroughly convinced that no gas machine is complete without having incorporated in it provisions for the use of this gas. It is nature's own respiratory stimulant, and it also has a stimulating affect on the circulation, particularly on the venous return to the right heart. It has been my experience that carbon dioxid not only stimulates respiration but raises arterial blood pressure slightly. It is of value in cases of depression with pallor under anethesia. I have not only seen the quality of pulse improve but have observed that considerable color returns to the skin after a few minutes use of about six percent carbon dioxid.

It is my policy to start patients with nitrous oxide and when they are unconscious to substitute ethylene for its better relaxation. Towards the close of the operation, after the peritoneum has been closed I go back to nitrous oxide at the same time add about six percent or less of carbon dioxid, this increases depth and rate of respirations and rapidly gets rid of the ethylene, also ether if any has been used. When the skin is closed I use pure oxygen and carbon dioxid for several minutes. It is not at all uncommon upon removing the face mask to find a quiet, conscious patient. The color is rosy pink and the general condition excellent.

I submit the following case reports with anesthesia charts showing blood pressure, pulse and respiration recorded every five minutes during the operation.

1. Mrs. C. Age 35 years. Protrusion of cervix through vulva for a number of years following difficult instrumental delivery, with large fibroid uterus. Morphine ¼ gr. Atropine 1-150 gr. Ethylene-oxygen anesthesia. Midline incision, bilateral salpingectomy and supra vaginal hysterectomy. In addition there was done a trachelo-plasty and perineorraphy. Patient awake six minutes after a two operation with perfect relaxation throughout. Outside of first degree shock several hours afterwards from which she rapidly recovered she showed no ill effects from the operation. No nausea or vomiting at any time and no gas pains.

2. Mrs. N. B. Age 33 years. Chronic appendicitis for years. Entered hospital between attacks. Morphine ¼ gr. Atropine 1-150 gr. in 2cc 25% Mag. Sulph. sol. one hour before operation. Ethylene-oxygen anesthesia. Rt. rectus incision. Appendectomy. Patient awake three minutes after anesthetic stopped. Talking to us while dressings applied. No nausea or vomiting at any time. Uneventful recovery.

3. Mrs. B. M. C. Age 33 yrs. Carcinoma of left breast. Morphine 1-6 gr. Atropine 1-150 gr. one hour before operation. Amputation of left breast under ethylene-oxygen

anesthesia. Awake three minutes after anesthetic stopped. No nausea or vomiting at any time. Uneventful recovery.

4. Mrs. D. M. H. Age 48 yrs. Soreness in back and frequency of urination for two years. Occasional hematuria. X-ray showed staghorn stone size of small marble in pelvis of left kidney. Morphine ¼ gr. Atropine 1-150 gr. one hour before operation. Ethylene-oxygen anesthesia. Good relaxation at all times. Awake six minutes after anesthetic stopped. No nausea or vomiting at any time. Never had to be catheterized once following a nephrolithotomy and over an hour's anesthesia. Uneventful recovery.

5. Mrs. K. C. Age 32. About six years previous sustained torn cervix and perineum following high forceps delivery. Eight months ago three months abortion with pelvic infection. Following this almost constant pain in abdomen intensified by exercise and menstruation. Morphine ⅛ gr. Atropine 1-150 gr. Ethylene-oxygen anesthesia. Incision and drainage of pelvic abscess. Awake two minutes after anesthetic stopped. No nausea or vomiting at any time. Uneventful recovery.

6. Miss V. L. Age 20 years. Thyroid enlargement began six years previous. Remained dormant for past six months, when it began to increase in size with pressure symptoms. Toxemia and nervous disorder. Morphine 1-6 gr. Scopolamine 1-100 gr. one hour before operation. Nitrous oxide- oxygen anesthesia with novococaine 0.5% locally. Awake five minutes after anesthetic stopped. Thyroidectomy with lower pulse rate at end of operation than at beginning. No nausea or vomiting at any time. Uneventful recovery. Left hospital sixteen days after operation.

7. Mrs. M. M. Age 42 years. For about a year and a half previous pain with general aching left loin. Slight frequency of urination with irritation. Palpable tumor mass extending anteriorly into abdominal cavity. Morphine 1-6 gr. Atropine 1-200 gr. one hour before operation. Left nephrectomy under ethylene-oxygen anesthesia. Patient showed cystic degeneration of left kidney. Pulse lower at completion of operation than at start. No shock following. Vomited small amount of bile stained fluid twice that afternoon. Made a splendid recovery. Only had to be catheterized once afterwards.

8. Mrs. L. K. Age 53 years. Chronic appendicitis. Morphine ⅛ gr. in 2cc 25% sol. Mag. Sulph. one hour before operation and repeated half hour before operation. Appendectomy. Patient gagged twice during operation. Ether added in small quantity each time secured relaxation. Awake eight minutes after anesthetic stopped. Slight vomiting of clear fluid once that afternoon. This case was not a success as far as the anesthetic was concerned on account of the failure to get good relaxation throughout with ethylene. She made a good recovery however and did not know she had any ether.

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Discussion

Dr. John E. Cannaday, Charleston: Dr. Norris has given us a detailed study of the use of gas anesthesia. I am glad to know that he has been so successful. We in Charleston, at the Charleston General Hospital, have specialized somewhat in the use of ethylene anesthesia, having used it in considerably over 1000 cases. In some we have used it for induction only; in other cases it was the only anesthetic used. We try to use it routinely for induction. For instance, our tonsillectomies are done routinely with ethylene induction, then switch on to ether. We have used ethylene very simply, used in by itself, as a rule, without mixing with any other gas. Occasionally we have had to give ether with it, especially in surgery of the abdomen. In gall-bladder cases we have not had any difficulty. My observation is that more depends upon the skill of the anesthetist than anything else; also upon the pre-operative medication of the patient. Occasionally we have found patients who did not take it well. Occasionally, also, you will find a patient who will not take nitrous oxid well. We believe there are certain advantages to be obtained by the mixing of ethylene and nitrous oxid, or the use of the carbon dioxid. Dr. Rutherford tells me he has just been over to Richmond and observed Dr. ——————using ethylene in stomach surgery, and using the cautery without any difficulty at all. He always sees that the room is open and that an electric fan is going, taking the air away, and has had no trouble. We do know that it is inflammable gas, perhaps not much more so than ether.

We have also found ethylene to be of great value in poor risks and in cases with chest irritations, such as colds or cough. We do not believe it causes any increase in chest irritation. I have found it of great value in making examinations in nervous patients. We have found little prolonged nausea following its use. Nausea during the waking period, lasting for a few seconds, is very common, but nausea extending over a period of hours, or even half an hour, is uncommon unless there is some condition of the intestines, etc., to which you could as well attribute the nausea. I believe there is less shock; it takes away the fear of anesthesia. Even though you want the patient to have some ether, there is quite an advantage in starting the patient off with gas anesthesia. It saves some of the fear and horror that some people have of the stage of excitement.

Dr. E. Bennett Henson, Charleston: We have heard a splendid discussion of a splendid anesthetic by a most competent anesthetist.

My remarks will be directed to ethylene from the surgical viewpoint. Since Sept. 1923, we have

been using ethylene more or less routinely and as yet have not met with a single contra-indication. There has been no death. We have had, however, a death from novocain. In fractures and dislocations, ethylene is the anesthetic of choice. (As far as that is concerned, ethylene is the anesthetic of choice in every case with me.)

Our anesthetists do not use the various combinations of gases. It is straight ethylene plus oxygen with us, and if the operation is interfered with a few whiffs of ether are given then back again to straight ethylene-oxygen. I do not believe in mixing drinks to produce exhilaration, neither do I believe in mixing so many gases to produce narcosis.

Dr. Norris is following Dr. Gwathmy's teachings. My estimation of Dr. Gwathmy was greatly lowered two years ago when in a meeting of anesthetists in Washington, he said that ethylene would not produce relaxation sufficient for abdominal operation without the addition of other gases. Prior to that time we had performed over fifty abdominal operations with straight ethylene and since that time we have done several hundred.

Dr. Norris speaks of ethylene anesthesia producing more nausea in short operations in the pelvis than nitrous oxide. I have not noticed any such difference, but if it is true it can readily be explained if one recalls Alvarez' experimental work in Vomiting of Pregnancy. The theory being that the hyperemia of the pelvic organs increasing the irritability of the colon producing reversed peristalsis. Elliot and Barclay Smith found that stimulation of the pelvic nerves will raise the tone of the colon and increase the tendency to reverse peristalsis. One recovers from ethylene so promptly and pain is felt so quickly following an operation that if sufficient morphine has not been given, the pain plus pelvic hyperemia will produce nausea and possibly vomiting.

The oozing during operation should not be blamed to ethylene. Just recently I did a hysterectomy under ethylene anesthesia and the venous oozing was very troublesome. The coagulating time of the blood was taken after the patient had been asleep forty minutes showed the clotting to be three minutes which corresponded exactly to the preoperative test.

A PLEA FOR THE TONSIL

Read at Annual Meeting of West Virginia Medical Association, Bluefield, June, 1925.

By DR. W. T. BOOHER,
Wellsburg, W. Va.

For the past two decades or more, the indiscriminate sacrifice of the tonsil has been carried on, on the grounds chiefly that it was a useless and adventitious organ, and was responsible for all the ills in any or all parts of the body, for which no other cause could be assigned.

It being located within reach of a tenaculum, scissors or snare, made it the especial prey of any and all, without any thought of the possibility that the Great Creator in His wisdom had placed this organ as an integral and important part of the human body with a definite and particular function to perform.

This radical treatment of tonsils can be likened to the craze of gyne-

cologists for the removal of ovaries, with or without provocation, and later the general surgeons with their determined efforts to eradicate all appendices and gall bladders.

However, in recent years, much research work has been carried on and e'er long, the pendulum will swing backward to a more rational position and inure to the well being of humanity.

That the function of the tonsil is not clearly known is poor argument that it is functionless.

In its embryonic development, from the second bronchial pouch it must be classed with the thymus and thyroid.

In its anatomy, we find a definite and delicate structure with a remarkably large blood supply and very slight connection with the lympatic stream. It has efferent but no afferent lymph vessels.

Many of the authorities are of the opinion that the foci of infection in appendicitis, cholecystitis, pancreatitis and ulcer of the stomach are in the tonsil.

The late Joseph Fraenkels believed that the tonsil had a protective influence over the appendix and that it was not possible to have a purulent appendix, unless the tonsils had been removed surgically or destroyed by disease. Accordingly, we have been surprised at the number of cases of appendicitis, we have noted, following tonsilectomy within a period of five years. From this we are led to believe that it is more probable that infection of the appendix, cholecyst, pancreas, etc., is due to the nonprotective action of a tonsil preserved in alcohol or formaldehyde.

Certain tenable theories of the function of the tonsil may be presented as follows:

1. The tonsil, from its important location at the portal of the respiratory system, protects the organism against infection.
2. The tonsil has a haematopoietic function.
3. The tonsil possesses an eliminative function.
4. The tonsil provides an internal secretion.
5. The tonsil plays a part in the production of immunity, i.e. that toxins are absorbed from the invading organisms, which are caught by the tonsil, thus forming antibodies.
6. The tonsils aid in giving proper temperature and moisture to the inspired air, especially so, to air which passes through the mouth, if for any reason the nasal passages are temporarily obstructed.
7. The tonsil provides a ferment of importance in the systemic economy.
8. A most important function—the tonsil has a physico-mechanical function viz.—providing a channel for the action of the palato-glossal and affording support and protection to the palato-pharyngenous.

Indiscriminate tonsilectomy disregards any and all of these functions.

What then are the indications for a tonsilectomy?

1. In those cases where the tonsils do not react favorably to thorough cleansing by suction and topical applications.
2. Where the pillars are deeply infiltrated, showing that great absorptive avenues have been thrown open to the spread of infection due to lack of tonsil drainage.

3. Where in the judgement of the surgeon and medical attendant, the tonsil condition has passed the point at which conservative measures will give any hopes of repair.

Tonsilectomy is not, as yet, a perfect operation and its result is not always as successful as we might wish. In fact, many are the cases that are in far worse condition from after effects. That a large number of us do not recognize the fact that this procedure is a major operation, is responsible for these conditions. That we lose sight of the important structures closely associated with the tonsil is shown by the scarred conditions of those parts, which we find so common in many tonsilectomized patients.

In fact, sometimes, it is a question just what part of the throat has been removed.

A goodly portion of the anterior pillar seems to be a favorite victim and a resultant mass of scar tissue remains to cause trouble the rest of the patient's days.

This condition is one that follows in a large majority of the so-called "Sluder" operations, which might be better termed in many operator's hands the "Slaughter operation."

Dr. Sluder, himself has stated, "that he did this operation in one thousand cases before he considered himself proficient."

Tonsilectomy should only be performed under the best of conditions. It is never an emergency procedure, hence, there is no excuse for this operation being done in a haphazard method. The patient should have the necessary pre-operative treatment, with the same care and diligence as that of any other major operation. The coagulating time of the blood is important and if this time exceeds (4) four minutes or if there is history of any obstinate or frequent hemorrhages, operation should be postponed until suitable treatment can be given to correct the condition.

Operative equipment should be complete to meet all emergencies and to facilitate the work. A good suction outfit, I consider a necessity.

This operation should never be done in the patient's home and few specialist's offices have sufficient and proper equipment.

An experienced and careful anaesthetist is a most important factor, one who has a wholesome respect for, but no fear of, an anaesthetic.

Suturing of the pillars, in most cases is very suggestive of a poor method of operation, accident, or carelessness on the part of the operator.

That operative technique should be adopted which will leave the throat with a minimum of deformity.

Advocates of X-Ray and ultra-violet ray promise a perfect treatment in the near future.

Murphy of DesMoines, Iowa, has devised and advocates circumcision of the tonsil. This method consists of the complete detachment of the tonsil from it's pillars and all adhesions down to it's base but not interfering with the blood supply of the organ.

We have used this treatment and with the additional thorough cleansing of crypts, incision in some cases and applications of some form of silver, our results were very satisfactory.

Another procedure which will often obviate radical treatment of tonsils is proper ventilation of the nasal passages.

Tonsilectomy is a life-saving procedure in a limited number of cases but we believe that within a few years, the operation of election in a majority of diseased tonsils will be one of drainage and plastic repair, i.e. a constructive procedure, which will result in restoration of a diseased and non-functioning organ to one of health and restored function.

Most any surgeon can remove an organ but it takes a real surgeon to reconstruct an organ.

SUMMARY

1. The tonsil is an essential organ with important functions to perform, and any treatment measures should be applied without losing sight of the possible loss of function.

2. Constructive rather than destructive surgery should be the aim in dealing with this organ.

3. Tonsillectomy is a capital operation and should be accorded the care, skill and necessary equipment which should attend all major operations.

4. Tonsillectomy does not fall within the domain of the general surgeon or the general practitioner and the sooner we can impress this fact upon the minds of the profession at large, the better it will be for humanity. It undoubtedly, is the one operation which is done most often, needlessly and recklessly.

5. Hypertrophied tonsils are normal conditions in childhood and their removal without the proven presence of marked infection is contra-inidcated.

6. Due diligence and attention to the nasal passages will often eliminate the seemingly necessary eradication of the tonsil.

7. Tonsillectomy is not the final solution of the tonsil problem, and in the near future, we believe that radical methods will be replaced in a great measure by rational ones, which will tend to the conservation of an essential organ.

8. While the tonsil is and has been under the most severe indictment, yet we believe that the prosecution has failed to make good it's charges.

Therefore, it behooves us to treat the tonsil with some degree of respect, until future research will establish its true status in the human economy.

DISCUSSION OF PAPER OF DR. W. THURSTON BOOHER, "A PLEA FOR THE TONSIL," BY DR. T. W. MOORE.

When we look into a throat six months or a year after having done a tonsillectomy and frequently see how differently it appears from what it did two or three weeks after the operation, we are often much disappointed.

What Doctor Booher has said relative to a careful examination before tonsillectomy I endorse most heartily. There is no question but what just as thorough an examination should be made as is done before any other surgical proceedure. Tonsillectomy is condemed because it is frequently done by men who are incompetent to do it, and it is necessarily imperfectly done; this applies to every branch of surgery, and only work that is done properly should be considered in the argument, for or against works on the tonsils.

Not a single one of the ten points given by the essayist as functions of the tonsil can be proven. We know no more about the physiology of the tonsil than we knew thirty years ago, and apparently know less, be-

cause our knowledge of the function of the other organs of the body has increased so much. The good that the tonsils do is purely problematical. The harm and suffering that they cause is manifest on every hand. So frequently, I have in years gone by, passed on tonsils and pronounced them healthy and years afterwards at the insistance of the internist or pedistrician have had to remove them. I remember particularly an under sized child of about 12 years of age who was sent to me by an internal medicine man with a letter insisting that I remove the tonsils; that he was sure that the arrested development was due to this cause. My examination showed that the right tonsil was apparently healthy; the left also, except the child would jerk away when it was touched. We removed the right tonsil and after it was out, I said this is certainly a healthy tonsil. We removed the left one and found back of it one-half teaspoonful of pus. This child's weight doubled in the next six months.

Permit me to cite my own case. In April, 1917, I developed a tenderness in two or three of my finger joints. I immediately had my teeth and sinuses X-rayed and my tonsils were examined and said to be small and only slightly diseased. My symptoms grew worse; itching of the soles of my feet and palms of hands developed. This was followed by urticaria and then I developed a jaundice, and in August began loosing weight very rapidly, one pound a day. After eighteen days of this, early in September, after some of my medical friends had suggested the possiblyity of carcinoma of the liver, I was most thoroughly examined and it was decided to remove my tonsils. They had to be removed by the electric cautery as my blood would not coagulate. At this time I was told that I could not expect to resume my work for three months and was to again report to the internest in ten days, at which time my condition had improved so much that I was permitted to return to work, the only condition being that I shorten my hours. In the summer of 1922, I developed a distressing neuritis of my left shoulder and back. This seemed to progressively grow worse until the following July, my medical advisers were unable to ascertain the cause for this. I went to the Mayo Clinic where after several days of most thorough examination my trouble was pronounced due to some pieces of tonsil which had been left. These were removed and I have been free from neuritis since.

Since this time my examinations have been most careful and my convictions are that there are no healthy tonsils in adults and this is probably true in the majority of cases in children.

THE TONSIL QUESTION

Read before the B .R. T. Medical Society at Philipphi, June 25th, 1925.

By DR. E. R. McINTOSH,
Elkins, W. Va.

The question is often asked have the tonsils any function, and if so, what? I am of the opinion that the tonsils have a definite function in early childhood, particularly before the second year, and that they have the ability to absorb bacteria which otherwise would get into the system and possibly cause a great deal of

harm. The best evidence that the tonsil has some function is that they become so hypertrophied and diseased in young children, particularly in cities where there are numerous varieties of virulent, bacteria. Moreover, it has been claimed by some that the tonsil has an internal secretion which mixes with the other internal secretions from the Thyroid, the Adrenal, etc., and that this secretion is valuable to the system, especially in infants. Perhaps the best proof to the contrary lies in the fact that there is no record of a child undergoing any physical or mental deterioration because the tonsils have been removed.

Have the tonsils any function later on in life?

It is possible that they have, but this is also questionable, and it seems to me that one should consider that tonsillar tissue has a tendency to atrophy as the person grows older, and if there is evidence of any enlargement of these organs say after the fifteenth year, in the majority of cases it is due to a pathological increase in tissue cells, even if a definite determination cannot be made that an infection is present.

We will assume that we are dealing with a diseased tonsil. Now what would one consider a diseased tonsil? A diseased tonsil is either a hypertrophied tonsil large enough to be easily discernable, which has crypts from which cheesy matter can be expressed; which is inflamed and seems to be continually irritated, and which shows evidences of inflamation of the surrounding parts; or the diseased tonsil may be a very small tonsil, or it may be the remnant of a tonsil, the result of a previous tonsillectomy or a poorly done tonsillectomy. It may be difficult to see the tonsil at all, but there are evidences of its pathological nature, such as continual irritation of the throat or an enlargement of the tonsillar gland or certain systemic reactions. Examples of tonsils of this kind are too numerous to mention, and at this point I can only say that if the tonsils are examined very carefully, evidences of their pathological nature can often be seen. But the best evidence of their pathological nature is determined by noting the improvement in the patient's physical condition after their removal.

A MORE THOROUGH METHOD TO BE USED IN THE DETECTION OF DISEASED TONSILS THAN HERE-TO-FORE

In former years the examination of the throat was made merely by inspection with the aid of a headlight and a tongue depressor and in this method only superficial examination was made of the surface of the throat and to determine the size of the tonsil. However, at the present time a more definite and precise examination must be made.

The size of the tonsil is not so much of importance today as the systemic reaction which occurs as a result of its being in the throat. In the first place a thorough inspection of the throat must be made, not only of the tonsil itself, but of the surrounding pillars, pharynx and soft palate. In a great many cases the tonsils do not appear to be very large and one feels that he is unwarranted in making the statement that there is anything there that is causing any trouble. However if the tongue is forcibly depressed and the palate irritated so that the patient gags, the tonsils will be extruded from between

the pillars and one will then note that they are considerably larger than would be suspected. In other words one is here dealing with a buried tonsil which is not evident upon a superficial examination. Even such an examination as this is not always sufficient to give the desired information sought and I have found it more than worth while to palpate the surface of the tonsil and its surrounding parts with my index finger. A great deal of information will be gained in this way. Not only can one tell the size of the tonsil, its consistency, its irregularities, its adhesions, but at the same time sufficient pressure can be made upon these organs to extrude a considerable amount of cheesy material from within. Aside from the examination of the tonsils in this way it is very important that a bacterial examination be made to determine the character of the organism that is invading the tonsils and to discover if possible whether or not the pathogenic bacteria are responsible for the systemic disturbance.

Of next importance in the examination of the tonsil and determining the pathological nature is the examination of the tonsillar gland. The tonsillar gland lies about one inch downward and forward from the angle of the jaw and is not readilly palpated unless the tonsil is diseased. In every case of tonsillar disease this gland can be felt. It varies considerably in size, sometimes being the size of a peanut and sometimes almost the size of a walnut. If this gland is in any way enlarged you can absolutely depend upon your findings and in every case diseased tonsils will be found. The question will often be asked by the physician which of the two conditions is the worst, a large protruding tonsil or a buried one. The small buried tonsil which seems to be encapsulated between the pillars and shows no evidences on the surface of being diseased other than one particular thing, that is; the presence of very minute yellow areas, many of them no larger than a pin head, which show under the glistening capsule. These yellow areas on incision of the tonsil and careful inspection, can be demonstrated to be minute abscesses which penetrate through the tonsil from one surface to the other.

That diseased tonsil manifests itself, not only by inspection and palpation by the methods above described but also by the local and systemic conditions which are the result of its presence. Among some of the local conditions which are caused by diseased tonsils, may be mentioned the chronic inflamatory conditions of the nasal mucous menbranes, chronic nasal sinusitis, chronic pharyngitis, repeated attacks of tonsillitis, either of the acute or chronic variety, repeated attacks of peritonsillar abscess, various ear conditions, either the acute otitis media so frequently seen in children, or chronic ear conditions which result later in progressive deafness. To these various conditions may be added acute bronchitis, due to an infection travelling down the lymphatic glands from the tonsils, or due to a direct infection from the tonsil itself.

Among the general affections which should be mentioned are the various arthritides, disease of the kidneys, general devitalising conditions of the system and, lastly a lowering of the general tone of the nervous system, resulting in what one may term brain fag.

THE MANAGEMENT OF THIS CLASS OF CASES RELATIVE TO THE TREATMENT

The question is often asked does medical treatment do any good in this class of cases. The use of medicine and strong astringents like nitrate of silver fifty grains to the ounce may be used in certain cases where it is advisable to delay operative proceedures for one reason or another. The local treatment for diseased tonsils is as follows. Repeated applications of Tinct. Iodine may be made to the diseased crypts after forcibly pressing out all the cheesy deposits contained within the crypts or the use of nitrate of silver as I mentioned above in this article. Applications of this kind should never be made unless under the best of illumination, so that none of this solution will get beyond the tonsillar area. No matter what method of treatment is used whether Iodine, Silver nitrate, Tannic Acid, Iron in its different solutions, it is only a make-shift and sooner or later the tonsils will have to be treated by surgical proceedure. Remember that the majority of tonsils that give rise to systemic affection are those which have a deep seated buried abscess which is not connected in any way with the crypts themselves. These cannot be reached in any way except by proper surgical proceedure.

There are two other methods in use for the treatment of diseased tonsils where there have been some good results obtained with the X-ray and Autogenous vaccines.

The X-ray treatment of enlarged tonsils was first practiced at the Rockefeller Institute several years ago. There have been some cases that have been markedly benefitted but these have all been selected cases. However, after all is said and done it is admitted upon all sides that the percentage of cures made by the X-ray will be very small.

What is the value of the administration of vaccines in cases of tonsillar disease, with systemic reactions? In a paper published a year or so ago by Drs. Palmer, Winslow and Hays the statement was made that they did not consider that the vaccine administrations were worthy of consideration in comparison to a well performed tonsillectomy.

The vaccine should be obtained from the pure cultures which are obtained from the superior tonsillar fossa and should be administered every third day, starting with 150 million then giving 250 million and finally 500 million until the patient has had ten doses in all.

Even if vaccines have been used and there is some amelioration in the patient's systemic condition one cannot help but feel that the diseased tissue of the tonsil is still present and there is a possibility in the future that a great deal of trouble will occur.

It is unnecessary to state that Tonsillectomy is of operation of choice. In children a general anaesthetic is always preferable, but what type of operation will be employed will depend a great deal upon the individual operator. There are probably as many types of tonsil operations as there are men who do the operation, but for myself I prefer the snare method to all others. There is little difference in the amount of hemorrhage which occurs as a result of a certain kind of technique, but it does depend upon the skill of the operator and how the operation is per-

formed. In other words a skilled dissection must be done in every case, which certainly will minimize hemorrhage.

Certain precautions ought to be taken before the operation, such as the coagulation time of the patient's blood, and it is a good plan to give the patient beginning several days before the operation calcium lactate sixty to eighty grains in about ten doses. At the time of the operation one should look for any bleeding point. If the bleeding occur from an arterial source the artery should be caught and tied off at once. If the bleeding is from a venous source it is unwise to continually attempt to ligate these structures, because the mass of veins is extremely complex, however, if after ordinary tamponage the bleeding does not stop, particularly if the tampons have been soaked in tannic acid and glycerine or in thromboplastin, have been used, it is then advisable to suture the anterior and posterior pillars together with a 00 catgut, which will slough in the course of twenty-four to forty-eight hours. In making such a suture one must go deeply into the tissues of the fauces so that the muscular parts are brought into contact. I have never encountered a severe hemorrhage but once where there was any great quantity of blood lost and I made the mistake in this case of allowing the patient to be carried from the operating room to her bed without getting her throat absolutely dry before so doing. I think that the great number of hemorrhages that are reported as secondary occuring a few hours after a tonsillectomy are due more to a faulty technique in not tying off the bleeding points before the patient leaves the operating table. I have had post-operative hemorrhages occur as late as the fourteenth day in a patient who lives at Kerens and the cause was undoubtedly due to her eating popcorn, as she was in the city that day and that evening late I was called to her home. In this case Thromboplastin was applied on tampon to the throat and given hypodermically. The patient made a good recovery. In all cases of complete tonsillectomy I prefer the general anaesthetic, but in cases where this is contra-indicated, or is the choice or rather preference of the patient, then the tonsillectomy may be done under a local anesthetic, a one-half percent solution of cocaine freshly prepared to which is added a small amount of adrenalin. Several drachms can then be injected between the anterior pillar and the tosillar capsul, deep into the areolar tissue behind the tonsil rather than into the pillars themselves. The operation under local is done with the same technique as is employed under general anaesthesia. After operation it is imperative that the patient stay in bed a day or two.

The more cases I see and operate upon the more I come to the conclusion that we should keep this class of patients longer in bed than is generally the case at the present time. After operation to remove, or rather to ease, the pain in the throat it is a good plan to dissolve twenty five grains of aspirin in one-half a glass of water and use as a gargle. The aspirin can be mixed with the many throat washes like listerine, liquid alkalinus antisepiticus which are more pleasant than the plain water.

One of the most frequent complications spoken about in medical literature developing after tonsil oper-

ations is lung abscess. It has been my experience that this is a rare complication for in the hundreds of tonsillectomies performed, I have only had one case and this patient was seen by Dr. Moore, his name was Nazlerod and he developed an abscess of the lungs about a week after he was discharged from the hospital. He made a complete recovery and the last time I saw him he was driving a taxi-cab in this city. In my entire practice I have been fortunate in not having a death, but have had frequent collapses with patients on the operating table. I think that I can truthfully say that my number of collapses have been very few and far between since installing the suction apparatus in my tonsil work. This apparatus works in three ways. It eliminates to a larger extent the sponging, prevents collapse from the inhalation of mucous and blood into the larynx, which was frequent before this instrument came into use, and is a preventative to a very large extent to lung abscess. No tonsil operation should be performed without some sort of a suction apparatus. An experienced anaesthetist is of the utmost importance in tonsillar surgery.

The After Treatment.—At the end of the third day I generally put my patients upon a gargle to be used at least three times daily. It is fully a week before the average patient is back to their regular diet again after a complete tonsillectomy. Young children a day or two earlier. I have found by experience that it is a good plan to put adults upon some form of iron for at least a month after the operation. This acts as a general tonic and as the patient often expresses it, shortly after taking iron, gives them a feeling of well-being. Anyway some kind of a tonic is necessary, especially if the patient was run down previous to the operation.

THE OBJECT AND WORKINGS OF "THE PROFESSIONAL RELATIONSHIP COMMITTEE."

By DR. J. R. SCHULTZ,
Charleston, W. Va.

The objective of this committee may be briefly summarized by saying:

First, to educate the people along medical lines until they can differentiate between the genuine and the bogus medical practice, and until the general public will appreciate medical services to such an extent that they will transact business with their medical advisor, as they do with any other business man.

Second, to promulgate any and everything that will be of mutual benefit to doctors in any manner.

Third, to preach cooperative spirit among the members of the medical profession.

It is time that doctors come down to earth. For too long a time their heads have been in and above the clouds. Their thoughts have been indealistic, with no consideration of the realistic world in which they work. The consensus of opinion among people is that doctors have an enormously big income and in most instances physicians enjoy the distinction of being classed with the very rich. Their ethical training is that they are following the profession of their choice purely because of the good they can do and should not plan for the financial remuneration.

You know that doctors as a whole are poor instead of rich. You also soon learn that the professor who taught money only a secondary consideration was teaching one thing and practicing another. How many good honest, conscientious doctors whose locks have been turned silver, and whose bodies are worn out, are still practicing upon every opportunity day or night when they should be enjoying the fruits of a well earned old age, not because they so love their prefession, but because they still must eat. Perhaps that is crudely phrased, but my heart aches when I see one of our honorable old doctors still trying to carry on when his tired and worn body is responding only to the stimulation of financial pressure.

How many doctors' children never have the opportunity for a well rounded education? Because their Daddy, in spite of his parental instincts and father love, held fast to the faith and thought only of other people's welfare. How many wives are left only with the widows mite when the Great Referee counted her doctor out for the final count?

Gentlemen, the above are not overdrawn pictures, they are not myths, they are plain ordinary every day cases and well you know it, if you will drop your pretenses long enough to call spades—spades.

I maintain when you led that young woman to the altar and promised to her and your posterity the best you could give, that you fall short of your obligations when you are concerned only with the welfare of your patient and think not of her and yours.

I maintain that our profession is a high calling, and I am ready to offer resistance to anyone who wants to make its members think of themselves as charity or semi-charity individuals. I maintain that you earn far more than you charge, and you should be ashamed of yourself when with apologetic manner you attempt to collect your fee, rather than as other business men demand their own in a reasonable time. You are under no obligations to your clientel for your fee, provided you rendered service.

This committee's articles to the public will be of such a nature as to focus the public eye on orthodox medicine.

Articles that show the achievements of the past, such as vaccination in typhoid and small pox, as treatment in syphilis and diptheria and as preventive medicine in yellow fever and malaria.

Articles that recount the exacting preparation the medical profession demands of its members, in this way build up confidence.

Articles on preventive medicine that will help to prolong the span of life and reduce morbidity, in this way you will combat your cults and fads for they have been carrying on rational publicity and the medical profession has been maintaining an ethical silence. Have no fear, if the medical profession make a noise about itself long enough and loud enough, your cults will quickly fade from our state.

The last two objects will be briefly discussed together for, nothing of mutual benefit can come except through a close cooperative spirit on the part of the medical profession.

This committee will attempt to break down a custom that will pay cheerfully an attorney anywhere from $10,000 to $100,000 for saving

a criminal from the penitentiary or electric chair, but cry extortion when a physician charges $100 to $500 for saving the life of a valuable citizen. A custom that will pay a baseball player $52,000 a season and think a doctor who gets $10,000 a year has robbed his patients. A custom that will gladly give a broker a commission of several thousand for knowing how to swing a deal, but think several hundred too much for saving a life.

I use the word custom, for custom is all that regulates fees.

It will be our aim to draw the bonds of association closer and protect our common interests. Why should doctors not have a credit exchange in each society so that if Mr. Dead Beat, beats Doctor A he finds that Doctor B knows him and he must pay cash. All mercantile houses have their credit associations. Are there any more reasons that the doctor should sell his time and skill to those who can and won't pay than that the shoe man should?

Again the medical profession does far too much charity. Please in this I do not want to be misunderstood, for I am very much in favor of those who can't help themselves. However, I can see no logic to the medical profession carrying the entire load of sickness of these unfortunate ones. What do we pay our taxes for? Is there any special exemption given to doctors in taxes for this quite a large consumption of our time? Do the grocery stores furnish the poor in your community with groceries, the coal operators provide coal, or the clothing stores hand out clothing without cost? The answer is, of course, no, these are provided for those who can't pay by our county and state. May I ask is our business just as much to us as the above named enterprises are to their respective owners. Do not doctors have on the average as large an investment as the average store? Is there more reward for selling tangible articles than in selling brains? The courts of equity provide the accused if he cannot pay for it with a legal advisor and this attorney is not asked to give gratis his service but is paid by the state. Then please answer why the state through taxation should not pay the doctor a reasonable fee for his work with this class of people, especially since it pays everyone else for theirs.

This committee will try to help doctors in collection of accounts by articles pertaining to this end of his work. There is no more reason for you to allow your accounts to run indefinitely than for the plumber to do likewise. Everybody demands his money from the doctor when due and where they can we too should expect our money promptly and where it cannot be paid at once, we should not be satisfied for everyone else to be paid in full before any payment is made on our account, but should expect our part along with the others. A few days ago I was in conversation with one of the best physicians in this state, a sober hard working, intelligent, conscientious physician, well past the meridian of life and who has been practicing for ten to fifteen years. He told me of having to borrow money because he had to buy a new automobile. I deem this a shame when the average doctor does not have an icome sufficiently large to take away the financial worries of life.

Some may say this a commercial idea and I would ask for no higher compliment. I have devoted much time to study along this line. I know the diagnosis is "too little business principles in our profession." The treatment is the adoption of these business principles. The promulgation and acceptance of this idea has almost become a passion with me.

The cooperative spirit will be strongly stressed because unless the majority of doctors will unite for common good you cannot have a credit exchange nor can you expect any more results in the collection of accounts. Practically everyone in this universe are now organized in an attempt to better their living conditions, save the doctors. The laborer has his trade union, the mercantile houses their credit association, the capitalist his operators association. All these abide by their code and do not attempt to strangle one another. Then tell me why in the name of high heavens doctors do not do likewise?

I have heard quite a large amount of criticisms of the public policy and legislative committee of last year. I was a member of that committee and know its story well. Let me ask you who are loud in your criticism what did you do to in any manner help that committee in its work? Outside of about fifty doctors the rest of you did nothing. You can get laws enacted that will benefit the medical profession only when you as a whole recover from sleeping sickness. Your individual society is the place to start. How many doctors practicing in your territory do not belong to your county and state society and why not? Do you know that in West Virginia there are approximately 1,750 physicians? Do you also know that now there are only 962 paid up members in the State Association. You can't go anywhere in this manner, you must get this other 788 in your society, get them to help. If you offer a united front and interview a prospective candidate about his views on medical legislation you will find he will not ignore you. May I suggest that when he gives you a favorable answer it is well right then to ask him to sign what he told you.

The articles of general interest are now being prepared by 52 doctors in our state. These will be released in 1926. One a week simultaneously throughout the state with no signature save the West Virginia Medical Association, for publication in your local papers. These we expect to run without cost for they will be of such nature that the papers, we think, will accept them as news items.

The artices on collection of accounts if run will have to be paid for, because they carry no general welfare items but are classed as advertisements. The cost of this of course will vary with the advertising rates in your vicinity, the number of papers carried in, and the number of men paying for it. I will say here that in Charleston where we have two papers and the highest advertising rate in the state, that if fifty doctors will pay for this campaign to carry this size space in each paper on Sunday will not cost any one doctor over $1.00 a week. Would a message of this kind be worth $1.00 a week to you? I am heartly in favor of it. Whether you use these or not is up to you.

Your part in this program is to help your committee by giving them suggestions and your whole hearted support. We want each society in

this state to elect at once a live local committee of three men. Their term of office to be one, two and three years respectively. Of course each succeeding year you will elect one man for three years. This local committee will be under the supervision of the State Committee, arrange for the publication of the articles released. This local committee can also arrange the financial end of these articles on collection, etc., if you think best to carry them.

In conclusion let me say what I have said are my most sincere thoughts. I expect to continue to fight for what I consider the doctors rights. As chairman of your committee I am willing to spend my time, effort and money. I pledge you my best. I am at your service. Get behind and help.

"DOCTORS VERSUS FOLKS"

Apologies to DR. ROBERT MORRIS

Dr. A. said: "John Ward, our bricklayer, is going to Florida for the winter. He says he will lay a few brick, and rest up the balance of the time. He can get fourteen dollars a day for working.—I wish I could go."

"Why can't you? I said.

"Because I belong to a bunch of chumps, flat heads" You see the laws of Florida won't permit him to practise. Dr. A. was good enough to practise on Floridianians during the world war, also all others, French, Germans and English. Now things are different.

Of course you jump to the conclusion that this is the malignant work of some Osteopath, Chiropractor, Christian Scientist. Oh no—never. It is the work of the "regular," our own professional brother. It is like the fellow who said that his dog must be good for coons because he was not good for anything else. Doctors are determined to keep someone from practicing medicine. They are absolutely unable to keep the irregular, so they bind fast their brethren.

Dr. B. declared he must be going, he had a $15.00 call to make to Horton. Asking him to wait a moment, I asked my secretary to phone Meyer's taxi and ask the price of a trip to Horton. Meyer's cars are not in very good condition and so far as I know he does not require graduation from a recognized college for his drivers. They do not remain in Horton but immediately retrace their steps. Notwithstanding this, the reply was: "From $15.00 to $18.00." Now Dr. B. is a regular graduate with a preliminary education. He has many years of practice behind him, and is now at his best. He attained considerable rank in the army. Why is he unable to charge more than a taxi driver?

Dr. C.: This man is in very good health ,alert, vigorous. He tells me he is in debt, that he is not making expenses, that on the previous day he collected fifty cents, the day I saw him nothing. He very much desires a location. There are six doctors in the town in which he lives, where there is room really for only one active, one partly retired, doctor.

Readers of this journal will bear me out in the assertion that I have always contended—that we do not need more phyiscians.—A. P. Butt.

THE WEST VIRGINIA MEDICAL JOURNAL

JAS. R. BLOSS - - - - - - - - - - - - - *Editor*

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All original articles for The Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all parts of the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

Advertising forms will go to press not later than the tenth of each month.

All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

Should be made by check, draft, money order, express order or registered letter to Sterrett O. Neale, Executive Secretary, 211 Smallridge Bldg., Charleston, W. Va.

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The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

MEMBERSHIP

With two months of 1925 remaining, a concerted campaign has been started in several component societies to obtain 100 per cent membership before December 1st.

Hundreds of letters to delinquent members and non-members have been placed in the mails and the roster in the office of the executive secretary is growing larger almost daily.

Of much interest is the fact that many new members have been enrolled this year. Others have applications pending and indications are that the goal of 1100 will be reached.

At the time this was written, the list almost has reached the 1,000 mark.

There has been much activity in the sixth councillor district. Logan county already shows an increase over 1924. An effort is being made to obtain a 100 per cent membership in Kanawha county, thus enrolling every eligible member of the profession.

Raleigh county, with two changes of secretaries in the year, now approximately has a 100 per cent enrollment.

Dr. H. G. Steele, councillor from the Fifth district, is acting secretary of the Mercer county society and is working to fully organize his area.

Personal letters have gone forward to doctors in Roane, Jackson, Mason and Putnam counties asking them to affiliate themselves with either the Little Kanawha and Ohio Valley, or Cabell or Kanawha county societies.

Monongalia, Marion, Harrison, Ohio, Marshall and Lewis county societies virtually have a complete membership.

However, there are more than 1,700 doctors in West Virginia. Of this number, the state officials believe that approximately 1,500 should be enrolled in the component societies and the state association.

Accordingly, every member is urged to constitute himself a "committee of one" to obtain membership applications from these non-members. The coming year is going to be one of the most active in state association history, it is believed, and every effort will be put forward to present a united membership of 1,500 strong.

EXAMINATIONS FOR LICENSES

Chiropractors are required to pass the same examinations in fundamental branches of medicine as are the applicants for medical licenses who appear before the Public Health Council.

This was indicated in a previous article in The Journal and borne out by the October examination questions. The Health Council, sitting as the examining board, has ruled that applicants for licenses to practice medicine and chiropractic both must answer the same questions in physiology and histology, chemistry and jurisprudence, bacteriology and hygiene, anatomy and embryology, and symptomatology, pathology and physical diagnosis.

However, in the latter set of questions the chiropractors are required to file written answers to the questions whereas the regular applicants for licenses are given oral, practice and practical tests.

When the chiropractic bill became a law there was considerable speculation as to whether seperate questions would be submitted to the chiropractic applicants, questions different from those submitted to the applicants for medical licenses. In the first examination, the questions were the same and they will be the same in the future.

The health council, according to Dr. W. T. Henshaw, secretary, holds that for obvious reasons applicants for licenses should be required to pass the same test. There will be no discrimination.

There are a large number of chiropractors in West Virginia who have twice failed to pass the examining board's tests. Those who failed

the first time had their last chance at the October examinations and if they failed then must close up shop.

That is the health council's ruling, concurred in by T. I. Morgan and J. N. Monroe, the chiropractic examiners on the public health council, according to information available after the close of the October sessions.

While actual figures are not available, examination papers not having been returned, it is estimated that a total of less than 75 chiropractors will be eligible to practice their so-called art of healing under state license. A large number will be required to close their offices and either seek some other means of livelihood or migrate to some other state where health laws are more lenient.

It has been indicated also that the state department of health is contemplating a clean-up. The law will be brought to bear upon violators of the medical practice act as well as those who would continue to practice chiropractic or osteopathy without a license, it is said. All others who would treat the sick must be licensed under one of these acts or stand prosecution.

There is to be nothing in the line of persecution of any person, according to advance reports, but there is going to be a sharp demand that West Virginia be rid of those persons who are not authorized by law to treat the sick. It is expected that a definite announcement will be forthcoming from the state department of health in the near future.

For the benefit of the medical profession, the executive secretary's office has obtained a complete set of the questions submitted to applicants for medical and chiropractic licenses.

A RELIEF REGISTER

Because of the large number of calls for relief men, it has become necessary for the Executive Secretary's office to create a register upon which it is hoped that the names and addresses of all men willing to do relief work will be inscribed.

The plan briefly is this:

1. Doctors willing to engage in relief work will please send in their names and addresses; also their telephone numbers to the Executive Secretary's office, Charleston, W. Va.

2. These names are to be inscribed upon a book, and the whereabouts of the doctor and the length of his relief services will be indicated.

3. All of those who avail themselves of this service naturally will have to keep the Secretary's office appraised as to their movements and the approximate dates upon which they will be available.

We certainly hope that all of the members who do relief work will avail themselves of this service and keep constantly in touch with the Secretary's office.

There have been more than a dozen applications for the services of a relief man within the last three weeks, and as this is being written, October 16th, there is a doctor who is seeking someone to substitute for him during the entire month of November.

It also is hoped that once this register is working properly that all members in need of relief men will notify the Executive Secretary's office immediately. Of course, if the Secretary is not able to supply the need immediately, recourse may be taken to the Clearing House Column of the Journal, where an advertisement can be carried for the small sum of $1.00 a month.

COFFEE DRINKING BY CHILDREN

Coffee drinking by children has long been regarded with disapproval by pediatricians. There are a number of objections to the practice among which its harm to the nervous system is important. It is entirely conceivable that the use of caffein-containing beverages by the child will lead to the production of serious nervous defects later in life.

In their recent book, "Safeguarding Children's Nerves" (1924), Doctors Walsh and Foote clearly indicate that there is an increasing nervous instability of American people as demonstrated by the failure of many of our troops to withstand the stress and strain of active service. These writers believe that the numerous cases of shellshock which were suffered by many American soldiers in the World War were nothing more than cases of hysteria. It is possible that the early use of coffee has had a contributing part in causing the lack of nervous balance that is exhibited by so many adults in this country.

The drinking of coffee in the United States is steadily increasing, and the average annual consumption now amounts to thirteen pounds or more per capita. No small portion of this coffee is used by children, as shown by a study of the diet of a large number of children of preschool age at Gary, Indiana. This survey was made by the Children's Bureau of the United States Department of Labor. The report mentions that "two-thirds of the entire group were found to drink coffee habitually, and forty per cent to have it more than once a day. Not only so, but in certain of the groups of foreign-born parentage, coffee was drunk by more than ninety per cent of the children, and three-fourths of the Polish group had it two or more times a day."

In 1912, C. K. Taylor, a psychologist, made a study of coffee drinking by school children. He found that out of a group of 464 children, over seventy per cent of them were coffee drinkers. Moreover, and more important still, he discovered that those children who drank the most coffee received the lowest grades. There is no doubt but that coffee drinking by children is generally deleterious to the nervous system of the child. But the greatest harm done to children by this drink is its replacing milk in the diet. The Gary report, referred to above, states that coffee drinking by children "appears to have been inversely proportional to the use of milk. Not only do the schedules show about the same percentage of children drinking coffee as those lacking milk, but a comparison of coffee drinking by milk groups shows the use of coffee to increase markedly as the amount of milk decreases." Commenting upon the disastrous effect of replacing milk by coffee, the report states further. "To leave out milk and substitute coffee plays havoc with any diet, whatever may be its redeeming features."

It is a well known fact that children easily acquire a taste for coffee and are less willing to drink milk after being permitted to use coffee. Miss Lucy H. Gillett, Superintendent of the Nutrition Bureau of the New York Association for Improving the Poor, says in this connection that "children should never be given tea or coffee, not even to flavor milk.

They will more often like milk if they are not first taught the combination of milk and coffee."

There are two important reasons why coffee should not be given to children . First, it has the harmful effect of crowding milk out of the dietary of the child. Second, it is an undesirable and unneeded stimulant.

In view of the fact that a large number of American children, especially in the industrial classes, are coffee drinkers, the matter is worthy of serious consideration.

THE CLOTHES OF SCHOOL CHILDREN

An editorial appears in the Cleaning and Dyeing World, which causes one to pause. The editorial in question is by a layman, John L. Corley, yet it might be written by a physician.

One of his children contracted measles and later pertussis by contacts in school. The conclusions given as to the manner of conveyance of these infectious diseases are certainly pointed.

He makes a most excellent and generous proposal to the cleaners and dyers of the country. Briefly it is that the week following Christmas be set aside for the purpose of cleaning and rendering sterile the clothes of all children in school, at the actual cost of so-doing. And that poor children be served in this way absolutely free of all cost.

It is to be hoped that the West Virginia physicians will encourage this movement in all ways possible.

It is a worthy movement.

COUNTY SOCIETY REPORTS

The Barbour - Randolph - Tucker County Medical Society met at Elkins in the Hotel Tygart, September 30th, 1925, at 8 p. m. Those present were Doctors B. I. Golden, A. S. Bosworth, W. S. Magill, C. A. Grooms, O. L. Perry, S. G. Moore, C. H. Hall and J. C. Irons. Visitor Dr. Swan, D. D. S. Dr. Golden presided. Minutes of previous meeting read and approved. A communication from A. M. A. relative to Physician's Auto Emblem was read. Owing to small attendance definite action was deferred.

Dr. Golden suggested that the interest of the Society might be increased if a committee were appointed to outline a tentative program for the ensuing year. After discussion the plan was approved, and the committee was in part appointed. Dr. C. A. Grooms, Dr. S. G. Moore, Dr. C. H. Hall, Dr. J. L. Miller, Dr. S. F. Holsberg.

The members from Phillipi, Belington and Mill Creek taken under advisement.

On motion Dr. Kahn of Baltimore is to be invited to visit the Society in October, Dr. Philips of Wheeling as alternate,—Society to pay necessary expenses and a supper preceeding the address of the guest, each member paying for his supper,—all to use earnest diligence to secure a good attendance of all our members, and invite neighboring societies to visit us on said occasions.

The secretary was directed to divide the list of members on roll into four sections, assigning a section to the following members, — Drs. Grooms, Perry, Hall and Moore.

Dr. Perry read a paper explaining the nature and character of the film for public education, entitled "Play Safe," free except expressage. Dr. Perry was authorized to secure the film for the public school auditorium, at expense of the Society. At the suggestion of the President the Secretary was directed to write Judge Hon. H. Roy Waugh, and Pos. Attorney R. S. Irons, our commendation for their willing efforts in enforcing the law in regard to medical practice, with the assurance of our hearty approval and support.

Dr. Moore gave an interesting talk on his experience and observation in the use of Insulin in the treatment of diabetis, for a period of about two years,—citing cases in demonstration.

1. An aged man who was almost prostrated, unable to do any work, and who apparently was doomed to early death. On Insulin treatment he soon began to improve, strength gained and today he is able, with use of regular doses of Insulin, to go about his business with ease and comfort.

2. A woman diabetic using Insulin seemingly in fair health, during Christmas season yielded to the tempting viands of the season, eating cake and candy, with the subsequent attack of drowsiness, coma etc., but when dieted and placed on insulin soon recovered and is now in fair health and wiser than to be tempted to yield to appetite.

3. A child about five years old, poorly developed, anemic, and weak, had four to five times the amount of normal blood sugar. On Insulin treatment two years is now developing normally, is in school, seemingly in normal health.

4. A man (73) diabetic with Arterio-sclerosis, under Insulin treatment seems to have gained much, is doing well, but as he lives a distance from here, I do not have late information.

5. One case of pneumonia, diabetic, ordinarily hopeless, but with use of insulin had good progress and recovery.

Dr. Moore said mild cases may be treated successfully by dieting, without use of insulin, especially the aged. He also reminded us that Insulin is not a cure, but only a means of assisting nature to supply a deficiency, and may have to be used often if not constantly. He said in his opinion Insulin was one of the greatest achievements of medical science of this age. Many lives are saved by its use, still many die because the physicians or the patients fail to apply the remedy, which may be easily secured, is comparatively cheap, and easy to use with little pain, and less danger of bad effects. He suggested that it should be a criminal offense for physicians not to resort to this remedy when having a bad case of diabetis.

He said he usually gave the Insulin about fifteen minutes before meals, and usually within two days sugar disappeared from the urine. He never had any bad local effects from using Insulin. No abscesses, but little pain, and generally the patient acquires a tolerance, and does not dread its use. The patient should be educated as to the approximate diet as to quality and quantity.

If in any circumstances a diabetic should be unable to obtain Insulin, he should promptly cut his diet by almost one-half. In case of over use producing acidosis instruct to take

milk freely, eat candy or sugar, and soon the condition is overcome.

Dr. Golden said he had treated one of the cases who had a badly lacerated *hand,* and usually wounds of diabetics are slow to heal or difficult to heal at all, but in this diabetic who had used Insulin, the wound healed nicely.

Dr. Groomes recalled two cases who had ulcers, being diabetics, and both of whom promptly healed when put on Insulin treatment.

On motion the October election of officers for the ensuing year was postponed until the December meeting.

On motion, adjourned.

J. C. IRONS, *Secy.*

STATE AND GENERAL NEWS

B. R. T. NEWS NOTES

Dr. Max Kahn of Baltimore was the guest of the Barbour-Randolph-Tucker Medical Society on the 15th of October. He read a very interesting paper on *"Bone Tumors"* illustrated by slides. Dr. Kahn has great faith in the proper use of X-Ray in treating inoperable cancers.

Dr. W. S. Michael has moved from Norton to Elkins, for the winter.

Dr. O. L. Perry is visiting the land of flowers for rest and vacation. Doubtless he will devote some time to fishing — from reports "Many Suckers" are being "Caught."

Dr. W. W. Golden, wife and daughter, Helen, are now in Elkins for a short visit. Mrs. Golden and Helen spend much of their time in Baltimore, and Dr. W. W. Golden has relegated most of his hospital work to his son Dr. B. I. Golden, who seems well able to take care of the work.

Dr. A. H. Woodford of Belington and E. L. Woodford of Horton have just recently returned from Florida, having driven through in auto. We have not heard whether they took any of the sucker bait—though it is abundant.

Dr. B. L. Liggett of Mill Creek, after mature deliberation, cast off his bachelor robes for matrimonial regalia, and he is now only regretting he delayed so long. His partner in this new relationship is Miss Cameron, daughter of Dr. W. T. Cameron of Mace, W. Va. Here's to the health, happiness and prosperity of Dr. and Mrs. Liggett.

Dr. C. B. Williams is health officer for Barbour County. He is quite busy in seeing that the sanitary conditions of our public schools are kept in proper condition. Largely through his efforts, with the assistance of Miss Munson, the School Nurse, there were nearly 100 tonsilectomies in Barbour county last summer, Dr. O. S. Gribble of Clarksburg operating. I have seen several of these thus treated, and find their general health much improved, and parents and teachers all tell me that they progress much more satisfactorily with their studies than in the past. A very large proportion of these children had adnoids removed also. Judging from observation of the success of this work in Barbour County every health officer should follow the lead of Dr. Williams, in having a "tonsil clean up" every year.

J. C. IRONS, *Secy.*

Dr. C. L. Holland of Fairmont, has been taking some Post Graduate work in Pediatrics in the University of Pennsylvania under Dr. J. C. Gittings.

The following is a list of the questions of the Public Health Council for candidates to practice medicine or chiropractic:

PHYSIOLOGY AND HISTOLOGY

(*both*)

1. Where in the human body are the following substances found: (a) Mucin, (b) chondrin, (c) lucin, (d) fibrin?
2. How is asphyxia produced, and what are the causes of death from asphyxia?
3. What are the functions of the pancreas?
4. Define and differentiate secretion and excretion.
5. What physiologic laws are the basis of rectal feeding in diseases?
6. What conditions produce variations in the normal temperature of the body?
7. What is meant by the condition of tetanus in a muscle?
8. State the function of (a) the vas deferens, (b) the vesiculae seminales, and (c) the prostate gland?
9. Name the superficial reflexes and the deep reflexes.
10. Describe the Babinski reflex, and explain its significance.
11. Name the principal centers of organic function in the medulla oblongata.
12. Describe color blindness and name the colors which the subject commonly fails to distinguish.

J. L. Pyle, M. D.,
Oct. 13, 1925. *Examiner.*

CHEMISTRY AND JURISPRUDENCE

(*both*)

1. What is chemical formula of Iodoform and of what is it a derivative?
2. What is chemical designation and formula of nitro-glycerin? How is it manufactured. What are its uses in medicine?
3. What is an alcohol? Describe the chemical process of the preparation of alcohol.
4. What elements enter into the composition of all alkaloids? Name two.
5. What is Organic Chemistry? State general properties of organic compounds.
6. Name and give the symbols of the substances called Halogens.
7. Where does Sodium occur in Nature? Give name and formulas of three sodium salts.
8. What is Boron and from what is it obtained?
9. How determine when body is dead? (for physicians only.)
10. How determine if child is born dead or alive? (for physicians only.)
11. (a) Explain the terms solution, (b) precipetate, (c) Incompatible, (d) Nascent state, (e) alloy.
12. Give difference between a physical and chemical change, and example of each.
13. What is a chemical reagent?

Answer any ten questions.

O. H. Jennings, M. D.
Oct. 13, 1925. *Examiner.*

BACTERIOLOGY AND HYGIENE

(*both*)

1. What micro-organisms are most often found associated with suppuration?
2. Name diseases of known bacterial origin.
3. For what is the Dick Test used?
4. Define a toxin. Define an antitoxin.

5. Define Hygiene.

6. Give incubation period of Epidemic Catarrhal Fever, Diphtheria, Variola, Varicella, Measles, Rubeolla, Pertussis, Parotitis, Typhoid Fever.

7. After diagnosing a contagious disease what is your first duty to the State?

8. Upon receiving a license to practice your profession in West Virginia what are you first required by law to do with it?

9. Upon diagnosing a case of Typhoid Fever what are your instructions to the Nurse and Family?

10. How would you disinfect a room 10x15x10 after a case of Scarlet Fever?

11. Name diseases that can be stamped out by proper hygiene.

12. Give two ways that impure water may be made safe for drinking purposes.

H. A. Barbee, M. D.
Oct. 13. 1925. *Examiner.*

ANATOMY AND EMBRYOLOGY (*both*)

1. What are the Anatomical factors concerned in maintaining the kidney in its normal position?

2. Give position and brief description of the Broad Ligament, naming the structures entering into its formation and the organs intimately connected with it.

3. Name and give relative position of the structures passing through the Diaphragm.

4. What are the Anatomical factors contributing to the development of Hemorrhoids?

5. Name the varieties of Cartilage and give examples of each variety.

6. What is Meckels Diverticulum, where is it usually located?

7. Describe the muscular coat of the Stomach.

8. Name and locate the Bursae about the shoulder joint.

9. What nerve is frequently injured by a fracture at the middle of the Humerus, and what is the resultant paralysis indicating that this nerve has been injured?

10. Describe, briefly and in a general way, the nervous mechanism by which sensory and motor impulses are transmitted between the spinal cord and the Abdominal Viscera.

11. How does the Foetus receive nourishment before the formation of the Umbilical cord?

12. What formation in the Embryo presents the first appearance of the Spinal Canal?

W. M. Babb,
Oct. 13, 1925. *Examiner.*

SYMPTOMATOLOGY, PATHOLOGY AND PHYSICAL DIAGNOSIS

(For chiropractors only, regular applicants being given oral, practical and practice tests.)

1. What are the most important symptoms in Scarlet Fever?

2. What are the first symptoms of Acute Pneumonia?

3. Differentiate, Hepatic from Renal Colic.

4. What are the symptoms of Laryngismus Stridulus?

5. Give symptoms and pathology of Herpes Zoster.

6. Give pathology of Locomotor Ataxia.

7. Differentiate, Friedreich's Ataxia from Locomotor Ataxia.

8. Give pathology of Edema of Lungs.

9. If the Ulnar Nerve is cut which of the fingers are paralyzed?

10. Locate, McBurney's point and of what diagnostic importance?

11. In what part of the body is Odema most apt to appear

1st. Disease of Heart,

2nd. Disease of Liver.

3rd. Disease of Kidney?

12. Give location where normal Heart Sounds are best heard.

In what direction are Heart Murmurs transmitted and where best heard

1st. Aortic Sound,

2nd. Mitral Sound,

3rd. Pulmonary Sound,

4th. Aortic Reguritant Murmur,

5th. Aortic Stenotic Murmur,

6th. Mitral Reguritant Murmur,

7th. Mitral Stenotic Murmur.

H. A. Barbee,
Oct. 13, 1925. *Examiner.*

SURGERY

1. Classify wounds. Outline treatment gun shot wound of chest inflicted by pistol ball.

2. Give signs and symptoms of intra-cranial pressure, treatment.

3. Classify Goitre, treatment toxic adenomatous type.

4. Give indications for transfusion of human blood.

5. Give diagnosis of hemorrhage into abdominal cavity several hours after an abdominal operation in which no drainage was used.

6. What is chancroid? Outline treatment for this condition.

7. How would you treat a patient age 70 who had an inpacted fracture of the neck of the femur.

8. Upon what signs and symptoms would you make a diagnosis of rupture of the urinary bladder.

9. Give diagnosis of congenital lues.

10. Give treatment tuberculosis of hip in a child six years old.

11. What is the difference between inflammation and conjestion?

12. What blood vessels must be ligated in an amputation at the middle third of leg?

Answer any ten questions.

H. G. Camper, M. D.
Oct. 13, 1925. *Examiner.*

MATERIA MEDICA AND THERAPEUTICS

1. Give the official preparations and doses of Arsenic.

2. Give the adult dose of the following drugs: Strychnine Sulphate, Morphine Sulphate, Bichloride of Mercury, Atrophine Sulphate, Mild Chloride Mercury.

3. (1) Name two expectorant drugs with adult dose of each. (2) Name two sedative drugs with adult dose of each.

4. Give the chemical and physiological antidote for the following drugs: Strychnine Sulphate, Arsenic Trioxide, Bichloride of Mercury, Phenol.

5. Give the physiological action of digitalis and outline its therapeutic indications.

6. Give the physiological action and therapeutic indications for opium.

7. Give the physiological action of belladonna and outline its therapeutic indications.

8. Outline medicinal treatment gastric ulcer.

9. Give indications for use of the Nitrites.

10. Outline treatment of erysipelas.

11. Outline treatment uremia.

12. Explain value of counter- irritation.

Answer any ten questions.

H. G. CAMPER, M. D.
Oct. 13, 1925. *Examiner.*

SPECIAL MEDICINE

1. Differentiate iritis and glaucoma, giving symptoms of each.

2. Define hydrothorax, give etiology, diagnosis and prognosis.

3. Give differential diagnosis between hysteria and epilepsy.

4. Give causes and symptoms of ascites and indicate how to recognize by what disease it is produced.

5. Give indications and contra-indications for tracheotomy and intubation.

6. Describe choked disc and what diseases we may expect to find it.

7. Give the diagnosis and treatment of acute suppurative otitis media.

8. What is hydrocele? Describe operations for its cure and describe your choice.

9. In nephritis where does the effusion of serum first appear? In cirrhosis of the liver, where? In cardiac disease, where?

10. Discuss Hodgkins disease.

11. Give symptoms, diagnosis and treatment of gonorrheal conjunctivitis.

12. Name four diseases which you consider there is specific treatment. Write prescriptions for each.

B. O. ROBINSON, M. D.
Oct. 13, 1925. *Examiner*

OBSTETRICS AND GYNECOLOGY

1. Describe the vitellus, the allantois, and the amnion.

2. Divide pregnancy into three periods of three months each, and give the signs of the condition which are developed in these periods.

3. Give the etiology, symptoms, and management of albuminuria of pregnancy without structural kidney lesions. What is the prognosis?

4. What are the danger signals of impending eclampsia?

5. Define abortion, miscarriage, and premature labor.

6. Give a description of the three stages of labor.

7. What are after pains, state cause, and give treatment?

8. Give the cause of adherent placenta.

9. Give the obstetric land-marks of the superior, and inferior stratis.

10. What powers may be exerted by the forceps?

11. What is the puerperal state?

12. Upon which side is the new born infant placed?

J. L. PYLE, M. D.
Oct. 13, 1925. *Examiner.*

PRACTICE AND PEDIATRICS

1. Differentiate between Dyspnoea of Bronchial Asthma and Dyspnoea associated with Cardiac failure.

2. Name three conditions causing Haematemesis.

3. Name six diseases in which the blood findings afford definite diagnostic information and give the findings in each instance.

4. Give Hygienic management and treatment of Acute Labor Pneumonia.

5. Give management and treatment of Acute Gastro-Enteritis in a bottle fed infant six months of age.

6. Name four things to which general enlargement of the abdomen may be due.

7. Give Etiology, Pathological Anatomy and symptoms and Urinary findings of Acute Glomerular Nephritis.

8. Give symptoms and diagnosis of Rickets.

9. What are the most important waste products to be considered in the investigation of impaired Kidney function?

10. Differentiate between the Rashes of Urticaria, Varicella, Scarlatina and Measles.

11. What parts beside the pharynx are frequently attacked by Diphtheria?

12. What are the factors involved in the production of Abdominal Tympanites?

W. M. Babb,
Oct. 13, 1925. *Examiner.*

A set of the questions submitted by the chiropractic examiners for their own applicants has been obtained. The list follows:

CHIROPRACTIC PHILOSOPHY AND PRACTICE

1. What vertebrae have peculiar names?

2. Differentiate between curve and curvature.

3. Name the important steps in preparing a case record.

4. Is vertebral subluxation the sole cause of nerve pressure? Explain.

5. What is a specific adjustment?

6. Can a subluxation ever be reduced with one adjustment?

7. What segments of the cord innervate the stomach?

8. What portion of the vertebrae would you use as a lever in rotatory scoliosis?

9. What are the chief factors involved in giving a correct adjustment?

10. What is necessary for correct palpation?

11. Why is the third cervical hard to palpate?

12. Which is the weakest portion of the spine?

Answer ten questions.

J. N. Monroe, D. C.
Oct. 13, 1925. *Examiner.*

CHIROPRACTIC ANALYSIS

1. Name five acute infectious diseases of childhood and give chiropractic prognosis in each.

2. Make a diagnosis of Chorea.

3. What is the chiropractic prognosis in the following: Paralysis Agitans; Tic Douloreux; Cerebral Abscess; Hydrocephalus; Influenza?

4. Define Agina Pectoris.

5. What bone changes take place in Rickets?

6. Define menorrhagia.

7. When is amenorrhea present physiologically?

8. What do you understand by vicarious menstruation?

9. What are some of the symptoms of uterine cancer?

10. Name ten pathologic conditions which CANNOT be effectively dealt with by chiropractic.

11. Make a diagnosis of Renal Calculus.

12. Make a diagnosis of acute Laryngitis.

Answer ten questions.

J. N. MONROE, D. C.
Oct. 13, 1925. *Examiner.*

ADJUSTING

1. What is the first essential requirement for both patient and adjuster in giving a successful adjustment?

2. What is meant by point of contact, when referring to a chiropractic adjustment?

3. At what point would you adjust, attempting to correct a given curvature?

4. Describe the procedure when adjusting a cocyx with an anterior subluxation?

5. Describe a typical cervical, dorsal and lumbar vertebra?

6. Describe an adult sacrum. With what does it articulate? Name the articulations.

7. Name three points of contact which may be taken adjusting a lumbar vertebra.

8. Assuming a patient refusing to give history of case, or give any sumptoms: Give in full your procedure in palpating and adjusting such a case.

9. You have a seventh dorsal subluxated to the left and inferior. From what and toward what direction would you adjust?

10. Name four articulations in the spinal column.

T. I. MORGAN, D. C.
Oct. 13, 1925. *Examiner.*

PALPATION AND NERVE TRACING

1. What is the purpose of nerve tracing. What may be determined by tracing a tender spinal nerve?

2. Describe a kyphosis, lordosis, scoliosis, rotation.

3. How would you determine an ankylosed condition in the spine?

4. What is the difference between a subluxation and a luxation?

5. Do any spinal nerves have direct connection with any vital organs of the body; if so name the organ or organs?

6. In how many directions may a coccyx be subluxated?

7. What is the difference between a spinal curve and a curvature?

8. Classify the movable segments in a normal human spine. How many segments in each section?

9. In what particular does the Axis differ from all other vertebrae?

10. What is the difference between the normal adult sacrum and the normal infant sacrum?

11. Over what nerve are mental impulses transmitted to the heart and lungs?

12. Designate by letters the directions in which a dorsal vertebra may be subluxated?

Answer ten questions.

T. I. MORGAN, D. C.
Oct. 13, 1925. *Examiner*

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INTRA-CRANIAL HEMORRHAGE OF THE NEW-BORN

By DR. PHILIP F. BARBOUR
Louisville, Ky.

Read Tuesday, June 9, Before the Fifty-eighth Annual Session of the West Virginia State Medical Association, at Bluefield, W. Va.

There is no time in life that is fraught with so much potential danger as the few hours occupied in the processes of birth. Life itself hangs by a slender thread but life connotes more than mere existence. Intracranial hemorrhage may be insignificant or its damage may result in permanent paralysis or mental impairment or moral degeneracies which affect not only the child itself but its family and eventually embraces the State in its sociologic and economic relations, for these children often become wards and dependents of the State and may procreate a large and growing list of defectives and degenerates that will parallel the celebrated Jukes family.

Intracranial hemorrhage in the newborn may be due to trauma, or to asphyxia or to certain dyscrasiae. Of these traumatism is probably the largest factor for reasons that are perfectly obvious. Hemorrhage may occur from tearing the small veins which empty into the large sinuses. On account of the positions of the sinuses they must endure much distortion from the overriding of the sutures and the molding of the head. The small veins from the undeveloped and exceedingly jelly-like gray matter have no supporting tissue, not even the pia, for an appreciable distance, and therefore are especially prone to break. It is possible also for the branches of the middle meningeal artery where they cross the coronal suture to be torn; with this difference, however, the arterial hemorrhages are usually extradural but they are very much more rapid and death will usually result before any diagnosis

is arrived at and would be difficult of relief even if diagnosed early. A common source of hemorrhage is the tentorium and the falx. Postmortem records show how frequently a tear in these tissues results from severe labors. Whatever the special cause, the venous hemorrhages may rapidly or only slowly give rise to symptoms, but the point at which the hemorrhage has occurred has a very important bearing upon the symptoms which the baby will present and also upon the treatment and the prognosis. The hemorrhage then may be over the cortex of the brain, supratentorial, or at the base, intratentorial or at times may fill the lateral ventricles from the choroid plexus, and the symptoms will differ accordingly. This view of the origin of hemorrhage is the one held by most obstetricians and must be accepted for a large number, if not all the cases of this lesion.

Many pediatricians hold to the view that the hemorrhage is due to the asphyxia which comes from the hard labor and which changes the character of the blood, making it less coagulatable. There can be no doubt that the venous stasis and congestion following asphyxia increase the tendency to hemorrhage. It is thought that asphyxia produces small punctiform hemorrhages or oedematous spots in the brain as it does in other organs. It is very difficult however to evaluate the different factors for the severe and prolonged labors are just the ones which are most liable to cause trauma and at the same time to exaggerate the asphyctic condition. It is important that this conflict of ideas be resolved at an early date. If asphyxia is the main factor then it would seem to be best to hasten the stages of labor as rapidly as possible. On the other hand if trauma is the factor then we should strive to secure a gradual molding of the head so as to prevent those sudden displacements of the bones and acute tension upon the tentorium which is so likely to cause a tear in it. Neither theory is entirely adequate, for hemorrhages have occurred in the premature, after very brief labors and sometimes after a cesarean section.

Certain dyscrasiae have also been cited as causes—syphilis, tuberculosis, hemophilia, and the hemorrhagic disease of the newborn which is a real clinical entity about which our knowledge is meager to say the least. There are undoubtedly many children whose bleeding time and blood clotting time have been very far above the normal Rodda has shown that this clotting time may extend from eight to ten minutes and even longer, and has devised a simple test which may easily be made. But as yet we are in the dark as to the cause and we are not in a position to use preventive measures. It is possible however that certain toxic states of the mother are the agents. Some have asserted that a bacillus coli infection of the mother's blood is a large factor. Such an infection could easily arise during the later stages of gestation.

There is a characteristic difference in the symptoms according to the location of the hemorrhage. When this takes place above the tentorium the baby will be very fretful and uneasy and cries continuously. It does not sleep or rest. The fontanelle will be bulging and various spastic twitchings and grim-

aces will often proceed pronounced convulsions, which will be unilateral and finally bilateral. Hemorrhage below the tentorium on the contrary produces drowsiness or stupor and the vital centers which lie in the medulla oblongata bear the brunt of the pressure. There will be irregular respiration and pulse rate, cyanosis, retracted painful neck, and vasomotor disturbances. Deglutition will be difficult; in fact one of the characteristic symptoms will be the inability to get the baby to nurse. If the hemorrhage only gradually increases, these symptoms become more pronounced from day to day. Foote speaks of an adder-like projection of the tongue as being quite suggestive. Many of the symptoms upon which we rely for diagnosis of pressure upon the brain in older children and adults, such as the pupil reactions and the reflexts, patellar, etc., are of little if any value in babies because the nerves themselves are not myelinated except those that are fundamental to life. The inadequate reflex system may give misleading information if we forget the developmental differences of early life.

The permanent injury which may and does result from these hemorrhages are easily deducible when we recall the associations between the localized hemorrhagic spots and the underlying brain and we can readily understand the permanent paralysis with spasm and contractures, the hemi- and paraplegias, the idiot, imbecile or high grade moron, or those unknown lesions which are responsible for moral degeneracies, the social misfits, the criminal and the insane. It is a real moot point whether death is not far better than a life that is to be so crippled.

If recognized it seems rational to try to relieve the brain pressure if possible. The clot, that is eventually formed, by its pressure must result in degenerative changes in the gray matter, in addition to the original traumatic effects. There is, however, an apparent ability of the tissues to absorb this blood without any recognisable after-effect, and certain experienced men believe in a laissez faire therapy. The removal of the effused blood is however so easy and with so little danger that it seems demanded in most cases. Lumbar puncture is not usually difficult if one remembers the anatomy, and will relieve the tension in the brain and cord in most cases. It may be repeated as often as the symptoms suggest it. In cases of supratentorial hemorrhage the spinal fluid will not always show macroscopic blood and yet the relief of the pressure will be verified by the improvement in the baby's condition.

Puncture may be done into the cisterna magna but it is a little more difficult and is not devoid of danger for the medulla lies underneath the point of the needle; sudden movement on the part of the child may have serious consequences. Anatomists tell us that there are venous plexuses in the median line of the cord anteriorly and posteriorly which may confuse the results. A major hemorrhage over the cortex of the brain may be reached by a needle through the anterior fontanelle as may also a ventricular hemorrhage if it is recognized. Decompression may also be tried but the results from these more elaborate methods have not been quite

so satisfactory, probably because the trauma to the gray matter has been too great to allow any remedial effect from any procedure. There is an urgent need for a very thorough study and record of these cases to enable us to evaluate the methods of treatment. Lumbar puncture and other methods of relief have been in use only a few years and we have not had time yet to ascertain or observe the remote after-effects.

Hemorrhagic disease of the newborn introduces another angle to the treatment. These cases continue to bleed after the puncture has been made and blood removed. There are certain changes in the blood which come from unknown causes and it is probable the prothrombin is deficient. There does not seem to be a lack of calcium. Usually an injection of whole blood into the buttocks, five or more c. c., which can be repeated, will be satisfactory or citrated blood injected into the peritoneal cavity is possibly more certain. Injections of blood into the longitudinal sinus are hardly justified in untrained hands.

It is the special duty of the general practitioner, who after all is the most frequent if not the greatest obstetrician, to give special attention to these cases. He should watch closely the toxemias of the mother and try to prevent this tendency to bleed. He should be prepared to recognize the symptoms of hemorrhage in the baby and to give it prompt relief, for there is no question that hemorrhage at birth is one of the causes of neonatal death. Its early recognition paves the way for relief and the prevention of all that train of neurolgic disaster which can be prevented only in the first few days of life. Afterwards it is too late.

* * *

Discussion

Dr. J. Howard Anderson, Marytown:

Does the administration of pituitrin to the mother, prior to the birth of the child, have any effect or any tendency in causing hemorrhage in the new-born?

Dr. Barbour: I can give you the word of Dr. De Lee, of Chicago, who believes that pituitrin is a very active factor in producing hemorrhage of the new-born. Anything that tends to hasten labor will tend to cause hemorrhage. Dr. De Lee is very much opposed to the administration of pituitrin in these cases, or in any cases in which hemorrhage might be caused.

Dr. C. O. Henry, Fairmont: I was very much interested in Dr. Barbour's paper. It brought to my mind a case which I attended more than thirty years ago. A short time after birth the child developed paralytic seizures. It was a long, protracted labor. This thing happened before all these things were found out. That boy is still living, grown to manhood now, more than thirty years of age. He has partial paralysis of the left arm. Everything has been done except what I thought all the time ought to be done, that is trephining or proper examination of that brain to see if there is any pressure there from any bones to cause those paralytic seizures. This is a long drawn out case. I do not know whether Dr. Barbour would be willing to tackle a case like that to see if anything can be done. Many times these things affect the mentality of the new-born. This has affected his

mentality; it is not what it ought to be. I have always been interested in the case, because it was my case. It happened a good many years ago, before some of the medical men here were born. I should like to have Dr. Barbour say whether he thinks anything could be done for that boy.

Dr. James R. Bloss, Huntington: We shall have a lot of interesting papers and a lot of important ones during this meeting. There will be none which will be of greater importance to the profession than this paper of Dr. Barbour's. When I was connected with the State Hospital, fifteen or eighteen years ago, we always tried to find out, in cases of idiots, imbeciles, and paralytics, what kind of labor the mother had at their birth. It was very difficult for us to get any definite or accurate reports on this, but in those cases where we were able, we were struck with the frequency of prolonger labors or forceps deliveries, or versions. Of course, at that time I was interested in nervous and mental work, and was not giving it the thought that I would today. For a number of years I have been in general practice and have done a good deal of obstetrical work. I stand before you very humbly when I think of my sins of omission in this particular thing of which the doctor spoke. I am reasonably sure that a good many babies would be alive today had I realized at the time what had happened to them. In the last year or so we have been paying more attention to it. Frankly, I do not think I have done lumbar punctures when they should have been done, even within the last year or so. I, personally, am convinced that a great deal of the mental defectiveness is caused by these hemorrhages at birth, which are very minute, not sufficiently great to cause paralysis, or even much difficulty in nursing. It will only be possible for us to prove this contention after a long series of cases, extending over a period of twenty years or more, for the simple reason that we shall not be able to tell how these individuals are going to depart from the normal standard of thinking and feeling and acting under the ordinary stimuli of average life. The more I think about it, the more I am convinced that many of our citizens of criminal tendencies are not criminals, but are defectives because of birth trauma, perhaps because of minute hemorrhages in those portions of the brain which are not motor, but which are the psychic centers, as it were. The responsibility of this particular thing rests upon us general practitioners, who are the principal obstetricians, if not the best ones. I hope that all of the men here will take home with them—I know I shall—a sense of our responsibility in the care which we give our obstetrical patients. It is a very grave responsibility that is placed upon us. We may be responsible for future criminals, for future murders, because we have not realized what happened when the baby was born.

Dr. Barbour, closing the discussion: With refreence to the case of epilepsy, I think it would be hard to promise any relief after thirty years of epileptic seizures. I have seen one or two cases operated upon where there was a lesion of the heat-center(?), but the results were not very good. After thirty years the damage to the brain would be

so great that nothing will replace it.

I am glad that Dr. Bloss emphasized the importance of having life histories for twenty years or more. Most of us are glad when we save the life of a baby at birth. It is a terrible thing to have an idiot child or an imbecile child. I do not know of anything sadder than for a man to look into the face of an idiot child three times a day, or oftener. I know of one doctor who committed suicide because he had an idiot child. Certainly we ought to do lumbar puncture. Take the child out of the room; don't let the mother see it, or the father, although it is not dangerous. If the child presents any symptoms, then do a lumbar puncture, and repeat it as often as necessary.

HYPERTENSION WITH SPECIAL REFERENCE TO TREATMENT

By G. H. BARKSDALE, M. D.
Charleston, W. Va.

Paper Read Wednesday, June 10, Before the Fifty-eighth Annual Session of the West Virginia State Medical Association at Bluefield, W. Va.

The subject of hypertension has been chosen for my topic not because I have anything new to add to a subject already crowding the literture, but first to attempt to classify a rather loose symptom complex, probably dependent upon a multitude of etiological factors. And secondly, to evaluate the multitudinous measures that have been brought forth for the relief or cure of this most intractible ailment.

Since Fisher's practical application of blood pressure readings to mortality figures, so vast a number of observations have been made that at present the normal for the age has become definitely standardized, so definitely that one having a sustained systolic pressure of twelve points over his prescribed reading is to be regarded as hypertension, if not actually such at least potentially so. At this juncture it is to be noted that as valuable as the systolic pressure may be the diastolic pressure is the constant member of the equation. One rather extravagant observer has said that if the diastolic pressure is 90 or less, don't bother about the systolic. Whether the figure is accurate or not, the sense of the thing is. The fact then remains that if given a high systolic and a normal diastolic, the cause being removed, the systolic pressure will probably return to normal and may remain there. However a high diastolic pressure means one thing, that is, serious damage has already been done to vital organs and the pressure will probably never be appreciably reduced.

Accordingly, in the following discussion, a systolic pressure over 150 and a diastolic pressure over 94 are to be regarded as hypertension. Hypertension in the final analysis is to be regarded as the response on the part of the cardiovascular system to acute or chronic toxemias, endocrinal disturbances or certain physiological disorders, hence, our success in treatment rests entirely upon how successfully these offending toxin products of metabolism, physiological errors or what not are to be either neutralized or corrected. From the foregoing it must be apparent that if we are to successfully prognosticate or treat these cases, one must have a workable classification based upon etiological

factors. The following has seemed rational:

A. Subacute (or contingent upon removal of cause) Hypertension. (1) Pregnancy, Eclampsia, Focal Infection, Exophthalmic goitre, Neurotic states, Certain brain tumors, Intracranial pressure.

B. Chronic Hypertension or hypertension due to chronic nephritis).

Such cases are characterized by a high systolic and diastolic pressure, arteries are hard and fibrous, a morning puffiness of the lower eyelids. There is a marked polyuria, night and day, of low specific gravity, albumen, casts—hyalin and granular—are present. The kidneys show an inability to concentrate salts and nitrogen. The phthalein output is decreased, the blood shows a nitrogen retention, directly proportional to the severity of the disease. The heart and kidneys are those characteristic of primary contracted kidney.

(2) Essential Hypertension (so-called hereditary type). A type of hypertension, not obviously secondary to any demonstrable cause. Sir Clifford Allbutt refers to it as a definite clinical entity and calls it Hyperpiesis. As true as this may be, one must be sure all possible has been done to rule out all factors that would justify a better diagnosis. It is interesting to know that such patients are particularly free from symptoms in spite of extremely high systolic readings. The urine, blood and general physical findings are quite the reverse of those of the nephritic class. The kidneys are usually competent throughout; the heart, however, may show enormous hypertrophy. Death usually follows from hemorrhage or cardiac decomposition, as might be expected when one considers the enormous strain placed on this organ.

(3) Arterio-sclerotic plus High Tension type. Such patients are usually over fifty, have led strenuous lives, both mentally and physically; systolic pressure is high, diastolic moderately so. (It is to be recalled here that no direct relationship has been proved between vascular hypertension and arteriosclerosis). The heart and vessels are those characteristic of generalized arteriosclerosis. The general physical findings including the urine and blood are negative. Were it not for the arterio-sclerosis there would be no essential difference between this and essential hypertension just referred to. They terminate in the same way.

(4) Hypertension Climacteric, a type found most frequently in obese, undersized women, suffering from chronic constipation and intestinal indigestion. They have an amazing tolerance for high pressure. The heart is enlarged, the vessels soft, the kidneys usually competent.

The incidence of the above types has been placed as follows: Definite kidney disease as a cause, 75%; essential hypertension, 20%; the remaining five percent should include climacteric hypertension, hypertension of toxic goitre, brain lesions and focal infections. Approximately 50% of the above die of cardiac failure, 25% of cerebral conditions (brain edema, hemorrhage or other results of arterio-sclerosis). The majority of the remainder die of uremia.

Concerning the treatment of hypertension, following our classifica-

tion, I wish to take up, first, Subacute Hypertension, touching on the most important subdivisions.

In the prenatal care of the pregnant woman, nothing has been introduced which has more to do with the safety of the woman than frequent blood pressure readings, elevation in blood pressures ante-dates albumen and is more constant in its significance, as the value of albumen alone is notoriously unreliable as to prognosis. Eclampsia does not occur without hypertension.

Mussey and Randall, in reviewing the histories of 523 pregnant women, found that 104 of them had had a systolic pressure of 140 or more. Of the latter, 72% of those under thirty and 54% of those over thirty had toxemia. De Snoo regards 130 m.m. as the limit of physiologic blood pressure. In the latter month of pregnancy in the primipera, a pressure above this is to be regarded as beginning intoxication, if it goes above 150, absolute bed rest, vigorous catharsis, warmth and other indicated measures should be employed. This failing, the matter of terminating the pregnancy should be considered.

The matter of focal infection has been so much discussed both pro and con that one can take one stand only and that is removal of proved sources of sepsis, purely on general principles, as per se their place in hypertension has been markedly exaggerated as proved by observations of the Metropolitan Life Ins. Co., the Life Extension Institute, and others. They were unable to establish any definite connection between focal infections in general, septic tonsils and teeth in particular, and hypertension. Christian expresses himself as follows: "Not every rarification revealed by X-ray at a tooth root means a focus of septic absorption and that not every tonsil that is not normal is a source of trouble. Teeth are but too often uselessly extracted. Tonsillectomy is an operation not to be undertaken lightly. The operation may be far more injurious than the imagined focus of infection." This is especially applicable to those past middle life, granted that this apparent focus was really the original causative factor, it does not necessarily follow that it is such at present. On this score I am sure that we need more conservation and common sense. Such would react to the advantage of the profession as well as to the patient.

In toxic goitre, brain tumors, etc., the treatment is so specifically connected with the causative factor that they have no place here. The remarks that follow concern particularly the treatment of essential hypertension. However, the majority of the statements are applicable to the condition in general. Hypertension, like fever, is an associated constructive symptom; either, however, may become a grave menace and must be specifically dealt with.

For clarity and convenience, I wish to first discuss the management of the early stage, later the advanced and late stages.

Treatment of the early stage of Essential Hypertension — It is accepted at the outset that the problem of treatment of these cases is a difficult one. Just how much they should be told is a question. They should not be frightened to such an extent that their thoughts become fixed on blood pressure readings, which they should not know. They must be told enough but certainly

not too much. Confidence and hope must be inspired in these men and women, a great number of whom are in the prime of life with everything to live for; tact and good judgment here are essential.

Before definite instructions can be given, an intimate discussion of the patient's habits should be gone into, such as concerns the nature of his work, whether hard, high pressure or irritating; food, volume and kind of, time taken at meals; domestic relations; exercise; recreation and vacations; sleep, repressions and what not. Evidence of cardiac strain is the only indication for bed rest, however, a general slowing up and the avoidance of new obligations are to be advised. Rest after lunch and an early retiring hour are more helpful. The heart permitting, exercise should be urged, especially those forms which interest the patient, gardening, golf, walking and the encouragement of hobbies, all of which lessen the time for useless introspection.

The matter of diet is so important that there are those who feel that the essential type is purely a metabolic disorder, secondary to dietetic errors. Whether this be true or not, the point emphasizes the importance of diet. In the past, undoubtedly, diets have been too rigid, we have followed old teachings which experimentation and blood chemistry have proved unnecessarily exacting and in some instances harmful. Malnutrition, anemia and general physical decline have followed. The patient's blood pressure was depressed from starvation in the same way a consumptive's might be from his toxemia. Granting the patient is not grossly overweight, a simple, well balanced diet should be recommended—one easily digestible, free from excess of meat and meat extractives, condiments and salt. No more protein than the actual needs of the patient. 0.8 gm. to one gram per kilo of body weight daily should be allowed. I have never felt the necessity of figuring daily diets; given a definite amount of protein, an intelligent patient, frequent weighings, the diet can be accurately regulated. In a Metropolitan Ins. Co.'s survey of 17,000 cases, 50% of the overweights carried an increased blood pressure (more than 20 m.m. above their normal). It would seem from the above and general clinical experience, that a gradual reduction in weight should be accomplished, probably 2 pounds per week is a safe rate. The caloric intake being based on the normal for the height and age, the reduction to be continued until the weight is at least less than 20% overweight. Fisher has shown that persons 20% or more in excess of their normal weight average a blood pressure higher than those of normal weight.

Concerning protein intake, Strauss and Kelman conclude that hypertensive patients with slight or no impairment of renal function have marked variations in blood pressure, such variations bear no relation to the intake of protein food. In such cases, no damage to renal function and no increase in non-protein or urea nitrogen of the blood was found to follow protein feedings up to 150 grams daily. Mosenthal feels convinced that a low protein diet is not effective in lowering blood pressure or a high protein diet in raising it. The general feeling at present is that if one must err in giving of protein it

should be on the side of allowing too much. This is especially true in the obese with beginning arteriosclerosis as the excessive use of carbohydrates may produce a hyperglycemia. Herrick states that in these cases carbohydrate is probably more dangerous than protein.

The matter of salt restriction is of interest. Allen maintains that a rigid salt-free diet brought about a reduced blood pressure, relieved subjective symptoms and possibly checked the progress of the condition. Mosenthal, Christian and others do not agree with Allen. They have been unable to influence blood pressure by salt restriction. O'Hare and Walker, following Allen's routine, found no noteworthy effect on blood pressure. They conclude by stating that hypertension is compatible with normal blood chlorides and normal tension with high blood chlorides. All are agreed, however, that from clinical observations, salt should be restricted. A salt poor diet, approximately two or three grams per 24 hours, seems rational. Exhausting hydrotherapy does not seem justified, however, I have found that most cases express distinct refreshment and satisfaction in frequent hot tub baths, ice bag to head while in the tub.

Electricity. I quote as follows: Bishop, after 25 years experience: "Treatment with electricity has proved to be a failure in producing any lasting benefit and I have seen it do a great deal of harm." Electricity by high frequency current and auto-condensation are recommended but they are far from having proven their value. (Nelson Medical Research Service.) Du Bray: "It is generally accepted that the high frequency current will produce temporary reduction in the blood pressure with an accompanying relief of symptoms. I have had no experience with its use but I see no objection to its employment for the symptomatic benefit it may afford, provided its administration is carried out by physicians with special knowledge that is necessary."

Drugs. The bowels should move freely one or more times daily, with laxatives if necessary. To avoid accumulations or so-called "bilious spells," nothing is more helpful than the routine administration of one half to one ounce of castor oil once weekly. Nitrites except in emergencies, certain headaches or associated anginal pains, have no place. There are those who condemn their use; personally, I shall continue to use them as noted. Potassium iodide is of no value unless there be an associated advanced arterio-sclerosis or syphilis and here I might add that the latter is unimportant in the production of hypertension. The same may be said of alcohol and tobacco.

Benzol benzoate. After a careful clinical study, Gruber and Shackelford conclude that the drug produces no effect on blood pressure in patients suffering from hypertension and has no place in the treatment of this condition.

The glandular extracts in turn come up for discussion. A very pretty theory is that the suprarenals, pituitary and the gonads tend to raise; the thyroid and pancreas to lower blood pressure. A perfect balance of their secretions implies health, a variation in secretions means disturbed function or ill health, according to the way the balance is tipped. So it has been suggested that at the climacteric

there being an atrophy of the gonads, the suprarenal and pituitary hypertrophy and their effort to compensate for the lost ovarian or testicular secretions, over secretion with a consequent hypertension ensues. Whether or not this be true, certain cases at this time are benefitted by corpus luteum or ovarian extract. In total I might add that as a group, glandular extracts come in for very faint praise.

As anesthetic risks, du Bray has to say: "It is surprising how well these patients with vascular hypertension stand anesthesia and surgical trauma, particularly when a short period of preparation has preceded a surgical procedure."

The management of the late or advanced cases resolves in itself essentially in supportive treatment of the heart and kidneys. The heart previous to decompensation should in all events be protected from the nervous stimuli incident to worry, excitement, and all things which cause sudden acceleration of the pulse. There should be a marked reduction in physical effort, though enough exercise to keep one fairly fit is most important. Rest after meals; full nights of sleep, with a sedative if needed, such as chloral, a vaso-dilator, is constant in its effect and safe. Fifteen to twenty grains at bed time is usually sufficient. O'Hare and Walker in their excellent paper on the heart in Hypertension have the following to say: "When attention must be given to the hypertensive heart, the treatment of this organ is exactly the same as the treatment of heart disease in general. Decompensation should be treated in the classical way with rest in bed, morphia perhaps and digitalis. Right here we should like to dispose once and for all of the false notion that digitalis is contraindicated in high blood pressure. The indications for digitalis therapy are exactly the same in high as in low blood pressure."

In addition the nitrites, sedatives and opiates give relief and should be employed as indicated. No violent purges or laxatives are usually necessary. There should be a reduction of both fluid and food intake. Granting the kidneys are competent, diuretin may be of value. Venesection of 500 to 800 c.c. of blood should be considered, granting kidneys are comparatively good and a heart primarily at fault.

Renal insufficiency with uremia: Ice cap to head, vaso dilators, sedatives, possibly lumbar puncture.

Before leaving my subject I wish to say that I have compiled this paper from incidences in my own practice, though primarily from a very extensive study of the current literature. Most particularly, I am indebted to the work of du Bray, University of California Medical School, whose splendid writings on this subject have been most helpful.

Conclusions

The blood pressure in the normal individual is thoroughly standardized. 12 points plus systolic means pathology.

A high diastolic pressure is vastly more ominous than a high systolic pressure.

Eclampsia does not occur without hypertension.

Focal infections probably play a very unimportant role in the production of hypertension.

Moderate exercise, much rest and a tranquil mind are most important

in the successful treatment of these patients.

Animal experimentation and extensive research do not sustain the old theory that salt and protein in moderation should be withheld.

No drug yet discovered has any appreciable effect in permanently reducing blood pressure. However, many are most valuable in relieving symptoms.

Fifty percent of hypertension cases die of heart disease. Therefore, the care of the heart is of paramount importance.

An intensive study of blood pressure cases has shown that the obese are particularly prone to high blood pressure, the under-nourished to low blood pressure. Correction of either favorably affects the patient.

The earlier these patients come under observation and treatment, the greater chance we have to lengthen their span of life.

* * *

Discussion

Dr. Walter E. Vest, Huntington:

Dr. Barksdale did not treat me quite as well as one of the other essayists on the program. The other essayist who asked me to discuss his paper sent me a copy of it a few days ago.

Dr. Barksdale's paper covers his subject very carefully and very thoroughly. Those of us who come in contact with Dr. Barksdale in his work know that everything he does, he does well, and this paper is no exception to his usual line of work. One point he made is that a high diastolic pressure is of a great deal more significance than high systolic pressure. I think there is no doubt about that. Another thing is venesection. This is the type of case in which you want to bleed. They respond better to bleeding than almost anything else. That, however, is a temporary measure. We have to keep these patients under pretty constant supervision; we have to regulate their lives. Barring just a few conditions, such as pregnancy, etc., the chances are that if a patient comes in with a high blood pressure that is a pretty permanent condition, and he ought to adjust his life accordingly.

Dr. Barksdale called our attention to one thing that we have been thinking of as causing high blood pressure, and that is brain tumor. Dr. Coleman states that the contrary is true, that low pressure is more indicative of brain tumor than high pressure. Heretofore, as Dr. Barksdale says, I have always thought that high pressure is found in brain tumor, but I give you that statement, with my authority.

Personally, I have come more and more to the conclusion that the less we tell patients about high blood pressure—that is, the figures—the better. There is a kind of psychosis associated with high blood pressure. I believe they will get along better if you can control them without giving them any definite figures. In the long run, the management of the patient has much more effect than the treatment of the condition. You have to get the patient to slow up, lead a simple life, a regular life, a life that they can lead without worry and without excessive work. In the final analysis, each patient that comes to us suffering from this particular syndrome should be carefully studied, just as much so as in any other disease, and probably more so than in some other diseases. We should find out everything about him. It is necessary to

know what is not the matter with him, as well as what is the matter. All possible causes should be eliminated, of course. Then, as Dr. Barksdale says, we should guide them in the way they should live.

I am an especial believer in the reduction of salt. The instructions I give my patients are not to use the salt shaker at all, to use only the salt that is cooked in the food.

I think we are under obligations to Dr. Barksdale for giving us this valuable paper. I feel that the last word has not been spoken, by any means, and that more and more papers, such as this one, will help us in alleviating this condition, which, if it does not give them bodily discomfort, certainly gives them much mental discomfort.

Dr. C. H. Maxwell, Morgantown:

I was listening for Dr. Barksdale to mention veratrum viride as one of the measures for bringing down the pulse. It will bring it down from 90 to 70. Keep them on veratrum viride, and they will be much more comfortable. You can not give them too much, because if you do they will get sick and throw it up. If you will study up the use of veratrum viride you will be pleased with it.

Dr. H. P. Linsz, Wheeling:

I want to thank personally Dr. Barksdale, and Dr. Vest for his discussion. I want not to discuss the paper, but to give a personal expeience. I carried a blood pressure of 235 for several years, and didn't know it. Then I got it reduced down to 170, and it stayed at that. I am one of the sufferers, so I was particularly interested in this paper. I was at Battle Creek a year, and they treated me with diet and baths, no medicine at all. It was reduced to 160, and I got so weak I couldn't walk. They told me I wouldn't live a year.

I should like Dr. Barksdale to tell us exactly under what conditions he gives digitalis, and what he expects digitalis to do.

Dr. H. M. Hall, Wheeling:

I think about three out of five patients that come in have been told not to eat red meat, not to eat eggs, and other things, and I think their diet has been so restricted that the restricted diet has something to do with the psychology. Then the use of digitalis is very valuable, as indicated by Dr. Barksdale. I think if the paper had no other thing to emphasize and bring before us than these two, it would be of great value.

Dr. Vest: I just want to call your attention to an experiment by a Barnes Hospital investigator. He reached the conclusion that digitalis was a governor of blood pressure. In cases of low blood pressure he found after administration of digitalis that the blood pressure tended to rise, and in high pressure he found that for some time after the administration of digitalis it tended to drop. He gave it in cardiac conditions regardless of blood pressure.

Dr. H. G. Steele, Bluefield: I want to confirm what Dr. Vest says about the use of digitalis. It will bring up the blood pressure when too low, and reduce it when too high.

Dr. James R. Bloss, Huntington:

I do not know about the Barnes Hospital experience; I have simply tried it out myself. If I have diastolic pressure of 110 to 140, the patient suffering from discomfort in the chest, while the systolic may

not be over 160 to 180, I have given veratrum viride. I find that those cases with a diastolic excess of over 100 and great discomfort are the ones that have responded best. I have at the present time 20 or 25 patients with high blood pressure. The question of how much to tell them I solve by saying, "Your pressure is over 150 and is too high for your age." As they improve I tell them it is coming down, but is still a little high. You find your patients will live for years and years with a pressure of 180, and live in comfort, doing ordinary work.

Now, about the protein. They ask, "Shall I eat any meat?" I say, "Yes, go ahead, eat some meat; don't eat too much. But cut down on your sweets, pies and cakes and desserts." I think the reduction of sweets is very important. Of course, we do not expect to cure these patients, but we can help them to live more comfortably and more happily, and certainly that is worth while.

Dr. Barksdale, closing the discussion:

I think Dr. Bloss's closing remarks are the best thing I have heard today, that the helping of these patients to live more comfortably is worth striving for.

Concerning brain trumors, if I had quoted accurately I would have said, "certain brain tumors." I do not know what he meant.

As to giving veratrum viride, I have had no experience at all. Of course, in using that the question comes up of what is the importance of reducing the blood pressure per se.

I do not know that there is anything mysterious in the use of digitalis in blood pressure. The use of digitalis does not vary from the treatment as applied to a failing myocardium under any conditions. As to the use of digitalis in hypertension I do not know anything about that. To be specific, the way I should use digitalis in a failing myocardium is, if the patient had had any digitalis previously, I would give a teaspoonful at once, and thirty drops every hour thereafter, until I had symptoms of digitalization.

THE VALUE OF PROSTATECTOMY UNDER SPINAL ANESTHESIA

By A. G. RYTINA, M. D.

Read Before the Fifty-eighth Annual Session of the West Virginia State Medical Association, Bluefield, W. Va., June 12, 1925.

For some peculiar and inexplicable reason, there resides in the minds, not only of the laity and the physician, but even of the surgeon, a dread of lumbar puncture. In my clinic, for both diagnostic and therapeutic purposes, we have performed between one and two thousand lumbar punctures without a permanent mishap. With this experience, it was not difficult to induce me to try spinal anesthesia, after witnessing a masterful demonstration of the method by Labat.

Within the past four years, we have done under spinal anesthesia between five hundred and six hundred operations, with only one death, which possibly could have been attributed to the method. Practically every type of urological operation has been done by me under the method, but I will limit my-

self in this discussion to the advantages of prostatectomy by this form of anesthesia.

In the average surgical operation, the selection of the anesthetic is a matter of small moment, but in old prostatic, who is so often the subject of nephritic, cardiac, vascular or pulmonary disease, the selection of the right kind of anesthetic is more important than the method of operative procedure.

With gas and ether anesthesia, there are four objections: (1) The great danger of pneumonia and cardiac complications; (2) the great danger of gastric disturbance; (3) the great danger of shock from hemorrhage; (4) cerebral complications.

Time will not permit me to dwell on these complications, but suffice to say, that I have experienced all of them, and it is not a little discouraging to have a patient carefully prepared and skillfully operated upon, develop after a few days, one or more of these complications with possible fatality. Further, if in the performance of prostatic operations, there is no need whatsoever of haste, if the operation can be done with care and deliberation, if good exposure can be had, owing to complete muscular relaxation, hemostasis assured, if there is no post-operative shock, and if at most times there is only slight post-operative discomfort, we are gaining advantages that cannot be overestimated. Yet, all of them are gained by the use of spinal anesthesia. My mortality rate in prostatectomies prior to the use of spinal anesthesia was about ten per cent (10%). Admittedly high, but high because in the average free ward case, the prostatic subject is not only most often a weak and debilitated subject, but an alcoholic as well, in whom following prostatectomy, the tide is too often turned by the use of the general anesthetic, causing the complications above enumerated, and preventing the patient getting the necessary post-operative treatment, especially forced water, that is so essential at this time. Unfortunately, in the average general hospital, the interne is not sufficiently interested, and the nurse has not the time to see that adequate post-operative treatment is carried out. Under spinal anesthesia, the post-operative treatment is considerably simplified by the fact that the patient is fully conscious from the start and can take his forced water by his own efforts. During the past four years there has been done by me or my associates, Doctors Gillis, Tolson, or Fargo, under spinal anesthesia, seventy-three prostatectomies, with only one death. The latter was a patient seventy-two years of age, who developed on the night following the prostatectomy a very high fever up to 106 Fahrenheit and certain cerebral manifestations, which the clinicians diagnosed as cerebral hemorrhage, and from which he died in a couple of days. Autopsy was not permitted. This is the only death we have had in our series. We have had no permanent complications. As nearly one-half of the cases were operated upon by my various associates, who began their prostatectomy experience under the method, the argument that our better results latterly are due to my increased operative experience and skill cannot be supported.

At this point, I should like to say just a few words about the choice

of method for removing the prostate. It is generally agreed that, all things being considered, the suprapubic operation is the method of choice. The consensus of opinion, furthermore, is that the two stage method is the one that should be generally employed. This method has its advantages and disadvantages. The advantages are, that the first stage can be done under local anesthesia, thereby doing away with shock and the other dangers of inhalation anesthesia and there is less hemorrhage, if the prostate is removed at a later date. The disadvantages of the two stage method are the economic loss, the psychological disturbance, the greater difficulty in removing the prostate, but above all, the danger of tearing into the peritoneal cavity. I have had this happen to me three times in a small series of cases operated on by the two stage method, and in one of the patients a general peritonitis developed, resulting in his death. With spinal anesthesia, however, there is not the slightest need, except most rarely, to do anything but a one stage prostatectomy. You have, undoubtedly, less shock under spinal anesthesia than under local, and there is no more hemorrhage after spinal than follows the removal of the prostate during the second stage method. In a word, you have all the advantages of the two stage method and none of its disadvantages. Of our series of seventy-three prostatectomies, done under spinal anesthesia, only one was done by the two stage method.

Technique: For those who are interested in the subject, we would advise them to consult the articles of Babcock (Oxford Surgery), Labat (Regional Surgery), and Rytina and Tolson (Annals of Surgery, February 1924), etc., for a complete discussion of the technique, mechanism, and phenomenon of spinal anesthesia. Our technique at the present time, most briefly considered, is as follows:

Both Apothesine or Novocain are prepared for use in small, sealed ampoules, each containing 1¼ to 1½ grains. The lumbar puncture is done with the patient preferably in the sitting posture. The patient with arms crossed and back bowed forward and head and neck fully flexed is supported by an attendant. The back is painted over a wide area with three and one-half per cent tincture of iodine followed by alcohol. Usually we select the space with the widest gap between the spinous processes, and in most cases this is the space between the third and fourth lumbar vertebrae. The point of the spinal puncture needle is then placed in the midline of the space selected, and after spraying ethyl chloride, it is introduced in the median line into the sub-arachnoid space. It is important to use a small gauge spinal puncture needle, and for this purpose a 19 gauge Babcock needle is the best. After removing the stylet, 2 to 3 cc. spinal fluid is allowed to run into the ampoule containing the Apothesine or Novocain. The drug rapidly dissolves and the solution is aspirated into the syringe. Ten to twenty-five cc. of spinal fluid is allowed to escape into a test tube and discarded. The syringe is then adjusted to the spinal puncture needle and enough spinal fluid aspirated into the syringe to make 5 cc. One cc. is then slowly injected without force and about one-half of 1 cc. withdrawn.

This manoeuvre is repeated until the entire quantity of solution has been introduced. After removing the needle, the patient is immediately placed in the prone position with head and shoulders elevated. With this method, after fifteen minutes he may with safety be placed in the Trendelenberg position. The blood-pressure and the pulse rate is noted before the injection and every five minutes after the injection. It has been our custom to administer five minims of 1-1000 adrenalin solution together with strychnia, grain 1-30 subcutaneously immediately after the sub-arachnoid injection. This is given with the idea of forestalling the fall in blood-pressure and slowing of the heart. If the blood-pressure falls to a marked degree, ten to fifteen minims of adrenalin solution is given intra-muscularly, and a whiff of ether administered. Should a marked slowing of the pulse occur, caffeine-sodium-benzoate, four grains, is given intramuscularly. Strychnia is also a valuable stimulant in these cases. Elderly patients or patients with impaired myocardium often require stimulation. Sterile normal salt solution and apparatus for its administration intravenously should always be in readiness in the event of circulatory failure.

Conclusions

Spinal anesthesia is especially valuable for removal of the prostate for the following reasons:

1. The anesthetic is quickly and in most cases readily induced.
2. Operative shock is avoided by blocking of the nerve supply of the operating field.
3. Hemorrhage is less than with inhalation anesthesia.
4. The time allowed by spinal anesthesia is conducive to more careful work.
5. No injury to the kidneys occurs with spinal anehthesia.
6. The heart is disturbed less than with inhalation anesthesia.
7. Gastric disturbances occur in only a small percentage of cases and are slight and transitory. Liquids may be administered by mouth during and immediately after operation. Nourishment may be given just after the disappearance of the analgesic effect.
8. Convalescence is shortened and there are few post-operative effects due to the anesthetic. No lasting post-operative effects have occurred in our cases.
9. Greater muscular relaxation ensues than after any other form of anesthesia.
10. If the indirect as well as the direct causes of death of inhalation anesthesia are considered, spinal anesthesia will be found to be the safer anesthetic for the operation of prostatectomy.

Colonial Hospital.

* * *

Discussion

Dr. Emil Novak, Baltimore, Md.: I do not know anything about the use of spinal anesthesia in genito-urinary work. I know there is in this country a great prejudice against spinal anesthesia—I think a well founded prejudice. But I do think, in a limited number of cases, where general anesthesia is contraindicated, it has a place. In gynecological cases, very old women with prolapsed uterus, with perhaps bronchitis, I think the risk is certainly less than with inhalation anesthesia. It is possible to do abdominal operations under this anes-

thesia; I have done a hysterectomy, for example, in a woman with an active process in the lungs. But I do not think it will ever be used as a routine.

Dr. A. P. Butt, Elkins:

As most of you know, I have been using spinal anesthesia for a number of years, perhaps fifteen years. I agree with the previous speaker that it will never be universally adopted, for it takes too much time to develop the technic. Its use in the third space, as the doctor recommends, I think is quite safe; in fact, we have a feeling that it is almost foolproof. I think it is almost more nearly foodproof than anything else. The one or two deaths I have had from anesthesia were from ether. Both were tonsillectomies.

I do not use the drug the doctor uses; I use stovain. I certainly should not advise anyone to use spinal anesthesia until he knows what he is doing. For instance, with the drug Dr. Rytina uses you have to keep the head up, while with the one I use you have to keep the head down. I doubt the efficacy of the solution the doctor has faith in in restoring the patient. Once I heard Mayo asked, "What would you do if this patient went bad?" That was under ether. He said, "We will send a nurse down to the basement, where she might find a hypodermic syringe. If she found it, it would probably be rusty, and by the time she got it cleaned up the patient would either be dead or better." That shows his faith in this measure. The only two cases of collapse I ever had were cesarean sections, and both were very bad. I shall never do that again, because it violates the principle laid down by Babcock, that it must not be used in anything that interferes with respiration. In these cases I injected adrenalin into the heart, and lost neither, but I shall not use spinal anesthesia for cesarean section again.

Dr. Wade H. St. Clair, Bluefield:

I should like to ask the doctor the relative value of spinal anesthesia and trans-sacral anesthesia in doing prostatectomies. I have used trans-sacral anesthesia in doing prostatectomies for some time, and by injecting the spinal foramina with 40 to 60 c. c. and then infiltrating the abdominal wall I have always gotten perfect anesthesia. I have felt that it is much safer than spinal anesthesia in cases where general anesthesia can not be used.

Dr. Rytina, closing the discussion:

I shall answer the last question first, regarding the relative advantages of sacral and spinal anesthesia. I know there are more men who believe that sacral anesthesia is better than spinal anesthesia than those who believe as I do, that spinal is better than sacral. The reason I prefer it is that it is somewhat simpler, and its action is more certain. My objection to sacral anesthesia is that the anesthetic does not act. You have the patient all prepared and get to work and find that the anesthetic does not act. My feeling is that spinal anesthesia is just as safe as sacral. I happen to know of three deaths from sacral anesthesia, and only two from spinal.

Regarding the reason why spinal anesthesia is not as popular as some of the other anesthetics, the average doctor is not capable of giving it. It is a little more trouble to give

it, while any interne can give ether. You have to stay at the patient's bedside, take the blood pressure every five minutes, and watch very carefully for complications.

Spinal anesthesia certainly works like a charm in these old prostates. We can take a man eighty-two years of age, weak, debilitated, and operate on him under spinal anesthesia, and come into the ward the next day and find him sitting up and reading.

TREATMENT OF PULMONARY TUBERCULOSIS IN THE HOME

By G. R. MAXWELL
Morgantown, W. Va.

Read Before the Monongalia County Medical Society, July 7, 1925.

We all frequently have cases of tuberculosis to treat. If we had sanatoria to send them all to it would be impossible, because there are some who would refuse to go regardless of the advantages. So it falls to our lot, as members of the medical profession, to take care of them in the home.

After having made the diagnosis it is well to visit the patient's home and select the room in which he is to sleep. A corner room with more than one window and a southwest exposure is best. This is not possible in all cases, but at least try to get the southern exposure.

The room is next prepared. All rugs, carpet, and curtains are removed. The bed is placed in such a position that the patient will not be in a draught. It is best not to have any excess furniture in the room. In addition to the bed, a dresser, table, straight chair and rocker are all that is necessary. An electric fan may be added in hot weather.

The following list of rules is given to all patients. They are told to tack them on the wall where they can see them at all times:

1. Be in bed every night by 9 o'clock.
2. Eat breakfast, dinner and supper at regular hours daily.
3. Eat plenty of good, wholesome food. Avoid too much candy and cake.
4. See that bowels move regularly every day.
5. Drink a glass of milk at 10 A. M., 3 P. M. and 8 P. M.
6. Go to bed daily from 1 P. M. to 3 P. M. (This does not mean to just lie down on the bed but to take off all clothes worn during day and put on either night gown or pajamas.)
7. Take temperature daily at 8 A. M. and 4 P. M. If temperature is 99 degrees or above remain in bed all day next day, getting up just for meals.
8. Take short walks in the open daily when weather permits, and temperature is normal.
9. Sleep with plenty of fresh air in room. Remember the secret of success in the treatment of tuberculosis is plenty of fresh air, sunshine, good food, plenty of rest, patience and time.

The patient and some member of the family are taught to take temperature and pulse. (It is not best that the patient be able to do this, but in home treatment this cannot be helped.)

The rest period daily from 1 to 3 P. M. is absolutely essential. It is necessary that all clothes be removed that are worn during the

day, and night clothes put on. Patients object to this and can't see the necessity of it, but let them know that you are the doctor and know best. No one should be allowed in the room during rest hours. The house should be quiet and the patient allowed to relax completely—trying to sleep if possible. He should do nothing during this period but rest—reading, letter writing, etc., tabooed.

The windows are kept open at all times, being closed only in cold weather when patient is dressing or while eating (if a bed patient). In extremely cold weather the windows need not be opened beyond reason. In cold weather a screen of muslin in the windows is advisable. This permits the fresh air to enter but keeps out the wind and snow.

After patient's temperature is down to normal, and remains such for a week or more he is started on graduated exercise and sun baths. The graduated exercise is best taken in the form of walks. Some member of the family takes the pulse and temperature immediately preceding the exercise. This is taken again fifteen minutes and one hour after his return. If there is a rise in temperature or pulse or both at the end of fifteen minutes which fails to return to normal at the end of the hour, the patient is not allowed to take so much exercise the following day. This reaction is caused by auto-inoculation by the toxins produced by the tubercle bacilli. The patients are usually started out with a five minute walk. This is continued for several days and as the patient becomes stronger this is gradually increased, usually five minutes at a time, until they are able to stand at least thirty minutes walk. When they are able to do this then it is possible to give them some form of useful work such as chopping wood, hoeing in the garden, mowing the lawn and the like. Of course they have to be started in this work gradually.

The sun baths consist of different areas of the body exposed to direct rays of the sun for increasing periods of time. The sunlight should be direct and not through glass, as glass cuts out some of the therapeutic value. Some member of the family is instructed how to give the sun baths. They are started with five minute exposure of the foot and leg to the knee. This is repeated for several days. Next comes ten minutes of legs up to midway between knee and hip. This is followed in a few days by a fifteen minute exposure of the legs to hips. (A towel is kept over the perineum. The patient is now turned over and the same procedure continued on the posterior surface of the legs.

The abdomen plus the legs is next exposed for twenty minutes. The entire body with the exception of the chest is now exposed for twenty-five minutes. This is followed by a twenty-minute exposure of the posterior surface of body, including buttocks to chest.

In a few days the entire body except the chest is exposed posteriorly for twenty-five minutes. The entire body anteriorly is finally exposed for thirty minutes daily and continued indefinitely. The same applies posteriorly. The chest is never exposed to the direct rays of the sun if there is any tendency toward a rise in temperature. To

do so might cause a flare up in the tubercular process.

Drug Treatment—Drugs need not be used any more than the symptoms indicate. It is important that the appetite be kept good. If it fails I find that some bitter tonic such as Comp. Tincture of Gentian and Nux Vomica in some elixir is very efficient. When cough is tight and causes the patient much discomfort, some expectorant should be given. Very good results will be obtained with Liquor Ammonii Acetates, 2 drams in ½ glass of water every two hours. If cough is very severe Codein Sulphate, ½ grain to 1, should be given PRN. Anaelgesic balsam applied to chest and rubbed in well relieves most pains in the chest.

In case of pulmonary hemorrhage the head of the bed should be raised, thus keeping as much of the blood from the upper part of the body as possible. Morphine Sulphate should be given hypodermically at once. There is some question as to the value of coagulants hypodermically. However, I've gotten good results with Merrill's "Fibrogen." Sharpe and Dohmme's "Chloro-Calcium" in tablespoonful doses every two ours is of value. Ice bags to the affected side help control hemorrhage.

A general systemic treatment originated by Dr. Rosen of Moscow and brought to this country by Dr. McGill of Elkins, who worked with him, has been recommended by Dr. C. H. Hall, of Elkins. It consists of 250 to 300 c.c. of 1.6% solution of Calcium Chloride intravenously on alternate days for six doses. The solution is made from the crystalline Calcium Chloride. It is given by the gravity method, starting with a temperature of 101 degrees which generally comes to body temperature before it is completed. If it is given too hot, too cold or too rapidly the patient is quite likely to have a reaction, chills, etc. As yet I have not tried this but expect to within a few days. He claims excellent results. Patients with sputum loaded with tubercle bacilli develop a negative sputum generally after six injections. Their appetite picks up, they gain in weight and strength and improve rapidly.

Periodic examinations should be made to see how patient is progressing. After he is able to come to the office a record should be kept of his weight. After he has returned to work he should be watched for some time to see that he does not get an acute excerbation.

CANCER OF THE COLON

By FRED R. RANKIN, M.D., F.A.C.S.
Lexington, Ky.

Approximately ten cent of all cancers occur in the intestines. The relative frequency of cancer of the large and small bowel is illustrated by a report of Judd's of some years ago, in which he found, in reviewing a series of 1846 cases, there were 1822 cancers in the large bowel and rectum, and only 24 cases in the small bowel.

Not only is the diagnosis in cancer of the colon obscure, for a considerable length of time, and frequently unrecognizable, but there is a widespread opinion that the prognosis is uniformly more unfavorable than in other parts of the body. This latter idea is not borne out by statistics, and in certain segments of the colon, particularly the

right half, the ultimate outcome following radical surgery is more favorable than in any other abdominal cancer, with the single exception of carcinoma of the body of the uterus.

The incidence and symptomatology in malignancy of the large bowel varies in proportion to the segment involved. Approximately one-half of all the cancers of the intestine occur in the rectum. Of the remaining 50 per cent, a little more than one-half occur in the sigmoid flexure, and about one-third invade the cecum and ascending colon. The mobile transverse colon is next in order, and finally, the two fixed points—the hepatic and splenic flexure. It is interesting to note that the mobile portions of the large bowel, where stasis is most likely to occur, are the most frequent sites of malignancy. This fact stimulates Lane to urge colonic stasis as a vital factor in the production of the malignancy.

The diagnosis of cancer of the large bowel has been immeasurably facilitated by the recent technical advances in roentgenoscopy and proctoscopy. It is unfortunate that there is not a characteristic syndrome which is pathognomonic of incipient colonic malignancy. The symptoms in the majority of cases depend upon the location of the cancer, and revolve around obstruction in one of its two forms—acute or chronic—and indefinite, vague, evidences of bowel irritation and irregularity.

Obstruction may occur, and does occur, in 5 per cent of cases in its acute form, without any premonitory warning. Coming out of a clear sky, its first symptoms are nausea and vomiting, and severe abdominal pain. Immediate operation reveals the underlying cause to be a colonic malignancy. Burgess found acute obstruction of the colon as constituting approximately one-third of the cases of acute intestinal obstruction. He reviewed a large series of cases from the standpoint of mortality, type of operation, and location of the lesion, and found that if one could exclude hernia, without localizing the lesion, the chances are nine to one that the cause was a malignant growth. Whether or not this type of obstruction is more frequently found in young individuals, I am unable to confirm from a staistical study, but I have observed recently two such cases in people under thirty-five years of age.

The chronic obstructive type of symptoms, which come on late, is a progressive affair, found in about two out of three of these individuals, and is largely evidenced by bowel irregularity, excessive flatus, increasing constipation, and irregularly interspersed attacks of diarrhea.

The pain, as in cancer elsewhere, unfortunately is a late symptom and is of small moment until some complication has taken place and the cancer has either attached itself to a neighboring viscus, or, by its mechanical presence, causes discomfort. Blood in the stools is a symptom to which much prominence has been given, but which actual experience proves is of relatively small value. The more frequent finding is blood on the stool, rather than mixed with the fecal content, and this indication almost invariably is of a low lying lesion, ulcerating and irritated by the passage of hardened feces over its raw surface. It is a

not infrequent happening to have the laboratory report return "blood negative" in cases of colon malignancy, and yet examination of the stools themselves reveals blood on the fecal masses. Bright blood invariably comes from low in the bowel and, in the case of malignancy, is rarely seen above the lower sigmoid. It is much more frequently due to hemorrhoids than cancer.

With the advancing malignancy, loss of weight, weakness and general cachexia are symptoms of the latter stages of the disease, due to obstruction, intoxication, or metastasis, and although at this stage the diagnosis is usually unmistakable, surgical intervention, or outlook from any other therapy, offers little from the standpoint of prognosis.

Tenesmus depends upon the irritation of the lower segment of the bowel, and is rarely present in right or middle colonic cancer growths. Associated with right colonic growth, one almost invariably finds a more profound grade of anemia than is the case with its fellow of the opposite side. One of the most characteristic symptoms of cecal cancer is the profound anemia without apparent loss of blood, which so frequently takes place. We have frequently seen right colonic cancer with a hemoglobin estimate of 25 to 30 per cent, and a red cell count of 2,500,000, where the growth remained local, small, and operable. The different types of content of the right and left colon, perhaps, in a measure, explain this. The fluid content of the right colon passes over a much larger absorptive area than the hard, formed feces of the left side. Koons, in reviewing a large series of these cases, arrived at the conclusion that the anemia was due to profound toxemia from an impaired absorptive function of the mucous membrane. This clinical feature is such a striking one, and so often proves to be due to colon malignancy, which has no other symptoms, that, I believe, one should strongly suspect the condition and take X-ray plates of the large bowel in any profound anemia of unexplainable origin.

Physical examination, routinely instituted, unquestionably will increase the percentage of diagnoses of malignancy of the colon in an earlier stage. While it is true that we are increasing our facilities, and recognize a higher percentage of these cases in an earlier stage, it is still a sad commentary on diagnosis that Mummery says 75 per cent of the rectal cancers which present themselves for examination are already inoperable. This is an even higher percentage of inoperable cancers than those found in the stomach by Cheever, who reports 50 per cent of cases of gastric cancer appearing at the Massachusetts General Hospital are already inoperable. Physical examination most frequently will reveal a tumor mass in the right colon, the transverse and the sigmoid, and almost invariably in the rectum. The two flexures—hepatic and splenic—lying high under the costal margins, are difficult of palpation, and rarely is one able to outline a tumor mass in these locations until it is an advanced stage.

The fact that such a high percentage of cases of cancer of the rectum and recto-sigmoid have been operated upon previously for hemorrhoids, without the real condition being recognized, is a direct indict-

ment of the failure to examine rectal cases digitally. Most cancers of the rectum may be felt by digital examination, and certainly, so simple a matter as proctoscopic examination will reveal all malignancies below the recto-sigmoid. The investigation of the sigmoid by endoscopy is a more difficult matter, and requires more technical skill and experience, but there is small reason to overlook a low rectal growth. If one makes even a cursory examination in the mobile portion of the bowel, particularly in thin individuals, the outline of a tumor mass over the line of the colon immediately excites suspicion as to its character. Occasionally, the tumor mass is the first symptom noticed and its accidental discovery by the patient, or by the physician during a routine examination, offers the best class of case for any type of surgical therapy.

The differential diagnosis of cancer of the bowel is largely different in the two halves of the colon, and the fact that certain pathologic conditions more frequently attack one segment than another, is of itself of assistance in making the diagnosis. The right colon is the site of hyperplastic tuberculosis and actinomycosis, from which cancer must be differentiated, while the left colon is more often the site of a diverticulitis, which is confusing in its manifestations. The clinical picture of hyperplastic tuberculosis parallels in many particulars that of cecal malignancy. It is associated with the same type of anemia as carcinoma, and frequently the radiologic examination is not sufficiently characteristic to differentiate it. Hyperplastic tuberculosis usually appears in younger people and is associated with tuberculosis usually in some other portion of the body. The tumor mass grows slowly and the duration of the symptoms extends over a much longer time than is the case in malignancy. Younger people are usually found the victims of hyperplastic tuberculosis, although this is of small value as a differential point, since carcinoma is being recognized much more frequently during the earlier decades of life. Secondary infection in tuberculous diseases of the colon may produce a slight and steady rise in temperature, with an accompanying leucocytosis.

Actinomycosis, although found occasionally in the sigmoid, usually is found close to the ileocecal valve. It produces tumefaction and obstruction, and in many ways resembles malignancy. Its roentgenographic characteristic is a filling defect, which is not pathognomonic however. Rarely is the differentiation established except by operation, unless sinus formation has taken place. This latter complication is found in the advanced cases and the sinuses are typical in appearance. They discharge a watery pus, in which the sulphur granules, characteristis of the disease, are found. Sarcoma, particularly lymphosarcoma, is found more frequently in the right colon and the rectum. The melanotic type seems to have a predilection for the lower bowel.

In the sigmoid, diverticulitis is now recognized as a definite pathologic entity, with a syndrome of its own, and no longer a bizarre discovery. Occasionally, however, it is so confusing in its manifestations that its differentiation from malignancy is impossible, even at the operatng table, and the microscopi-

cal examination is necessary to establish the correct identity. Diverticulitis is characterized usually by attacks simulating appendicitis, although occurring on the left side. The little pouches which stud the bowel wall fill up and, for one reason or another, become occluded. Inflammatory changes take place, and unless the sac discharges itself in the bowel it may fasten itself onto a neighboring viscus, or may perforate with local abscess formation or general peritonitis. Usually diverticula are multiple, and in the vast majority of cases, symptomless, and when in a quiescent stage may be diagnosed with absolute certainty by X-ray. Where inflammatory changes have taken place, and there is a coalescence or a perforation of a number of these diverticula, with a local inflammatory mass as a result, obstruction supervenes and frequently differentiation from malignancy is impossible without the microscopic report.

The usual types of carcinoma—medullary and scirrhus — are found throughout the large bowel, and in addition, the colloid form of malignancy is recognized in about 16 per cent of cases. The growths most frequently begin opposite the mesenteric border and extend peripherally, and in about one-fourth of the cases, an annular napkin-ring type of growth is found. This is of slow progression and metastasizes to different parts slowly. The colloid type of growth, while more favorable for longevity, in the end, is a more fatal type of malignancy. It is characterized by the production of large or small amounts of mucoid gelatinous material, and its tendency to metastasize to the regional lymphatics, and thence to the liver, renders it more fatal than the other types. The local lymphatics are always invaded in colonic cancer late, and for this reason, prognosis is more favorable than is generally supposed.

Surgery, in colonic cancer, must be selected to suit the requirements of the two obstructive types of symptoms—acute and chronic. In the acute complete obstruction of the colon, met with in a small percentage of cases, the surgeon is confronted with a condition demanding the exercise of greatest judgment and technical skill. Not only is malignancy undermining the natural powers of resistance of the individual, but superimposed upon this is an acute obstructive process which of itself is of the gravest significance. To undertake a complete operation in the face of acute obstruction due to malignancy is most unwise.

The ideal procedure is to relieve the acute condition and by subsequent stage, attempt to eradicate the malignancy. Indeed, it is extremely questionable whether, in dealing with acute obstruction of the colon, one should attempt to ascertain the location and extent of the lesion causing it, if the general condition of the patient is grave. Statistical reports indicate that even the exploration of the abdomen increases the mortality. Bevan has urged that a simple cecostomy through a split muscle incision be done under local anesthesia, or gas and local anesthesia, as the ideal procedure. The cecum is brought into the wound and a tube is placed in it and sutured to the peritoneum. After a few hours, the tube is opened and allowed to drain. The extent of the lesion, its location, the

condition of the local lymphatics, and presence or absence of metastases in the liver are not demonstrated. The object in view is to drain off the toxic content of the upper intestinal tract, reduce the attendant intoxication, and at a future date, undertake the location of the offending growth by roentgen-ray, or by exploration, if necessary.

Surgical treatment must also be adapted to the location of the lesion. We have found it a good working rule to employ a single stage operation in the proximal colon, and a graded resection beyond that. Operative mortality and freedom from recurrence, over a space of three to five years, are guides as to the choice of procedure. In the right colon, the mobilization is satisfactory and the blood supply is fairly constant. By splitting the peritoneum to the outer side of the bowel and rolling the growth toward the midline, by gauze dissection, one may clear out the lymphatics which lie retrocecal and accompany the blood vessels in the mesentery. In the lower portion of this dissection only the ureter and the spermatic vessels are necssary to be avoided, and if the growth attaches itself to one or the other, their sacrifice is warranted. Ligation of the spermatic vessels is attended by no untoward results, and ligation of the ureter, providing it is done with a non-absorbable material, results in the death of the right kidney. Obviously, this should not be done unless the condition of the kidney of the opposite side is known, but with a satisfactory function in the left kidney, the death of the right from constant obstruction will produce no symptoms. If the kidney is infected, its removal may be necessary. The injury to the duodenum, in mobilizing the upper angle of the colon, requires especial care, since a duodenal fistula is one of the most unfortunate complications possible. The anastomosis between small and large bowel is best made between the transverse colon, at its proximal extremity, and the ileum. In resecting the cecum, the distal twelve inches of the ileum may be sacrificed. Since its blood supply is rich, there is small reason for necrosis on the ileal side of the anastomosis.

Restoration of the continuity of the lumen of the bowel may be made in one of three ways—first, axially; second, laterally, and third, end-to-side. I believe the best results are obtained from end-to-end, or end-to-side anastomosis. The lateral anastomosis entails considerably more operating and leaves blind pouches which dilate and permit fecal accumulation. Foreign bodies lodging in the ends of the pouches occasionally cause perforation.

The end-to-end anastomosis may be accomplished by direct open suture, or by the Parker-Kerr method. The latter is an easily accomplished, satisfactory method of performing axial anastomosis satisfactorily. It should, I believe, be supplemented in all cases by an enterostomy twelve or fourteen inches from the anastomosis line for the relief of gas distension and pressure. The relief of intra-colonic pressure is the keynote to successful intestinal anastomosis.

The end-to-side method, as practiced by C. H. Mayo, is exceptionally satisfactory. He performs the anastomosis with a Murphy button, dropping the heavy end into the

mouth of the colon, perforating a small opening in the superior longitudinal band and anastomosing the ileum there. The open end of the colon is invaginated with a catgut suture, and brought up to the peritoneum, where it is fastened, the purse-string suture being allowed to extend out of the wound, and a small gauze pack is reinforced, and using the purse-string suture as a guide, a forceps is introduced into the end of the colon. After forty-eight hours, the colonic end is sealed to the peritoneum and there is scant danger of infection from leakage.

The middle colon has a very uncertain blood supply and, like the left side, the vessel arches do not overlap with sufficient constancy to permit a one-stage operation being carried out without a high mortality from leakage and peritonitis. It is best done either following a cecostomy or, as I have done in a few cases, by two stages of a Mikulicz operation in one, leaving the clamps on and providing an enterostomy in the ileum for the relief of obstruction. In this manner, one may be sure of the blood supply to the ends, and the third stage of the procedure may be satisfactorily accomplished at a later date, after the method of the original Mikulicz-Bruns operation.

In the left colon, mortality statistics have always been from five to ten per cent higher than in the right. This is probably due to the fact that obstruction is more constantly encountered in this half, and also that the fecal content is more solid, and consequently intoxication accompanies lesions of this side in a more profound degree than in the other segment. A mortality of 17 per cent is about the average following one-stage operation of resection, with anastomosis either axially or laterally. In the face of obstruction, the local conditions are unfavorable for success. Edema and infiltration of the tissues make them unfitted for anastomosis. The reparative powers are retarded by the obstruction, and in addition, the blood supply is inconstant. Leakage, abscess formation, or peritonitis brings about this high death rate.

Replacing this type of procedure by a two-stage operation of cecostomy or colostomy, and a subsequent resection, has reduced the mortality to a par with that of the right side. Cecostomy is advocated by Jones and Stiles as being the primary operation of choice. Thru an ample incision, exploration is made and the cecostomy is carried out after the Gibson or Witzel technique, or secondary, the resection and the lumen restored by direct suture. The use of the Murphy button in the left half of the colon is not attended by uniformly satisfactory results. The cecostomy presents certain advantages over the colostomy. It is further removed from the field of the secondary operation, and is more readily closed when necessity for its use is past. Frequently it closes spontaneously, or only a minor extraperitoneal operation is required. Our experience has been more with the colostomy in the descending colon, or upper sigmoid, and we have found this entirely satisfactory. Cecostomy or colostomy permits one to relieve the obstruction, build up the individual's resisting powers, and by irrigation and treatment, to improve the local condition at the site of the subsequent anastomosis. It does

not in any way militate against a secondary radical operation; in fact, it increases the chances of extending the operability, and while the time factor is an unfortunate one, I do not believe that economic conditions should influence one's judgment in dealing with malignancy. The graded operation undoubtedly has demonstrated its advantages in the left colon by a reduction of mortality as well as by increasing the limits of operability, and demands consideration as the method of choice.

The Mikulicz procedure, popularized because of its apparent simplicity of accomplishment, should be, I believe, reserved entirely as a palliative operation in cancer. Its widest field of usefulness is in diverticulitis, where there is no necessity for gland dissection. Its limitations necessitate mobility of the part to be removed, and it makes no arrangement for removal of other tissue than the local growth.

The end results following widespread resection for cancer are satisfactory in the colon as elsewhere in the body. Out of 150 resections of the right colon, which I reported in 1923, thirty patients were alive from five to ten years and thirteen from ten to fifteen years after operation. Forty-seven per cent of the whole series were alive three years after operation. The liability to error in diagnosis and the forlorn outlook in cases of inoperable malignancy make it imperative, I think, that any case of cancer of the large bowel in which there is the slightest reason to believe something may be done, even in a palliative way, should be explored.

It is true that palliative operations, such as side-tracking and short-circuiting, carry a high mortality, but occasionally a growth is resected which before exploration was deemed inoperable, and occasionally a diverticulitis is mistaken for a cancer. Certainly palliative colostomy in the operable cases makes the remaining weeks or months of an individual's life more comfortable.

MANAGEMENT OF TYPHOID

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Typhoid is an infectious disease characterized by the presence and growth of a specific bacillus found in the blood and widely distributed through the body. It produces toxins with considerable virulence and also is a local cause of inflammation and necrosis. This infection is due to Eberts bacillus or Typhoid bacillus. Incubation period is from 14 to 21 days. The bacillus enters the body through the mouth, reaches the alimentary tract, passes through the walls of the intestines into the tissues and blood. Lymph glands about the intestines are involved and show signs of inflammation, on the third day show solution. This swelling increases for the first week. During the second week there is necrosis, ulceration, then slough. The glands of the appendix are also involved. At this time there is a swelling of the mesenteric glands which may soften and suppurate, resulting in local and general peritonitis. Lymph glands of the colon may become swollen, later necrotic. Catarrh or mucus colitis of the lower colon may be present. The spleen may be enlarged, sometimes there is an acute inflammation of the pia

mater due to the typhoid bacillus, then cerebral symptoms develop. There is usually bronchitis and pharyngitis. The above pathology is usually accompanied by an acute degeneration of the kidney.

The bacilli are found in the blood up to the eighth day. The bacillus is found in the urine, sputum, stools and sometimes bile passages. The heart remains normal in size or there may be no change in the heart muscle. There may be endocarditis, this is rarely seen; the trouble with the heart in typhoid is not constant.

The symptoms during incubation may be absent, but during the latter part of incubation the patient may suffer with general malaise, chilliness, anorexia, slight frontal headache. When disease is first ushered in, headache is a very constant symptom. Headache is dull in character, may be so severe as to require relief. Stomach symptoms occur as a result of an acidosis. Diarrhea may be present, not very true in the south however. The majority are constipated. If colitis is present diarrhea may be a marked symptom.

Invasion may be slow or abrupt. The abrupt invasion similates an attack of influenza. Epistaxis may be present or may occur later, however not pathognomonic. When epistaxis occurs it is important to estimate the coagulation time. This is a good procedure in all cases of typhoid, then we raise the time when necessary. Sometimes there is marked abdominal pain, worse in the lower right quadrant and gall bladder region, which may be mistaken for appendicitis but there is very little or no muscle spasm and no leucocytosis. During this period of invasion the patient may improve for a few days, temperature may come to normal in the morning and rise in the afternoon. No explanation is given for this improvement for a few days. Some cases are so virulent that they produce toxins which affect the brain and produce symptoms which resemble meningitis.

The temperature curve is very typical if not diagonistic—highest at 9 p. m. with morning remissions; for first week of disease temperature may return to normal in the morning, gradually rising until the last of the second week; after the third week it begins to fall again.

Sometimes the clinical picture is reversed, the temperature being highest in morning and lowest in afternoon; pulse is slow, dicrotic in character; respirations are increased partly owing to temperature acidosis and nervousness of the patient. Tongue when protruded is out to a point, edges are red, white coat in the center. These symptoms are not very severe if properly handled. On the eighth day rose spots appear on the abdomen and lower part of the chest; they disappear on pressure and reappear when pressure is removed. Spleen is enlarged, diarrhea may or may not be present.

Examination of the blood shows secondary anemia, red cells normal, leucopenia present, increase in small lymphocytes, decrease in pollys. There is pharyngitis, bronchitis and foul breath. A tentative diagnosis can always be made before the organisms are demonstrated in the blood. The diagnostic triad is: Eighth day, rose spots in six per cent of cases; second dicrotic pulse; third, enlarged spleen.

There is very little dependence to be put in the Widal reaction, due to the prophylactic treatment which may give a positive Widal. T. B. may give a positive result. However, the Widal is a symptom like the slow pulse. Sometimes pneumonia is accompanied by typhoid fever and the typhoid is overlooked. Malaria is not difficult to differentiate with proper examination of the blood. In the Estevo-Autumnal type of malaria it is very difficult to find. Frequently when doubting this we treat for typhoid fever. Typhoid may be confused with malignant endocarditis. Pyemia may cause confusion. Blood, history and physical examination differentiate the condition.

Miliary T. B. with constant symptoms and no constant findings may be confused. Tuberculous peritonitis is confusing.

Treatment: Rest in bed continued until patient has been convalescing for ten days. A longer period indicated sometimes, as disease is frequently followed by arterio-sclerosis. The diet in typhoid should be simple, easily digested and as concentrated as possible. One should get the full caloric value. Do not give an immense amount of food as some clinicians do, as the stomach and other organs are not functioning to the normal. Do not force 4000 calories in 24 hours. First take weight into consideration, second that the patient is sick, and third that he is at rest in bed. Figure a maintenance diet and add a small amount. Diet should be balanced.

Fresh air is important. Best to treat in the open air, bright, airy and sunny room. Use hydrotherapy for lowering temperature. Tub bath best, sponge bath next. Coal tar anti-pyretics are contra-indicated. They weaken the heart muscle and reduce temperature at the expense of nerve energy. They may cause rigors. It is not necessary to reduce temperature too much, as fever is rather a conservative process. During the first ten days when the temperature does not respond to hydrotherapy there is incomnia, bodily pains and headaches. An anti-pyretic (coal-tar) may relieve symptoms but should not be continued. Stimulation is rarely indicated. It is of rarely any benefit, powerful stimulation only whips a tired horse. The heart muscle is the blame, it is different from the rheumatic heart. If stimulation is to be used, the stimulants of choice are strychnine, caffeine, digitalis and sparteine. The stimulation is merely to carry over a certain period rather than to prevent death. Marked tympanites is sometimes present and is a very dangerous symptom. It is usually due to improper feeding, so the first thing we do is to study the food which is given. Do not give sweet milk since this causes tympanites. Hemorrhages are more frequent with milk. In the case of tympanites the patient can usually tell you which food causes the most distention. In most cases a small quantity of dilute hydrochloric acid will relieve when given in small quantities following meals. Beta Naphthol and powdered charcoal correct foul smelling stools. Stops intestinal putrefaction and causes the patient to feel much better. This relieves the liver of an extra burden. If marked diarrhea is present we know there is a marked ulceration in the intes-

tinal tract and until over we give large quantities of buttermilk, and eliminate all other foods for the time being. May give bismuth to produce slight constipation. A normal saline enema daily to secure a bowel movement. S. S. enema may produce proctitis. On the second, third or fourth day an oil and glycerine enema may be given to eliminate tendency for fistula tract at the same time increases the movement. It is a good practice to insert the finger into the rectum once each week and determine if infection is taking place or if fecal impaction is present. It is a bad practice to give laxatives during the course of this disease. Sometimes following the administration of calomel the patient feels much better, temperature and pulse are lowered, but at the same time the life of the patient is jeopardized. It is quite often given without deleterious effects, but often causes hemorrhage.

Remembering the pathology of typhoid, first week, congestion and swelling; second week, necrosis; third week, ulceration; fourth week, resolution. We know it is best not to give purgatives after the first week since we do not know at what depth the ulceration may be. Purgatives after the first week may cause rupture which may otherwise not take place. If a blood vessel is near an ulcer it may rupture and result in serious hemorrhage. Laxatives are indicated with badly distended gut and when drugs, stupes and enema give no relief, we must get rid of the gas and we give a mild laxative, however chances are less than a paresis of the gut or perforation due to distention. Best to give frequent small doses of calomel. Headache and nervousness are controlled by hydrotherapy. May be necessary to give small doses of codeine.

The organisms in the urine, stools and expectoration should be rendered antiseptic for the protection of other people. The cure for a bacilluria is large doses of typhoid vaccine after the disease. It is thought best by most clinicians not to give typhoid vaccine during the course of the disease, since vaccines lower the resistence which the patient already has. It was found best not to give intestinal antiseptics in the 36 cases treated at The Knoxville General Hospital during the months of November and December, 1924. The bed linen should be carefully taken care of, best boiled or placed in antiseptic solution. The urine should be carefully handled. Room screened from flies. Scrupulous care of the mounth and teeth. Particles may become dry and breathed in the lungs producing pneumonia. Parotitis may may result from an unclean mouth. The general care of the physician should be the same as with any other infectious disease.

All cases of typhoid should get well except in very virulent cases where the toxins are overwhelming and at other times when complications result, however we strive to eliminate complications.

There are a certain number of cases which relapse after the temperature has been normal for 3 or 4 days. The process begins over. There is a false relapse at the middle of the third week when temperature falls to normal for two hours, returns again and soon falls to normal again. There may be recurrent relapses.

Hemorrhages are very serious and are of three forms, capillary oozing from raw surface of ulcer; small hemorrage from very small blood vessel, temperature in neither of these cases is interferenced with. The third or most fatal is a rapid hemorage where large quantities are passed until death occurs. Vaccines may cause hemorrhage due to lowering resistance. We should begin the prophlactic treatment of hemorrhage early in the disease by estimating the coagulation time. When hemorrhage does occur it is best to do a tranfusion give horse serum or coagulin, give morphine to paralyze the gut and produce clot and pressure. We rarely have time to do anything before death occurs. We may give fluids by the drip method per rectum, do not give fluids by mouth. Temperature may rise when blood clot results due to an infection. At the end of 48 hours wash out the lower bowel with irrigation which does not distend the gut and no peristalsis is brought about. Best to use normal saline solution. After 52 hours may give enema. When there is a tendency for bleeding have blood typed and ready for transfusion. Normal saline into the vein or under the skin is sometimes very necessary, however do not give too much intravenously as may raise blood pressure and push out blood clot.

Complications such as Thrombosis or Phlebitits, which occur in the veins of the abdomen and saphenous vein, are treated systematically. Pneumonia is treated as any other pneumonia. Pleurisy and parotitis are also common complications. Perforation of the intestines is of two types, typical and atypical. In the typical type the first symptom is a sudden severe abdominal pain characterzied by a rapid pulse sub-normal temperature, cold clammy skin and an anxious expression. The state of shock is treated as any other shock by application of heat, vaso-constrictors morphine for pain, elevate the head of the bed which may prevent general peritonitis. Surgical intervention if the patient does not react from shock. First four hours is the best to operate. In the atypical type we have a pin point perforation with localized peritonitis. There is very little pain. Examination of the blood shows a gradual increase in poly count. The white cell count when taken every hour shows a gradual rise. At this point surgical intervention is the only thing that can save the patient.

Infection of the gall bladder is another common complication, onset with chill followed by septic temperature, tenderness over the gall bladder. We treat this condition with hot fomentations and absolute rest. If, in 24 hours, we have no improvement we resort to surgery, since perforation may result and general peritonitis follow. Some clinicians use urotropin. This is probably a very good plan to follow. Among other complications are typhoid spine, so called hysterical spine, spondylitis or paraspondilitis, post-typhoid sepsis or bed fever, sometimes called immunition fever. There are three types of immunition fever, mild, moderately severe and severe. In the mild type the temperature may be normal for 1, 2, 3 or 4 days then we have a gradual rise of temperature in the afternoon which persists. The patient does not look sick, he is

hungry, his tongue is clean. He does not look as if he has temperature. This patient will recover if left in bed, however we take him out of bed and place on a full diet and patient will soon recover. Second type may come on when temperature is falling and when temperature has been normal, this condition begins with a chill rapid pulse rate, profuse sweating and similates malaria very closely. The treatment for this patient is to take out of bed and feed or patient will stay sick indefinitely and may starve to death. The third type may follow or occur during the fall of temperature. Onset begins with rigors, collapse during rigor, pulse so rapid cannot count, profuse perspiration, mild deliriums and a coated tongue. This patient will take food when given to him. With the present day method of treating typhoid we fortunately do not have many cases of this kind. The etiology of the above condition seems to be due to a lack of the proper food during the entire course of the disease. The pathology is only that of starvation. The typhoid ulcers have healed, the tissues of the body present only that found in any case of starvation. If we wait too long the patient will starve to death. At the end of the fourth week typhoid is well except those patients which have relapse.

The most important sequellae of typhoid are gall stones which are due to the typhoid bacillus acting as a typhoid nucleus, arterio sclerosis and phlebitis which may follow and for which we keep at rest and then follow by wearing elastic stockings. Hysteria may occur in any condition. Any case may become a typhoid carrier. Bacilli may be found in the urine, stool, sputum and in all secretions of the body. If carriers are discovered give large doses of the typhoid vaccine to get rid of the bacillus.

Management of convalescence holds good for any disease, as pneumonia, influenza and typhoid. There are certain changes in the body which must recover before these patients are to carry on active duties of the ordinary life, therefore keep in bed until resolution of the changes take place. Then after resolution begins allow sufficient time to elapse before taking active duties again.

Recently some clinicians have advocated the use of 220 soluble mercurochrome intravenously given every other day until the patient begins to show signs of improvement or else goes the other way. Personally I have tried mercurochrome in three cases two of which recovered. In these two the course of the disease was not shortened and treatment was begun in the first week of the disease.

Dose given is 1-2 C. C. of 1 per cent solution per kilogram body weight. 1 per cent dissolved in distilled water, freshly prepared and must be filtered. Can repeat in 24 hours for 3 or 4 doses.

THE WEST VIRGINIA MEDICAL JOURNAL

JAS. R. BLOSS - - - - - - - - - - - - *Editor*

WALTER E. VEST, Huntington
C. A. RAY, Charleston
HARRY M. HALL, Wheeling } - - - - - - - - *Associate Editors*

THE JOURNAL issued on the first of each month. Entered as second class matter, January 1, 1916. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Authorized July 24, 1919.

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Single Copies	35 cents

All original articles for The Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all parts of the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

Advertising forms will go to press not later than the tenth of each month.

All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

Should be made by check, draft, money order, express order or registered letter to Sterrett O. Neale, Executive Secretary, 211 Smallridge Bldg., Charleston, W. Va.

Editorial Office: 804 Lincoln Place, Huntington, W. Va.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

With this issue of the Journal the present editor makes his exit from the activities of your publication.

For ten years this work has been very dear to me, and I can honestly say that it has been a pleasure to try to do what was possible to help the association in this way.

The Journal is one of the best of the state journals, and while it is not all that your retiring editor would have it be, yet I cannot but feel that the members can feel proud of it.

There have been many criticisms, during these ten years, of the policies of the editor. Many times we

have been criticised for our pages dealing with state and general news because they were more or less of a "family" nature. In our opinion this is one of the most valuable features of the State Journal, in that it keeps the various members in touch with their friends throughout the whole state, and their activities from month to month.

Then again the editorial department has been criticised because there were not more editorials of a scientific nature. Here again I can only say that most of the editorials have been such as deal with propositions of organization, and the welfare of the profession as a whole.

I have tried to publish the papers of scientific value as they have been presented at the meetings of the State Association, and to the various county societies, feeling that the members of the West Virginia Medical Association were intelligent men and could deduct the scientific values from these addresses and papers.

The editor of the Journal has had very little help from the membership in the way of material for the Journal. A few of the men have helped nobly, and I feel that very much of the success of the Journal has been due to the efforts of these physicians. I take this opportunity of expressing to them my heartfelt thanks and appreciation.

That the Journal will be better in the future I feel sure. The new plan of having a committee of publication to actively manage it, with a chairman, will work out to the advantage of the association I also feel sure. It will take the committee some time to get the "hang" of things, so to speak, and yet they will produce a better Journal than any one man can possibly do.

I bespeak for the Committee on Publication your earnest and loyal support of your Journal in the future. Its success depends absolutely upon the membership of the State Association, and each individual member must do his share and give his support if it is to accomplish all that it should.

PATRONIZE OUR ADVERTISERS

Recently a Charleston member of the State Association in placing an order for supplies with a mail order house, as an afterthought, added this postscript to his order:

> "Do you advertise in the West Virginia Medical Journal? If not, why not?"

In reply came this explanation:

> "Also note your P. S. inquiring as to why we do not carry an ad in the West Virginia Medical Journal. In this connection we beg to advise that we issue our own monthly catalog covering the entire medical profession which is approximately 140,000 every month and for this reason we feel that we already reach every doctor in the country, and advertising in local Journals would simply be duplicating our present advertising."

This response did not satisfy the Charleston member. He turned over the letter to the executive secretary's office for further action.

The letter soliciting the advertising was duly forwarded and in part, the reply relates:

> "We beg to advise that while we would like very much to advertise in your Journal, unfortunately at the present time we are committed to a policy of direct advertising from which we can not vary.
>
> "You realize that it is in making a single exception we lay ourselves open

to the charge of favoritism unless we also carried advertising in all other state journals."

The communication closes with the indefinite statement that if the company should change its policy "in the near future" it will be more than glad to get in touch with the West Virginia Medical Journal.

All of this serves to bring up an important proposition. Members of the State Association are performing a fine service if they patronize those reputable supply houses who are represented in our advertising columns. These supply houses, through their exploitation policies, play a vital part in the publishing of this publication. Without their wholesouled support, the Journal can not be made to pay its own way unless almost $4,000 a year is appropriated from the state association's treasury.

A perusal of Dr. J. R. Bloss' report as editor of the Journal for the year 1924, read at Bluefield (see August Journal, page 396) discloses that the cost of publishing and mailing your official publication in that year reached the sum of $3,685.

The advertising receipts for 1924 totalled $3,570. Thus it readily can be seen the important part that our advertisers play each year and these advertisers are entitled to *first* consideration, it would seem, when orders are to be placed for supplies.

There is no doubt but that the mail order houses have come to stay. Their prices may be slightly lower than some of those institutions that advertise direct to the profession through our Journal. But what is the mail order house contributing to the support of the association's own official publication? How much of the annual printing cost of the Journal is the mail order house paying?

Advertising rates in the West Virginia Medical Journal are low, very low. A space approximating one-eighth page costs but $3.00 a month where an annual contract is signed. On the same annual basis, a quarter page advertisement costs but $4.50; a half page ad $7.50, and a full page ad $12.50.

The Journal offers advertisers the cheapest and best medium for reaching the organized profession in West Virginia. National advertisers could not send a post card once a month to our members for such a small sum as is represented by a full page advertisement.

At the rates set forth, it readily can be seen that a large volume of business must be included in the advertising section each month before the Journal can break even on its printing bill and be self-supporting. And it is fair to the Journal advertisers that they be given first consideration when orders for supplies are to be placed.

When a mail order house says that it already reaches the profession through its catalog each month and that advertising in the Journal would "simply be duplicating," it is high time that our members awaken to the very important part that our own advertisers play each month.

The Journal can be made bigger and better by supporting our advertisers and through interesting more hospitals, drug stores and laboratories within our state in the value of being represented in it.

MEMBERSHIPS

Acting upon instructions of the publication committee of the state association, the executive secretary is

to compile a list of all members in good standing for publication in the February issue of the Journal. In addition, the delinquent membership list also will be prepared.

At the time this is being written, memberships reported total 999. The total reported for 1924 was 1064. There are 165 members on the delinquent list for the year, thus disclosing that actually the number of new members who have availed themselves of the membership privileges at increased dues almost offset the number of delinquent members. In other words, almost 100 new members have been added to the state association roster.

Particularly interesting is the fact that several counties have 100 per cent paid-up memberships already, and two or three of those where the number of delinquents is rather large have held no meetings since spring, and thus are yet to make final reports.

Every precaution will be made to have the published lists accurate as to names, addresses, etc. In this connection, it is the plan of the executive secretary's office to circularize the entire membership so that records will be complete and accurate in his office. Hereafter, too, members will be requested to report any change in address to the secretary's office promptly. During the year, several members have missed copies of their Journal mainly because address changes were not reported.

COUNTY SOCIETY REPORTS

Bluefield, W. Va., Oct. 22, 1925.

The Mercer County Medical Society held its regular monthly meeting in the Municipal building at 8 o'clock p. m. The meeting was called to order by Dr. R. O. Rogers, president of the society. Dr. H. G. Steele was appointed by the president to act as secretary pro tem, in the absence of Dr. Littlejohn. The president said, "Due to the fact that the secretary's books are still in possession of Dr. Littlejohn the reading of the previous meeting will be omitted.

No clinical cases were reported. First on the program was Dr. Walter E. Vest, of Huntington, W. Va., who read us a very interesting, instructive and thorough paper on the gastro-intestinal history. Dr. Vest handled this subject very manfully and if we follow his outline in our work no doubt it would be easy to make a diagnosis in many cases, as he has followed out this subject very thoroughly and when the symptoms of any particular case are pictured under any of these outlines a diagnosis ought to be easily made, as he has given us a well defined outline covering most diseases.

Next on the program was Dr. R. J. Wilkinson of Huntington, W. Va., on Intestinal Obstruction. Dr. Wilkinson, not being able to attend, sent his regrets in not being able to be with us, and Dr. C. J. Reynolds, of our city was appointed to read Dr. Wilkinson's paper. This paper was very instructive and covered the ground thoroughly and Dr. Reynolds read it very clearly with interest and enthusiasm.

First on the discussion of these papers was Dr. A. H. Hoge, who opened the discussion on Dr. Vest's paper and brought out some very interesting and instructive points on the diagnosis of different diseases. The following made brief remarks on these papers: Drs. Rogers, Hare, St.

Clair, and Reynolds. Dr. Wallingford said: "One of the most important points in the diagnosis of gallstones is whether the patient has had typhoid fever." Dr. Scott said: "Enterostomy is one of the most valuable things we have for intestinal obstruction."

Dr. Vass said: "The absence of peristalsis made out by the stethoscope is a very valuable point." Dr. Deaver called this the "Dead Belly." Dr. Vest, in closing the discussion, thanked the members for the liberal discussion of the two papers and for the invitation of the privilege of reading his paper before our society, saying he always did enjoy coming to Bluefield.

On behalf of the of the society Dr. Rogers thanked Dr. Vest for reading his paper, and Dr. Wilkinson for sending his paper to our society.

On account of Dr. David Littlejohn moving to Charleston, Dr. H. G. Steele was elected secretary of the society to fill the unexpired term of Dr. Littlejohn. The following were appointed as a program and entertainment committee for the next term: Drs. Harloe, Clements, and Luttrell, with instructions from the president that the next regular meeting in November would be held in Matoaka in Rock district and they were to get up and furnish the entire program.

Dr. M. W. Sinclair's application was received. There were 17 members and five visitors present. A very delightful luncheon was served. Adjourned at 10:10 p.m.

H. G. STEELE, Secy.

The McDowell County Medical Society met at the offices of Welch Hospital Number One for their regular monthly meeting on November 11, 1925.

Present: Drs. Kirkpatrick, Cox, Sameth, Rutherford, Stevens, Straub, Livingston, Woolwine, Killey, Camper.

In the absence of the president, Dr. Peck, Dr. Kirkpatrick acted as chairman of the meeting.

The minutes of May, 1925, meeting were read and approved without correction.

Clinical cases: The paper of the evening was read by Dr. W. B. Stevens, of Eckman, on "Rheumatism." The way in which the paper was handled showed that the writer was well versed, and had a wide experience, in the treatment on this uncertain and aggravating malady. Dr. Stevens gave us a very concise classification, pathology, symptoms and treatment of this condition. All who were so fortunate as to hear this paper feel well repaid, and feel that they were better informed on the treatment of this disease than they were previous to the meeting. It was a scientific paper embodying the theoretical and practical aspect of this disease. It was the feeling of the society that this paper should be published in the State Journal so that others may have the opportunity to read so practical and scientific a paper as Dr. Stevens gave.

Dr. Camper opened the discussion by thanking Dr. Stevens for his paper. Dr. Camper stressed the importance of intestinal intoxication due to stasis as one of the causes of the disease. In the treatment Dr. Camper emphasized the importance of using the ice cap on the heart.

Dr. Kirkpatrick cited a few of his cases that he had treated by elimin-

ating the focus of infection in the teeth and tonsils.

Dr. Livingston questioned the use of intravenous sodium iodid in the treatment of arthritis deformans.

Dr. Stevens in closing, did not believe the intravenous therapy did much good.

The following bills were ordered paid:

Flowers for Dr. Lovely, $20.00.

Home Office Supply, $6.75.

On motion duly seconded a resolution was passed in which the chairman was to delegate a committee of three to draw up resolutions on the death of Dr. B. H. Lovely, a copy of which was to be sent to his family, and a copy to be spread on the minutes of the society.

An application of Dr. C. F. Hicks, with check for $12.00 was read and approved, and Dr. Hicks was duly made a member of this society.

A letter was read from Dr. Steele of Bluefield, informing this society that a rebate of $411.27 was due the McDowell County physicians who contributed to the State Association fund. A motion was made and seconded that Dr. Killey distribute this amount to the various members according to their quota. A list of the members receiving rebates to be sent to the secretary for publication in the minutes.

Dr. Sameth's statement for the year ending December 10, 1925, showed the society to have a balance on hand of $449.22.

Miscellaneous business: On motion duly seconded, it was decided to elect the officers for the ensuing year. The following officers were elected:

President, Dr. A. G. Rutherford, Welch, W. Va.; vice-president, Dr. W. B. Stevens, Eckman, W. Va.; secretary, Dr. L. E. Cox, Mohawk, W. Va.; treasurer, Dr. J. L. Sameth, Welch, W. Va.

Censors: Drs. J. H. Anderson, W. B. Stevens and J. C. Killey. Delegates to the state meeting, Drs. Camper and Stevens; alternates, Drs. E. E. Vermillion and G. L. Straub.

October 8, 1925.

The Cabell County Medical Society held its first meeting of the Fall Session on Oct. 8, 1925, at the Hotel Frederick.

Mr. Ivan Davis was present and made a few remarks about his new drug store and distributed cigars which were much enjoyed.

Minutes of the last meeting were read and approved with a minor correction (Guyan instead of Guyandotte).

Applications of Drs. A. Bromley York and A. M. Kelley were presented and turned over to the Board of Censors.

Dr. Marple, chairman of the Pep and Membership Committee, reported progress.

Scientific program: Dr. R. J. Wilkinson of the C. & O. Hospital, presented a paper on "Acute Intestinal Obstruction." The subject was well covered and brought out many points of importance. Paper was discussed by Drs. Guthrie, Klumpp and Vest.

It was moved by Dr. Biern that a committee of two be appointed to draw up proper resolutions on the death of Mrs. E. E. Rose. Carried. Committee: Drs. Biern and Wylie.

Dr. Hodges discussed the advisability of moving our meeting place to the Prichard Hotel. He stated that the management of this hotel had offered to let us have meeting space free, and in his judgment it

was a more satisfactory place than the one we have now. He made a motion that we move our meeting place to the Prichard Hotel. This motion was amended by Dr. Biern so as to extend thanks to the Hotel Frederick. Dr. Hodges accepted the amendment, which was duly seconded and carried.

Dr. Wilkinson moved that a committee of five be appointed to confer with the Board of Commissioners of the City of Huntington in regard to an up-to-date health department for this city. Seconded and carried: Committee: R. J. Wilkinson, Oscar Biern, W. Byrd Hunter, J. E. Hubbard, C. P. S. Ford.

Dr. Hodges moved that *Hygeia Magazine* be placed in the High School and all Junior high schools, Marshall College, and the public libraries, the expense to be borne by the society. Seconded by Dr. Vest. Carried.

Dr. Hawes discussed the probability of our saving as much as possible so as to make a payment on a permanent home for the society. Dr. Bloss discussed the same and said when the lot was paid for he would donate $500.00 toward building a permanent home.

The Treasurer's report was read.

Attendance 37.

C. G. WILLIS, *Secretary.*

STATE AND GENERAL NEWS

The state association's automotive insurance program is moving forward slowly but surely and there is an ever-increasing interest being manifested in the membership. The response to the preliminary cards of inquiry has been virtually 100 per cent.

Many members, however, have been rather skeptical about clearing their insurance through the executive secretary's office because of the propaganda that has been put forward by insurance salesmen representing old line companies. One of these recently told a member that if a claim could not be settled and a suit for, say, $10,000 resulted that the doctors would have to "chip in" to pay any verdict.

An investigation disclosed that nothing could be further from the facts. The association's insurance underwriters is a corporation just the same as a stock company. It can sue in its own name and be sued, and no person whether a policy holder or a claimant not a policy holder can sue any member for any transaction arising out of the company's business.

The only liability not included in a stock company policy is the liability of assessment. This liability actually is in name only. In the event of insolvency of the mutual company or the company going into receiver's hands, the receiver can call upon each individual member for his pro-rata share of the liabilities up to an amount not exceeding one additional premium. This condition is placed in the policy not only under sanction of law but under conditions of the Lumbermen's Mutual Casualty company's by-laws and can not be changed in any policy during the time it is in force.

There seems to be little doubt that it ever will be necessary to call on any member in West Virginia for additional premium, or part thereof. History of insurance companies in the United States, which started with first company in 1752 and was a mutual company, there has never

been a mutual company with $200,000 in cash assets and $100,000 in surplus that has failed or made an assessment.

Compared with these facts are those relating that at this time, the Lumbermen's Mutual Casualty company has over $4,500,000 in cash assets and nearly $1,000,000 surplus. Thus the claims that assessment are liable to be made seem ridiculous.

Solidity of the company which is now engaged in writing automotive insurance for our state association members further is stressed by the fact that the Cudahy Packing company recently placed its whole automobile insurance program, covering its great fleet of trucks, in the hands of the L. M. C. C.

A number of members have written to the executive secretary inquiring if claim representatives are in their respective territories. A complete list of claim representatives will be published in the January Journal and it is the proud boast of the L. M. C. C. that its claim service is not to be equaled by any other mutual or stock company organization.

Also, in answer to other inquiries it has been ascertained that the L. M. C. C. is answerable to the same legal restrictions and regulations in West Virginia as are the old-line or stock companies.

Members are being urged to avail themselves of this insurance plan and thus save from 25 to 30 per cent of these annual premiums. One member, a councilor, who has carried his insurance through the Virginia Medical Society for three years, received a dividend this year of more than $10 on a policy where the premium was less than $35. Thus, he saved his state association dues on the one transaction.

Many officials of the state association have availed themselves of this insurance and others are going to do so as soon as their present policies expire, it has been indicated.

THE JOURNAL IS TO BE MOVED

One of the sweeping changes in the twenty years' existence of the West Virginia Medical Journal will be made during the month of December.

The Journal is to be moved to Charleston from Huntington where it has been published for the last ten years.

The editorial policy of The Journal is to be directed by the state association's new publication committee of five members, of which Dr. C. A. Ray of Charleston, councilor from the sixth district, is to be chairman.

Hereafter, all communications to The Journal should be directed to the executive secretary's office in Charleston.

The reasons for moving The Journal are:

First—The bid of The Charleston Printing & Publishing company was the lowest submitted and it was accepted at a recent meeting of the publication committee.

Second—All editorial, scientific, news and business affairs of The Journal thus will be centralized in the same city. During the past year, with The Journal published in Huntington and the executive secretary's office being located in Charleston, a certain amount of confusion has resulted and often it has been necessary for the executive

secretary, as business manager of The Journal, to make two or three visits to Huntington each month to look after the advertising and other business details.

Dr. Ray becomes chairman of the publication committee in the place of Dr. J. Howard Anderson, of Marytown, who resigned as chairman but retains his place on the committee as a member and as associate editor.

Dr. Anderson tendered his resignation at the organization meeting of the committee in Huntington, November 1. He explained that he did not have access to certain facilities at Marytown to handle the chairman's duties to his own satisfaction and therefore he thought it best to retire as chairman. He pointed out that he could not obtain the services of a stenographer at Marytown, even for part time work, and that the chairmanship carries with it a large amount of correspondence.

Accordingly, Dr. Harry M. Hall of Wheeling, suggested Dr. Ray's name and Dr. Ray was chosen acting chairman until the next meeting of the council to be held in Morgantown.

A week later, Dr. H. P. Linsz of Wheeling, chairman of the council, while on a visit to Charleston to go over the activities of the executive secretary's office, suggested that Dr. Ray be chosen permanent chairman to serve during the entire year. He suggested to save expense of calling a special meeting of the council, that the councilors vote by mail. At the time this is being written, eleven of the fourteen votes in the council have been in the affirmative, and thus Dr. Ray, having obtained a majority, becomes the permanent chairman.

It was pointed out at the meeting in Charleston, which also was attended by Dr. H. G. Nicholson, state treasurer, and Dr. R. H. Dunn, South Charleston, councilor from the sixth district, that it was best to choose a permanent chairman at this time to avoid the confusion that necessarily would result in a change of editors in mid-year.

Dr. Ray, who attended the meeting of the Southern Medical Association in Dallas, after a brief hunting trip in northwest Texas, joined the executive secretary in Chicago, November 20, to participate in the annual conference of secretaries and editors, conducted by the American Medical Association. He took active charge of The Journal upon his return.

One important action of the new publication committee was that, hereafter, all scientific papers to be published in The Journal must be approved by at least three of the five members of the commitee. In the past, all of this work has been handled by Dr. J. R. Bloss of Huntington, who becomes president of the state association on January 1.

All reports from secretaries and all news notes in the future should be sent direct to the executive secretary's office for publication.

Watch for the January issue of The Journal.

Under the direction of Dr. Samuel Morris, of the school of medicine, a course of instruction intended to develop in young men an intelligent and clean attitude toward life's relationships, is being conducted at West Virginia University.

Weekly guidance conferences are being conducted.

This is the first class of its kind to be inaugurated in any school in the state, insofar as can be learned, and it is a decided step in the advancement of sex instruction among the young. All freshmen are required to take the course, the aim being, according to the announcement, to give them a wholesome knowledge of the laws of life in order that they may understand the necessity for keeping morally clean and physically fit.

One of the most important meetings at Chicago in connection with the annual conference of editors and secretaries was the session called to discuss periodic examinations of apparently healthy persons.

Participants were the secretaries of state medical societies, officers and trustees of the American Medical Association and a group of persons who have been especially interested in this movement. Thirty-five doctors having been invited.

The program included two sections, i. e., the Physician and the Education of the Laity. The first stressed the necessity of arousing his interest and educating him for the thorough effective conduct of periodic health examinations and was divided into two parts—those relating to the undergraduate medical student and the physician already in practice.

Three papers were included in the second part on the following subjects:

(1) Papers and discussion, with demonstration by examinations of physicians themselves—Dr. Alec N. Thomson of New York.

(2) Post-Graduate Courses—Dr. Orrin Sage Wightman, New York.

(3) Typical cases and end-results of periodic examinations—Dr. Anna Mann Richardson of New York.

On the subject of education of the laity, the following program was followed:

(A) By newspapers, magazine articles, etc.—Dr. Elliott B. Edie, Pennsylvania.

(B) By lay-medical health associations—Dr. Hoyt Dearholt, Wisconsin.

(C) By examinations at health expositions and exhibits—Dr. Roy R. Ferguson, Illinois.

(D) By departments of public health—Dr. Stanley H. Osborn, Connecticut.

A complete report will be made on this conference in the January issue of The Journal. Much of the discussion was along the same line as the program adopted by the West Virginia State Medical Association at its last meeting in Bluefield and now being pushed by the professional relations committee.

Many far-sighted men and women here in West Virginia already have made it a practice to have complete medical examinations at least twice a year. They have found that such examinations have served to keep them well and on several occasions symptoms that probably would have resulted in long seiges of illness have been discovered and corrective steps taken before disease obtained a foothold.

OBITUARY

Dr. D. M. Brickley, a prominent physician of Manbar, Logan county, was stricken with apoplexy in

bed at his home November 18, living only a few minutes.

Dr. Brickley was forty-three years old, and studied medicine at the University of Louisville Medical College, from which he graduated in 1911.

He was an active member of the state and county medical societies.

He is survived by his wife and four children.

Resolutions

At a meeting of a committee from our county society, the following resolutions were adopted:

Whereas, the Logan County Medical Society, in the death of Dr. D. M. Brickey, is called to deplore the loss of one of its members, a man who was eminent in his profession and loved by many, be it resolved:

First: That this Society feels his passing most keenly.

Second: That it offers its deepest sympathy to the mourning members of his family, praying that their grief may be assuaged in the contemplation of a life well spent.

Third: That these resolutions and preamble be spread upon the minutes of the society; that a copy be sent to the State society, that they may be published in the West Virginia Medical Journal, and a copy be sent to his bereaved family.

DR. C. A. DAVIS,
DR. W. S. RAWN,
DR. H. H. FARLEY,
Committee.

AMERICAN BOARD OF OTOLARYNGOLOGY

An examination was held by the American Board of Otolaryngology on October 19, 1925, at the Cook County Hospital, Chicago, with the following results: Passed, 120; Failed, 23; Total examined, 143.

The next examination will be held in Dallas, Texas on April 19, 1926. Applications may be secured from the secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.

At the meeting of the Southern Medical Association, Dallas, Texas, November 9-12, the following officers for 1926 were elected: President, Chas. C. Bass, New Orleans, La.; First Vice-President, Oscar M. Marchman, Dallas, Texas; Second Vice-President, W. A. Bryan, Nashville, Tennessee; Chairman of the Council, H. Leslie Moore, Dallas, Texas; Chairman Board of Trustees, E. H. Carey, Dallas, Texas; Editor, M. Y. Dabney, Birmingham, Alabama; Secretary-Treasurer, Mr. C. P. Loranz, Birmingham, Alabama. Dr. Stewart R. Roberts, Atlanta, Georgia, was elected to the Board of Trustees, to succeed Dr. Llewellyn F. Barker, Baltimore. Atlanta was chosen as the next meeting place and the date chosen was the third week in November, 1926.

The following West Virginia physicians attended the meeting of the Southern Medical Association, Dallas, Texas, November 9-12: Dr. L. McClure Campbell, Eskdale; Dr. R. H. Edmundson, Morgantown; Dr. Arthur K. Hoge, Wheeling; Dr. Thomas W. Moore, Huntington; Dr. C. A. Ray, Charleston; Dr. Walter E. Vest, Huntington.

AUTOMOBILE OWNERS DELINQUENT—OVER 200,000 NEGLECT DUTIES

Believing we can serve our members we give this space to the letter of Chas. E. Hiner, member of the

State Road Commission in charge of license enforcement.

To the Editor:

Thousands of owners of automobiles in your community are making it impossible for the State Road Commission to serve them without a delay that will prove detrimental to their best interests. Knowing that the press is in intimate contact with the public, I am impelled by the consideration of public duty to request your aid in mutual service to our people.

The Legislature of 1925 passed the law requiring every owner of an automobile to procure from the State Road Commission a Certificate of Title. The law made it impossible to issue a license to any owner of a motor car unless there was first produced from the Commission a Certificate of Title. Consequently we are unable to issue a license to any owner of a motor car for the new year until the owner has procured his Certificate of Title. We mailed in September blank applications and copies of the law to every car owner.

We have repeatedly called the attention of motor car owners to this statute. We know there are 250,000 licensed motor cars in West Virginia, yet we have received only 25,000 applications to the present time for Certificates of Title.

It is our aim to serve the public without delay. We want to do this, yet if the public will not co-operate with us the car owners cannot expect the Road Commission to do something that is physically impossible and issue two hundred thousand Certificates of Title during the month of December. There will not only be delay in the issuance of the Certificates of Title, but there will be a corresponding delay in the issuance of license plates for 1926 without which car owners cannot operate their cars. Upon issuance of Certificate of Title, application blanks for new licenses are issued to owner.

We have an efficient force organized to serve the public at this time. We are ready and waiting. If the car owners wait until the final day there will be a prolonged delay, but it will not be the fault of the State Road Commission. The car owner who fails later to secure the service he would expect from a public servant can attribute his disappointment to his own neglect.

I know that it is an imposition to ask you to give publicity to this letter, but I am sure that you are interested in serving the public the same as the State Road Commission.

Very respectfully,
CHARLES E. HINER,
Member State Road Commission.

AN APPRECIATION

The following letter from one of the oldest members of the West Virginia State Medical Association was received by the executive secretary:

"I wish you to convey to the West Virginia State Medical Association my high appreciation for the honor conferred upon me making me an honorary member of that distinguished body. Permit me to say that I am at the eighty-fifth mile stone and sixty consecutive years have been spent in the practice of medicine in West Virginia.

"Again thanking the society for the courtesy extended, I am,

"Fraternally yours,
"T. M. CALVERT, M. D.,
"Mannington, W. Va."

Dr. T. Jud. McBee will return to his home in Morgantown in December from Baltimore where he has has been doing post-graduate work in Urology for the past several months. On his return he will limit his practice to Urology, to which he has given special attention for the several years.

A CHRISTMAS GREETING

Christmas is the time when each of us gives thought to the good we can do for someone else and particularly the unfortunate.

It is fitting, at such a season, that due acknowledgment should be made to the guardian of our health, the American physician, for his unselfish and tireless devotion throughout the days and nights of the whole year in preventing sickness and relieving suffering and distress. To him is due the opportunity many of us enjoy to celebrate our continued or renewed health on Christmas Day.

It is the pleasant duty of our company to have its part in a somewhat analogous capacity, to aid throughout the year in the general task of forestalling and relieving the distress of the injured. Through a nation-wide campaign consistently pursued, we are trying to do our part in the prevention of automobile accidents, and through our plan of prompt and equitable loss adjustments, when the accidents have occurred, we serve to relieve or remove the distress of the injured.

To the physicians of West Virginia, at this Yuletide Season, we extend our sincere good wishes for the future and our appreciation of your services in the cause of humanity.

JAMES T. HAVILAND,
Vice-President Lumbermen's Mutual Casualty Company.

The campaign to establish an endowment fund for The Physicians' Home, the first small unit of which is already in service at Caneadea, N. Y., was launched Monday, November 23, at the Waldorf-Astoria, New York. An impressive gathering that included men and women prominent in medicine, financial and other fields heard noted speakers outline the purposes of the campaign and laud the movement. A number of substantial donations were received indicating the interest of the profession and the public.

Dr. Morris, President of the Home, said in part:

"None of the doctors are to be subjected to institutional methods. They will be free to come and go as they please. Those who have nothing will pay nothing. Those who can afford to pay for part or all of their care (and there are many such) will be allowed to do that.

"The Directors of The Physicians' Home are all busy men actively engaged in professional work and receiving no compensation for their time and labor, willingly expended in this charity, the need for which has been brought so strongly to their attention. They feel that it is time, in the larger development of the institution to secure an endowment which will allow them to transfer the responsibilities to men who are trained in social service relating to institutions."

Campaign headquarters have been established in the Times Building, Times Square, New York. Contributions should be forwarded to that address, in care of the treasurer, Albert G. Weed, M. D. Other officers and directors are: Robert T. Morris, M. D., President; William H. Dieffenbach, M. D., Vice-President; Silas F. Hallock, M. D., Secretary; and Drs. Warren Coleman, Max Einhorn, Wolff Freudenthal, J. Richard Kevin, Stephen V. Mountain and Ralph Waldo.

It was disclosed at the inaugural banquet that of the more than 140,000 physicians in the United States approximately 5 per cent are incapacitated. It is these the Home seeks to serve.

Dr. George M. Lyon announces the removal of his office to Suite 1105, First Huntington National Bank Building.

BOOKS RECEIVED

Thoracic Surgery: The Surgical Treatment of Thoracic Disease. By Howard Lilienthal, M. D., Professor of Clinical Surgery at Cornell University Medical School. Two octavo volumes totalling 1294 pages, with 90 illustrations, 10 in colors. Philadelphia and London: W. B. Saunders Company, 1925. Cloth $20.00.

A Text-Book of Medical Diagnosis: By James M. Anders, M. D., Professor of Medicine, Medico-Chirurgical College, Graduate School of Medicine, University of Pennsylvania; and L. Napoleon Boston, M. D., Associate Professor of Medicine, Graduate School of Medicine, University of Pennsylvania. Third Edition, entirely re-set. Octavo of 1422 pages, 555 illustrations, some in colors. Philadelphia and London: W. B. Saunders Company, 1925. Cloth $12 net.

Applied Biochemistry. By Withrow Morse, Ph. D., Professor of Physiological Chemistry and Toxicology, Jefferson Medical College, Philadelphia. Octavo of 958 pages with 257 illustrations. Philadelphia and London: W. B. Saunders Company, 1925. Cloth $7 net.

Sex; for Parents and Teachers: Wm. Leland Stowell, M. D., Fellow of the New York Academy of Medicine and of the American Medical Association; member of the New York State Medical Society; formerly Consulting Physician of the New York City Children's Hospital and Schools.

When on every side the subject of sex is being presented to the youth of the nation, through the medium of moving pictures and popular novels (intended for adult audiences doubtless, yet shared by adolescents) does it not behoove the parent and teacher to forestall erroneous and harmful ideas by utilizing the sensible approach set forth by Dr. Stowell and endorsed by leading educators. The MacMillan Company, publishers, 60-66 Fifth Avenue, New York. Price $1.50.

Dyspepsia; Its Varieties and Treatment. By W. Soltau Fenwick, M.D., B. S. (London), late physician to the Evelina Hospital for Sick Children, London. Second Edition, revised. Octavo of 515 pages, illustrated. Philadelphia and London. W. B. Saunders Company, 1925. Cloth, $6 net.

Physical Diagnosis of Diseases of the Chest. By Joseph H. Pratt, A. M., M. D., and George E. Bushnell, Ph. D., M. D. Octavo of 522 pages with 166 illustrations. Philadelphia and London: W. B. Saunders Company, 1925. Cloth $5 net.

The Art of Medical Treatment. By Francis W. Palfrey, M. D., Visiting Physician, Boston City Hospital; Instructor in Medicine, Harvard University. Octavo of 463 pages. Philadelphia and London: W. B. Saunders Company, 1925. Cloth $4.50 net.

Symptoms of Visceral Disease. A study of the Vegetive Nervous System in its Relation to Clinical Medicine. By Francis Marion Pottenger, A.M., M.D., LL.D., F.A.C.P. Medical Director Pottenger Sanitorium for Diseases of the Lungs and Throat, Monrovia, Cal. Author of "Clinical Tuberculosis," "Tuberculin in Diagnosis and Treatment," "Muscle Spasm and Degeneration," etc. Third edition with eighty-six text illustrations and ten color plates. St. Louis. C. V. Mosby Co. Price $6.50.

Some Fundamental Considerations in the Treatment of Empyema Thoracis, by Evarts A. Graham, A.B., M.D. Member of Empyema Commission U. S. Army; Professor of Surgery, Washington University School of Medicine; Surgeon-in-Chief Barnes Hospital, St. Louis Children's Hospital. This essay was awarded the Samuel D. Gross prize of the Philadelphia Academy of Surgery in 1920. Illustrated. St. Louis, C. V. Mosby Co., 1925. Price $3.

Methods in Surgery, used in the Surgical Divisions of Barnes Hospital, St. Louis Children's Hospital and Washington University dispensary, Including outlines for case history taking, pre-operative and post-operative care of patients, routines, diets, etc. By Glover H. Copher, M. D., instructor in surgery Washington University School of Medicine; Clinical Assistant to Barnes Hospital; Surgeon to Out Patients, Washington University Dispensary; Visiting Surgeon St. Louis City Hospital, St. Louis. C. V. Mosby Co. Price $3.

Personal and Community Health, by Clair Elsmere Turner, Associate Professor of Biology and Public Health in the Massachusetts Institute of Technology; Associate Professor of Hygiene in the Tufts College Medical and Dental Schools; sometime member of the Administrative Board in the School of Public Health of Harvard University and the Massachusetts Institute of Technology; Fellow American Public Health Association; Major Sanitary Corps U. S. A. (Reserve). Illustrated. St. Louis. C. V. Mosby Co., 1925. Price $2.50.

The Normal Diet. A simple statement of the fundamental principles of diet for the mutual use of physicians and patients, by W. B. Sansum, M.S., M.D. Director of Potter Metabolic Clinic Department of Metabolism, Santa Barbara Cottage Hospital, Santa Barbara, Cal. Illustrated. St. Louis. C. V. Mosby Co., 1925. Price $1.50.

Old and New Viewpoints in Psychology. Some interpretations and applications of psychological princi-

ples. By Knight Dunlap, Professor of Experimental Psychology in the Johns Hopkins University, Baltimore; formerly President of American Psychological Association. This volume contains three public lectures delivered at the Johns Hopkins University and two papers read before the Southern Society of Philosophy and Psychology. The lectures on "Mental Measurements" and on "Present Day Schools of Psychology" were delivered under the auspices of the Johns Hopkins University and the lecture on "The Psychology of the Comic" was delivered under the auspices of the Johns Hopkins Women's Club. The paper on "Psychological Aspects of Spiritualism" was read at Macon, and the paper on "Reading of Character from External Signs" at Memphis.

The lecture on "Mental Measurements" was prepared with the cooperation of Dr. Buford Johnson and Mr. Schachne Isaacs of the staff of the Department of Psychology of Johns Hopkins, and represents therefore a departmental viewpoint instead of merely the author's personal opinions. We believe that the points made in this lecture are of great importance and that they should be carefully considered by every psychologist as well as every other person working in the mental measurement field.

The four other lectures represent the author's own conclusions primarily, but have had the benefit of the criticisms of his two colleagues. The C. V. Mosby Co., publishers, St. Louis. Price $1.50.

An Introduction to Objective Psychopathology, by G. V. Hamilton, M. D., director of Psychobiological Research, Bureau of Social Hygiene, Inc., New York City, with a foreword by Robert M. Yerkes, Ph. D., LL. D., Professor of Psychology, Yale University.

This book is essentially a psychopathologist's account of his studies and interpretations of various modes of human and animal behavior. It is meant to reflect the importance of effecting such studies by the use of scientifically formulated methods of research as an essential supplement to the always useful but never quite trustworthy methods of field and clinical observations.

The results of Dr. Hamilton's work are here offered to physicians, social workers and lay readers who may share with him a hope that in time psychopathologic research will make possible the construction of textbooks devoted to systematic accounts of the human personality as an integration of adjustive functions, each of which may be regarded as playing a recognizable role in the determination of total response to particular types of situations. The C. V. Mosby Co., publishers, St. Louis. Price $5.

Ocular Therapeutics. A manual for the student and practitioner, by Dr. Ernest Frank, A. O., professor of Ophthalmology and Chief of the Second Eye Clinic at the University of Hamburg. Translated by Clarence Loeb, A.M., M.D., Oculist to the Michael Reese Hospital, and head of the Department of Ophthalmology of the Michael Reese Dispensary, Chicago, Ill. St. Louis. C. V. Mosby Co., 1925. Price $3.50.

Eye, Ear, Nose and Throat Manual for Nurses, by Roy H. Parkinson, M.D. Visiting Oculist and Aurist

to St. Joseph's Hospital, San Francisco, Cal. Illustrated. St. Louis. C. V. Mosby Co., 1925. Price $2.25.

An Intermediate Text Book of Physiological Chemistry, with Experiments, by C. J. V. Pettibone, Ph. D., Associate Professor of Physiological Chemistry, Medical School, University of Minnesota, Minneapolis. Third edition. St. Louis. C. V. Mosby Co., 1925. Price $3.25.

Development of Our Knowledge of Tuberculosis, by Lawrence F. Flick, M.D., LL.D., co-founder of Rush Memorial Hospital for Diseases of the Chest; organizer of the Pennsylvania Society for the Prevention of Tuberculosis; co-founder of the Free White Hospital for Poor Consumptives and White Haven Sanatorium Association; co-founder of Henry Phipps Institute; co-organizer of the National Association for the Prevention of Tuberculosis; chairman of the Committee on International Congress on Tuberculosis in Washington, 1908; ex-president of International Anti-Tuberculosis Association; author of "The Crusade Against Tuberculosis," "Consumption, a Curable and Preventable Disease."

Tuberculosis is one of the most complex and most difficult subjects in the art and science of medicine. As a disease it has been an affliction from the dawn of civilization and has challenged man's best thought for the alleviation of suffering. Protean in its nature, it has led men into numerous avenues of study and research. Giant intellects have worn themselves out trying to solve its riddles and warm hearts have burned out in zealous endeavor to relieve the burdens which have come with it. No disease has taken so heavy a toll in service and martyrdom for its elucidation. Now that it is understood and its mysteries cleared up and the way paved for its extermination, the story of how this is done is of gripping interest. The story has also a practical side. No single mind has been big enough to grasp the full meaning of tuberculosis. The development of our knowledge of it has been from one vast intellect to another. Every step was necessary for the next. Many, when taken, were held to be false by many of the best minds of the day.

The physician of today, no more than his brothers of the past, can grasp its full meaning except in retrospect. The mistakes which have been made help one to understand the truths which have been unfolded. No knowledge is so complete as that which comes in the making. This is the motif underlying the work which is now offered to the medical profession.

Lawrence F. Flick, M.D., 738 Pine St., Philadelphia, Pa. Price $7.50.

International Clinics; a Quarterly of illustrated clinical lectures and especially prepared original articles on treatment, medicine, surgery, neurology, paediatrics, obstetrics, gynecology, orthopaedics, pathology, dermatology, ophthalmology, otology, rhinology, laryngology, hygiene, and other topics of interest to students and practitioners by leading members of the medical profession throughout the world. Edited by Henry W. Cattell, A.M., M.D., Philadelphia; with

the collaboration of Chas. H. Mayo, M.D., Rochester; Sir John Rose Bradford, M.D., London; Wm. S. Thayer, M.D., Baltimore; Frank Billings, M.D., Chicago; A. McPhedran, M.D., Toronto; Hugh S. Cummings, M.D., D.P.H., Washington, D. C.; John G. Clark, M.D., Philadelphia; James J. Walsh, M.D., New York; John Foote, M.D., Washington, D. C. Sir Humphrey Rolleston, K.C.B., M. D., D.C.L., London; Sir Donald Mac Alister of Tarbert, BT., M.D., F.R. C.P., Glasgow; Seale Harris, M.D., Birmingham, Ala.; Chas. D. Lockwood, M.D., Pasadena, Cal.; A. H. Gordon, M.D., Montreal. Volume II, thirty-fifth series, 1925. J. B. Lippincott Co., Philadelphia and London, 1925.

Simplified Nursing, by Florence Dakin, R.N., Inspector of Schools of Nursing, State of New Jersey. Octavo, 497 pages, 77 illustrations.

Out of an extensive nursing experience covering more than twenty years, the author presents in the form of lessons the fundamentals of nursing in a simple, easily understood form but with technical accuracy. The content has been confined to methods which may be easily, safely and accurately carried out by intelligent persons in the home, the practical nurse or the trained attendant. It is covered under three sections as follows: I. Routine Work; II. General Nursing Methods; III. Special Nursing Methods, followed by a complete glossary and full subject index. The text is illustrated and presented with the confidence that it meets a long-felt need for a simple text with an accurate background, dealing throughout with essentials. J. B. Lippincott Co.

MEDICINE AND SURGERY

IRON IN THERAPEUTICS

The United States Pharmacopeia and the National Formulary contain sixty-four preparation of iron. The chemical fate and the therapeutic efficiency of medicinal iron, nevertheless, have been long uncertain, and debate has been proportionately voluminous. Cushny well sums up what is known of the fate of medicinal iron preparations in the body, pointing out that they probably undergo changes in the stomach, then pass into the duodenum, from which the great bulk is carried on to lower parts of the intestine. Some of the iron is absorbed by the epithelium and leukocytes in solid form and perhaps in solution and then is deposited in the spleen, where it may undergo some changes in form before being taken up by the blood and deposited in the liver and perhaps in the bone marrow. Cushny says:

Where the supply of iron has been inadequate for the formation of hemoglobin, the originally inorganic iron is probably worked into higher forms and eventually into hemoglobin in the liver, and it seems likely that ferratin is one of the intermediate steps in this synthesis. When there is no deficiency of iron for the formation of hemoglobin, the liver slowly yields its store of iron to the blood, which carries it to the cecum and large intestine, by the epithelium of which it is finally excreted. It is to be noted that the iron absorbed does not increase the amount of iron in the urine, bile or other excretions. The ordinary preparations of iron follow the same course in the tissues as the more complex compounds which exist in foods.

As may be seen, even this is qualified information. Actual chemical evidence has been difficult to get, be-

cause iron is normally present in the tissues, and the body utilizes quantitatively little of the iron that may be introduced therapeutically or in food.

It seems possible now, however, that much of the therapeutist's uncertainty may be cleared up. Williamson and Ets, on the basis of experiments involving the use of large numbers of nearly identical animals over long periods of time under uniform conditions, have obtained results which merit consideration because of the controlled conditions under which they were secured. Inorganic iron, whether given by mouth, subcutaneously or intravenously, they found, is absorbed and may be found especially in the liver and spleen, but is not converted into hemoglobin. The futility of prescribing iron for anemia following hemorrhage is shown by the fact that animals made anemic by one or several large bleedings do not recover any more rapidly when inorganic iron is given. The efficiency of food iron seemed pronounced, and animals on a diet containing food iron recovered rapidly from hemorrhages that removed an amount of iron greater than exists in the entire body outside the blood. If the work of Williamson and Ets is confirmed, the next "Useful Drugs" may contain even fewer preparations of iron than the sixteen listed in the present new edition.—Jour A.M.A., Oct. 10, 1925.

PITUITARY DISORDER

Out of 175 cases of pituitary disorder, C. H. Frazier and F. C. Grant, Philadelphia (Jour. A. M. A., Oct. 10, 1925) have selected 100 cases for analysis of symptoms and results of treatment. In this series of 100 cases, the initial symptom, according to the patient's statement, was failing vision in 71 per cent, and a later development in 16 per cent. In 27 per cent headache was the initial symptom, and a later symptom in 61 per cent; it was described as severe in 37 per cent, as moderate in 15 per cent, and as slight in 9 per cent. "Pituitary headache" implies tension within the pituitary capsule, and one would rather expect a more or less constant location to which the pain is referred. As a matter of fact, in this series the location was varied and was described as frontal (17), fronto-occipital (5), fronto-temporal (7), vertexfrontal (1), occipital (5), vertexoccipital (2), occipitotemporal (3), and general (7). Thus the majority in this series were frontal, followed in order of frequency by occipital, general and bitemporal. While headache was recorded as severe in one third of the total number of cases, as a matter of fact in only five cases was it the outstanding symptom for which the patient sought relief. Optic atrophy was present in 41 per cent, and in more than half of these there was total or almost complete blindness in one eye, with deterioration of vision in the other. The yellowish discoloration of the disk, really pathognomonic of pituitary disease, was recorded in 35 per cent of the cases. The authors state that the surgery of the pituitary body as practiced today, has limitations, proportionate in large measure to the duration of the lesion. When surgery is recognized as an essential factor in the treatment of the pituitary lesion in the early stage, before optic atrophy is advanced and before the terminal stages of functional disorder are reached, there will be a de-

cided improvement in the operative results and a lower mortality. The surgeon has been handicapped because he has been confronted so often with terminal effects.

DETERMINATION OF LOCAL COMPRESSION AS AN INDICATION FOR LAMINECTOMY

Claude C. Coleman, Richmond, Va. (Jour. A.M.A., Oct. 10, 1925), summarizes his study as follows: Clinical study of patients with severe spinal cord injuries generally fails to give early information as to the extent of the cord lesion. Laminectomy for spinal cord injuries, except in penetrating wounds, is not indicated unless there is pressure on the cord. Pressure on the cord following fracture dislocation cannot be demonstrated by clinical study or roentgen-ray examination unless there is considerable vertebral deformity. Complete occlusion of the spinal subarachnoid space following injury should be taken to mean that the cord is compressed in a deformed or normal dural canal. The demonstration of such compression of the cord by the Queckenstedt test or Ayer's combined puncture after spinal trauma should be considered an unequivocal indication for operation.

DIATHERMY IN JOINT INJURIES

F. W. Ewerhardt, St. Louis (Jour. A. M. A., Oct. 10, 1925), regards diathermy as a safe heating procedure which can be localized in deep-seated tissues at will; the degree of intensity may be satisfactorily regulated by means of suitable electrodes of varying sizes, properly applied and augmented by the co-operation of the patient. It is a valuable measure to at least partial control of pain, spasm and swelling in the earlier stages of fractures and joint injuries, and contributes, therefore, materially to a favorable functional end-result. Patients take kindly to it, they are favorably impressed with the procedure, and their co-operation is more easily secured when movements and massage are indicated. Unquestionably, the period of convalescence in the treatment of fractures is materially reduced. Its application seems indicated in post-operative bone and joint conditions, acute sprains, fractures and bursitis; when brasiere is found necessary; in acute and chronic arthritis, and in treating contractures and fibrositis. It is contraindicated in cases of pus sac without drainage, when there is danger of hemorrhage, and in tuberculous joints and suspected malignancy.

THE AVERAGE SEX LIFE OF AMERICAN WOMEN

The Committee on Maternal Health found that, as soon as it had surveyed the field and persuaded seven clinics to work out contraception studies—indications, methods and results, and related sterility and sterilization—steps must be taken to develop essential data not available. Among these missing facts may be mentioned age at marriage and at childbirth, by single years for American women; duration of their reproductive life, with fecundity and fertility; the findings that make, or point to, the diagnosis of sex experiences; exact genital measurements; the anatomy of the sex act and the bearings of it on health; together with

the correlation of pelvic disorders and diseases with sex practices of all kinds—the whole based no longer on opinion, but on trustworthy medical records. This paper by Robert L. Dickinson and Henry H. Pierson, New York (Jour. A. M. A., Oct. 10, 1925), is an introduction to the series, covering several thousand histories. As an important preliminary the authors propose the first summary of an epoch making and elaborate study published by Katherine B. Davis, for the Bureau of Social Hygiene.

PERIRENAL SCLEROSIS (CHRONIC CICATRIZING PERINEPHRITIS)

Vincent J. O'Conor, Chicago (Jour. A.M.A., Oct. 10, 1925), reports two cases of perirenal sclerosis occurring as a sequel to perinephritic abscess. The patients were young men. The symptoms of renal compression became severe several years after an apparently successful drainage of a right peri-nephritic abscess. Both patients complained of a dull lumbar pain, which was localized and did not radiate to the abdomen, groin or thigh. In each instance the pain was markedly increased when the daily fluid intake exceeded 3 quarts. The pain became acute and sedatives were required when a quart of fluid was taken during a two hour period. The only objective finding was a deficiency of function on the affected side. There was no evidence of stone, tumor or urinary obstruction, and the ureteropyelograms were normal. This unilateral diminution of renal function was evidenced by a fixed low specific gravity, a lessened excretion of urea, chlorids and total solids, and a retarded phenolsulphonephthalein excretion. In each instance the opposite kidney was normal or slightly more efficient than usual. These divided urine tests were made from two to four times in each instance before operation. The operative procedure consisted in a complete removal of the cicatricial capsule and a thorough mobilization of the renal pedicle, pelvis and upper ureter. Nephrolysis, or decapsulation, relieved all pain, and there was ultimately a complete return to normal function on the affected side.

BLADDER REFLUX

A clinical and experimental study has been made by Daniel N. Eisendrath, Harry Katz and Julius M. Glasser, Chicago (Jour. A. M. A., Oct. 10, 1925). By bladder reflux is to be understood the regurgitation (backflow) of bladder contents into the ureters and renal pelves. The condition may be congenital or develop in postnatal life. That it is not a permanent affection is shown by the first case reported, in which a marked reflux complicating atony of the bladder and due to spinal syphilis entirely disappeared after appropriate local and general treatment. Reflux plays an important part in carrying the infection from the lower to the upper urinary tract and explains the recurrence and resistance to treatment in such cases. It may lead to an erroneous diagnosis of bilateral renal tuberculosis because it is a frequent complication of that disease. It is extremely rare in normal persons and during pregnancy. Acute and chronic cystitis favor it because of changes in the lower ureter preventing proper closure of the orifice

on one or both sides. In ninety-one cases including normal persons, pregnancies and various vesical and renal conditions, reflux was found in only five, or 5.4 per cent, most frequently in infections of the bladder and kidney, both tuberculous and non-tuberculous. Obstruction at the vesical neck is a comparatively rare cause of reflux. There is still much difference of opinion as to the reason why the mechanism at the ureterovesical junction, which normally opposes the reflux of bladder contents, should fail to function. Some hold that a hypertonic vesical musculature forces the ureteral orifices open. Some believe that a congenital insufficiency will explain all cases. A third group holds that changes in the wall of the lowermost portion of the ureter from lack of innervation or disease prevent the proper closure of the orifices. One must concede that all three of these may coexist, or even, acting alone, be sufficient cause for the phenomenon.

DIATHERMY IN CALCIFIED SUBDELTOID BURSITIS

Joseph F. Harris, New York (Jour. A. M. A., Oct. 10, 1925), is convinced that diathermy in calcified subdeltoid bursitis is a curative measure and not a palliative one. A long series of cases treated over a period of years has shown a complete restoration of function and an absence of pain. It is therefore fair to assume that in each case the greater part of the deposit has been absorbed by this form of treatment. If not completely absorbed, it has been reduced to such a size that it does not interfere with the function of the shoulder. Up to this time there has not been a recurrence.

MUSHROOMS STIMULATE DIGESTIVE SECRETIONS

The mushroom is a food plant not utilized as it deserves to be. Large quantities of these grow wild and they are easily cultivated, so they should be in the list of foods which are abundant and inexpensive, especially in rural communities. On the contrary, they are expensive and used for the most part by well-to-do people in the city. Their value is not so much in nutrients, for that is low, but because of the piquant flavor they add to other foods, thereby increasing palatability and stimulating digestive secretion without the harmful effects which may be associated with spices, condiments and similar means of high seasoning. Dried mushrooms are to be had in the market at a much lower price than the fresh, or they may be dried in the home. One explanation of the limited use of mushrooms is that they so nearly resemble poisonous fungi that many people are afraid to trust their judgment of them. People of southern Europe use mushrooms in large quantities, so do many tribes of savages.—Lulu Graves in Hygeia, December, 1925.

SCAN FAMILY PEDIGREE BEFORE WEDDING COUSIN

No arbitrary rule can be laid down regarding the marriage of cousins, says Hygeia, in answer to a question on this subject. This question was answered in the December issue.

The traits, desirable or undesirable revealed in the offspring of such matings, will depend on the qualities, either latent or expressed, which are

already present in the family stock. Such inbreeding, by bringing together like characteristics, tends to perpetuate particular traits more certainly in a given strain. If they are valuable, well and good, but if undesirable—if defect meets defect—the result is often disastrous.

The greatest difficulty in deciding on the advisability of marriage between relatives lies in the fact that every individual carries in transmissible form innumerable latent characteristics as well as those which are evident. When two such concealed tendencies are brought together—a situation obviously more likely to occur in cousin marriages than in matings between unrelated persons — they may become fully expressed in the new individual. Mental deficiencies, epilepsy, various insanities, susceptibility to tuberculosis, and many other human ills are of the type which remain dormant in an unsound stock only as long as it is overruled by a normal inheritance from one parent.

Since this is true, before consummating a cousin marriage, one should carefully scan the family pedigree. There are few families which do not possess some undesirable hereditary traits, and if cousins decide to marry they should do so with knowledge of the extra hazards they are imposing on their children.

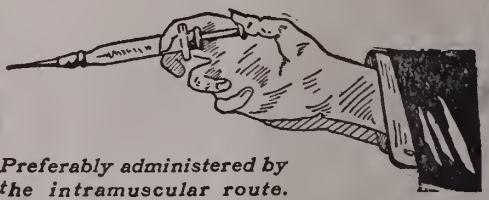
However, the children of a cousin marriage in which each parent was free from inheritance defect, revealed or latent, are no more likely to have defective children than are any other persons.

PRUNES NO LONGER HELD IN DISREPUTE

There was a time when prunes were somewhat in disrepute as a food just why, is hard to say, but this is no longer true. One of the large, high class grocers in New York City who has several retail stores in that city, says that he sells ten 25-pound boxes of prunes daily from one store. This is one of the many indications of the popularity of this fruit.

So says Lulu Graves expert dietitian, writing on the use of fried fruits and vegetables in the diet, a feature of the December issue of Hygeia, popular health magazine published by the American Medical Association.

Properly cooked prunes are nutritious and delicious. To be properly cooked, they should be washed thoroughly, covered with warm or hot water and allowed to stand until tender. If kept on the range or elsewhere to keep the water hot, less time is required. If not, after the soaking process they should be cooked for a short time only, below the boiling point. Either process, prolonged soaking or rapid boiling, will cause the prunes to become mushy and make the unattractive in appearance. No sugar need be added to California prunes of good quality, but Oregon prunes are more tart and one may prefer them sweetened a little. Some prefer the prunes uncooked after the soaking; it is not really necessary to cook them, if they are tender. They may be served plain as a breakfast fruit or in combination with cereal.



Preferably administered by the intramuscular route.

Sulpharsphenamine SQUIBB

Manufactured as developed by Professor Voegtlin and colleagues of the United States Public Health Service.

Least toxic of the Arsphenamines
20% more arsenic than Neoarsphenamine
More stable than Neoarsphenamine

SULPHARSPHENAMINE by the intramuscular route has proved quite as effective therapeutically as arsphenamine and neoarsphenamine from the standpoint of spirillicidal action and of effect on the blood and spinal fluid Wassermann reaction. There is evidence of superiority over the older arsphenamines in the treatment of neurosyphilis, and distinct evidence of superiority to neoarsphenamine intravenously in all aspects of syphilis.

(*Stokes and Behn, Jour. A.M.A., July 26, 1924, p. 245.*)

E·R·SQUIBB & SONS, NEW YORK
MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

NEXT MEETING, BLUEFIELD, JUNE 9-10-11-12

THE WEST VIRGINIA

MEDICAL JOURNAL

Published by The West Virginia State Medical Association

VOL. XX—No. 2 HUNTINGTON, W. VA. FEBRUARY, 1925

CONTENTS

INFANT DIET MEAD'S MATERIALS

The *Real* Value of MEAD'S DEXTRI-MALTOSE *in* Infant Feeding

MEAD'S DEXTRI-MALTOSE (Dextrins & Maltose) is a form of carbohydrate that, when added to cow's milk and water in the proportions best suited to meet the nutritional demands of the bottle-fed infant, usually gives gratifying results. *These gratifying results* are due to:

1st. Dextri-Maltose is a form of carbohydrate readily assimilated by the average infant and less liable to cause digestive disturbances.

2nd. *The control of the infant feeding case which the physician can easily exercise due to the ethical policy of Mead Johnson & Company.*

The Mead Policy

Mead's Infant Diet Materials are advertised only to physicians. No feeding directions accompany trade packages. Information in regard to feeding is supplied to the mother by written instructions from her doctor, who changes the feedings from time to time to meet the nutritional requirements of the growing infant. Literature furnished only to physicians.

In addition to

MEAD'S DEXTRI-MALTOSE

Mead also offers for the physician's approval

MEAD'S CASEC
(*For the simple preparation of protein milk*)
and
MEAD'S COD LIVER OIL
(*A standardized antirachitic agent*)

Samples of these infant diet materials and literature describing their use will be sent at the physician's request.

MEAD JOHNSON & COMPANY
Makers of Infant Diet Materials
EVANSVILLE, INDIANA, U. S. A.

A NEW SQUIBB PRODUCT

TO supply a need of the medical profession, the Squibb Laboratories announce the perfection of a distinctive and superior agar-oil emulsion. It will be marketed under the professional title

Squibb's Liquid Petrolatum with Agar

This new Squibb preparation is made with Squibb's Liquid Petrolatum (Heavy, Californian), known for over twelve years as a pure naphthene oil of exceptionally high natural viscosity.

Squibb's Liquid Petrolatum with Agar has a dry agar content three times as great as that of similar preparations on the market examined by us.

It is absolutely free from oily taste; and its creamy consistency, pleasant taste and proven therapeutic efficacy, assure its universal favor with patients as well as physicians.

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THE WEST VIRGINIA

MEDICAL JOURNAL

Published by the West Virginia State Medical Association

VOL. XX—No. 3 HUNTINGTON, W. VA. MARCH, 1925

CONTENTS

INFANT DIET  MATERIALS

THE DOCTOR'S METHOD OF MILK MODIFICATION FOR INFANTS

Every physician has a method of feeding infants under his care. Much depends on his instructions being carried out.

The Mead Johnson Policy prevents outside interference and doctors find that Mead's Dextri-Maltose, cow's milk and water, gives gratifying results in the majority of infants under their care.

THE MEAD JOHNSON POLICY

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MEAD JOHNSON & COMPANY

EVANSVILLE, INDIANA

Here is a Cough Remedy for prescription only

Never advertised for sale direct to the laity

for

STUBBORN COUGHS and COLDS

try

THIOCOL SYRUP "ROCHE"

A valuable remedy, fully described in New and Nonofficial Remedies.

Thiocol Syrup does not disguise the condition by simply alleviating the symptoms but exerts a direct curative effect upon the area of infection.

Does not contain any narcotic or palliative drugs, does not constipate, does not upset digestion. May be safely administered to the youngest children.

Dosage. One-half to four teaspoonfuls, according to age, three times a day.

Original bottles contain
6 fluid ounces

The Hoffmann-La Roche Chemical Works, New York
Makers of Medicines of Rare Quality

Now Ready

INSULIN, for the treatment of diabetes mellitus, as discovered by Banting and Best of the University of Toronto, Canada, is now available in the form of INSULIN SQUIBB.

This product of the Squibb Laboratories is manufactured under license of the Governors of the University of Toronto and every lot of Insulin must meet the requirements of the Insulin Committee of the University of Toronto before it is marketed. INSULIN SQUIBB has been accepted by the Council on Pharmacy and Chemistry of the American Medical Association.

INSULIN SQUIBB is supplied in 5-Cc. vials, in ~~two~~ three strengths:

50 Units (10 units per Cc.)—BLUE Label
100 Units (20 units per Cc.)—YELLOW Label
200 Units (40 units per Cc.)—RED Label

Complete Information Upon Request

E·R·SQUIBB & SONS, NEW YORK
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MEDICAL JOURNAL

Published by the West Virginia State Medical Association

VOL. XX—No. 4 HUNTINGTON, W. VA. APRIL, 1925

CONTENTS

INFANT DIET MEAD'S MATERIALS

Live Food For Babies

There is none so good

First thought—

BREAST MILK

Second thought—

FRESH COW'S MILK
WATER *and*
MEAD'S DEXTRI-MALTOSE

For Your Convenience
Pamphlet on Breast Milk
Pamphlet on Dextri-Maltose

The Mead Johnson Policy

Mead's Infant Diet Materials are advertised only to physicians. No feeding directions accompany trade packages. Information in regard to feeding is supplied to the mother by written instructions from her doctor, who changes the feedings from time to time to meet the nutritional requirements of the growing infant. Literature furnished only to physicians.

MEAD JOHNSON & COMPANY
Evansville, Ind., U. S. A.

PREVENT HAY FEVER!

Pollen Allergen Solutions Squibb

NOW is the time to immunize your Hay Fever patients against their annual affliction. Pollen Allergen Solutions Squibb are used for the prophylaxis and treatment of Hay Fever and other pathologic conditions due to pollen sensitization. Treatment should commence several weeks before the expected onset of the usual seasonal occurrence.

SQUIBB'S DIAGNOSTIC POLLEN ALLERGEN SOLUTIONS afford the means of determining the offending pollens as a guide for treatment. The prophylactic treatment consists of graduated doses of the glycerol solutions of the pollen proteins. Complete sets of these in graduated doses and in 5 Cc. vials are offered by the Squibb Laboratories as Pollen Allergen Solutions Squibb.

Write us direct for special information concerning the use of Diagnostic Allergens Squibb and Pollen Allergen Solutions Squibb for the prevention and treatment of Hay Fever and allied conditions.

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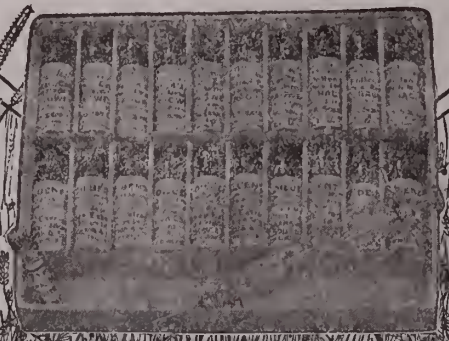

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MEDICAL JOURNAL

Published by the West Virginia State Medical Association

VOL. XX—No. 5 HUNTINGTON, W. VA. MAY, 1925

CONTENTS

INFANT DIET MEAD'S MATERIALS

FEEDING THE AVERAGE INFANT

The proper food for the infant is Mother's Milk

Complemental feedings of Fresh Cow's Milk, Water and Mead's Dextri-Maltose are very helpful to the infant's nutrition when the supply of Breast Milk is insufficient.

When summer (Fermentative) Diarrhea is present, Mead's Casec will generally give gratifying results.

If Infant Diet Materials of quality are needed, MEAD'S products may be used with Confidence by physicians.

Samples of Mead's Dextri-Maltose
Samples of Mead's Casec

The Mead Policy

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Published by the West Virginia State Medical Association

VOL. XX—No. 6 HUNTINGTON, W. VA. JUNE, 1925

CONTENTS

INFANT DIET MEAD'S MATERIALS

CONTROLLING THE INFANT'S DIET

The physician knows the requirements of the individual baby—he alone is fitted to prescribe and to regulate the infant's diet.

His prescribing of the proper food, based upon the infant's nutritional requirements, is of far more advantage to the infant than a printed set of rules on the label or bottle.

The trained physician eliminates guesswork. He gives the mother a feeding formula and expects her to follow his directions.

The physician who prescribes MEAD'S Infant Diet Materials knows his instructions will be followed to the letter. There are no directions on the packages to conflict with his formula for each individual baby.

MEAD'S DEXTRI-MALTOSE

Cow's Milk and Water
meet the demands of the average well baby

MEAD'S CASEC

and

MEAD'S POWDERED PROTEIN MILK

are very satisfactory in treating Summer (Fermentative) Diarrhea

Samples of these products and literature sent on request

The Mead Policy

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MEAD JOHNSON & COMPANY
Evansville, Indiana, U. S. A.

"Simple" Goiter

A Surprisingly Prevalent Disease, yet One of the Easiest to Prevent.

Iodostarine Tablets afford a method of Prevention and Treatment logically suited to your private practice.

OUT OF 3,200 SCHOOL CHILDREN affected with simple goiter in one district, 2,780 (86.9%) were cured completely and 320 more (another 10%) were greatly improved after treatment with Iodostarine Tablets. (Steinlin: *Official School Journal of St. Gall*, 1922.) In other words, 3,100 out of 3,200 or 97% of these goiters responded to treatment—a notable achievement and an indication of the effectiveness of the remedy when properly employed in correctly diagnosed cases.

For Goiter prevention, Iodostarine Tablets are being widely used by physicians and Public Health Authorities. Reports show that they are likewise highly efficient in the treatment of simple goiter of adolescence.

Bear in mind, Iodostarine Tablets contain Iodine in an organic form; are absolutely definite in strength; are stable; keep indefinitely without liberating Iodine; do not cause gastric irritation; are very palatable.

Boxes of 50 Tablets, Each Tablet Equivalent to 10 mgm. Iodine

If you are not familiar with the dosages of Iodostarine Tablet administration we shall gladly send you information and, if you so desire, a complimentary supply for trial.

Manufactured ONLY *by*,

The Hoffmann-La Roche Chemical Works, New York

Makers of Medicines of Rare Quality

Insulin Squibb

INSULIN is the active anti-diabetic principle of the pancreas.

Insulin is the one and only anti-diabetic specific.

All Insulin manufactured in the United States is prepared under the license and control of the University of Toronto.

INSULIN SQUIBB is the name given to the Insulin manufactured by E. R. SQUIBB & SONS.

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50 Units (10 units per Cc.)—BLUE label
100 Units (20 units per Cc.)—YELLOW label
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VOL. XX.—No. 7 HUNTINGTON, W. VA. JULY, 1925

CONTENTS

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WHEN THE INFANT HAS DIARRHOEA

PROTEIN MILK feeding to the infant with summer (fermentative diarrhoea) is generally followed with gratifying results.

PROTEIN MILK made with MEAD'S CASEC is simple to prepare.

CASEC is one of the physicians' first thoughts for infants of this type.

Samples of CASEC together with literature describing its use in diarrhoeas furnished immediately on request.

The Mead Policy

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Test for Yourself the Superiority of

SQUIBB'S LIQUID PETROLATUM WITH AGAR

SQUIBB'S LIQUID PETROLATUM WITH AGAR contains about 30% of agar gel, or "prepared" agar, equivalent to 1½% of dry agar. Proof of this exceptional agar content can easily be substantiated through a simple test that clearly indicates the superiority of this new Squibb Product.

SQUIBB'S LIQUID PETROLATUM WITH AGAR was developed by the Squibb Laboratories in response to a growing demand of the Medical Profession for a product that could be prescribed with confidence. It is especially intended for patients who have an aversion for plain oils; or for those who need the combined therapeutic effects of a lubricating mineral oil and the bulk supplied by agar.

This smooth creamy emulsion is readily taken by the most fastidious because of its pleasant taste. It does not separate on standing.

1. *Mix one fluid drachm of Squibb's Liquid Petrolatum with Agar with five fluid drachms of water.*

2. *Pour the mixture into a test tube and heat to boiling point over a Bunsen burner or alcohol flame. Then cool under running water until thoroughly cold.*

3. *The material in test tube will be found to be a jelly, no longer fluid, and will not pour even though tube is turned up-side-down. Any other product of this character on the market can also be easily tested for agar content by the same method. If the agar content is low, the material in the test tube will not solidify, but will remain in its original liquid form.*

This product contains *no phenolphthalein.*
Combining an active cathartic with a physiologically indifferent intestinal lubricant, is unscientific and irrational—especially when the product is intended for continued use.

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VOL. XXI.—No. 8 HUNTINGTON, W. VA. AUGUST, 1925

CONTENTS

INFANT DIET MEAD'S MATERIALS

CHOOSING AN INFANT'S DIET

If all babies were *alike* and *standardized,* then one food would probably take care of the nutritional requirements of most babies.

BUT—physicians know that foods must be altered to suit the nutritional requirements of each infant.

MEAD'S INFANT DIET MATERIALS are helping physicians to do *scientific* infant feeding.

MEAD'S DEXTRI-MALTOSE (the carbohydrate of choice for modified cow's milk mixtures.)

MEAD'S CASEC (a useful adjunct when the baby is suffering from Fermentative Diarrhea.)

MEAD'S STANDARDIZED COD LIVER OIL (as important to protect the infant from Rickets as orange juice protects from scurvy.)

The Mead Policy

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Evansville, Indiana, U. S. A.

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INSULIN SQUIBB is supplied in 5-Cc. and 10 Cc. vials in three strengths:—

5 Cc.	10 Cc.	
50	and 100	units (10 units per Cc.)—Blue label
100	and 200	units (20 units per Cc.)—Yellow label
200	and 400	units (40 units per Cc.)—Red label

Unless otherwise specified the 5 Cc. vial will always be supplied.

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THE WEST VIRGINIA

MEDICAL JOURNAL

Published by the West Virginia State Medical Association

VOL. XXI.—No. 9. HUNTINGTON, W. VA. SEPTEMBER, 1925

CONTENTS

THE GOITER QUESTION?

THE prevention of simple goiter is easily accomplished by giving the children under your care just

1 Iodostarine Tablet a Week

Leading authorities on the subject both in this country and Switzerland advocate this tablet and method after much experience and careful survey.

Start your children at once on Iodostarine Tablets. The coupon below will bring you a free box of 50 tablets and literature.

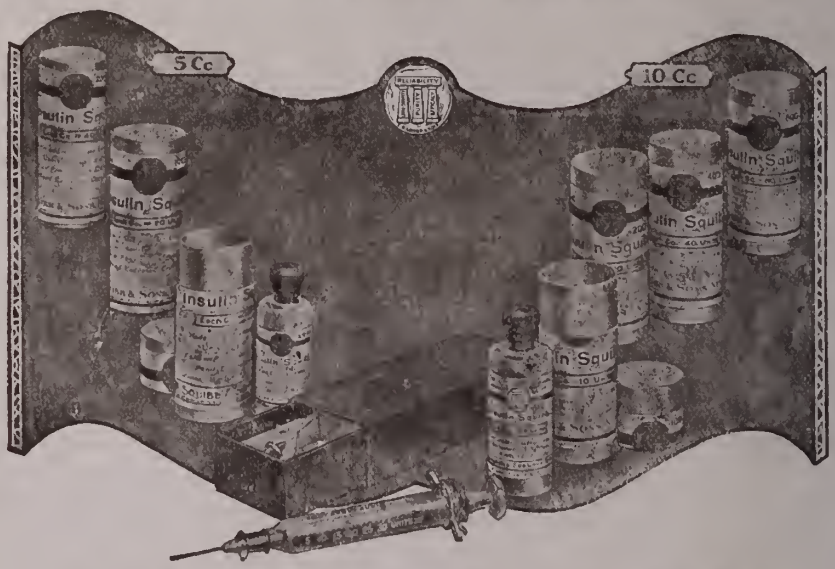
The Hoffmann-La Roche Chemical Works. New York
Makers of Medicines of Rare Quality

THE HOFFMANN-LA ROCHE CHEMICAL WORKS 5-I-12
19 Cliff Street, New York City, N.Y.

Please send me a complimentary box of IODOSTARINE TABLETS for the Prevention and Treatment of Simple Goiter, with literature.

_____ M. D. *Address* _____

City _____ *State* _____



Insulin Squibb

is now available in 5-Cc. and 10-Cc. vials, in three strengths

5-Cc.	10-Cc.	
50	100 units (10 units per Cc.)	— *Blue label*
100	200 units (20 units per Cc.)	— *Yellow label*
200	400 units (40 units per Cc.)	— *Red label*
	800 units (80 units per Cc.)	— *Green label*

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Published by the West Virginia State Medical Association

VOL. XXI.—No. 10 HUNTINGTON, W. VA. OCTOBER, 1925

CONTENTS

INFANT DIET  MATERIALS

INFANT DIET MATERIALS

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MEAD'S DEXTRI-MALTOSE

Used in the modification of regular milk mixtures

MEAD'S CASEC

Used in the feeding of infants with fermentative diarrhea

MEAD'S COD LIVER OIL

A tested Antirachitic Agent

MEAD JOHNSON & COMPANY
Evansville, Indiana, U. S. A.
Manufacturers of Infant Diet Materials

MEAD JOHNSON & COMPANY,
Evansville, Indiana

Gentlemen:—

Send me the following literature and samples checked:

- ☐ Mead's Dextri-Maltose
- ☐ Mead's Casec
- ☐ Mead's Cod Liver Oil

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THE GOITER QUESTION?

THE prevention of simple goiter is easily accomplished by giving the children under your care just

1 Iodostarine Tablet a Week

Leading authorities on the subject both in this country and Switzerland advocate this tablet and method after much experience and careful survey.

Start your children at once on Iodostarine Tablets. We shall gladly send you a complimentary box and literature upon request.

The Hoffmann-La Roche Chemical Works. New York
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Biological Products that have made possible the Eradication of Diphtheria as an Epidemic Disease.

The Squibb Diphtheria Group

SCHICK TEST SQUIBB is a reliable diagnostic test for susceptibility to diphtheria. A safe guide in determining the need of Toxin-Antitoxin immunization.

DIPHTHERIA TOXIN-ANTITOXIN MIXTURE SQUIBB—New Formula (each Cc. represents 0.1 L+dose of diphtheria toxin) — establishes an active immunity against diphtheria, lasting three years or longer. As easy to administer as typhoid vaccine. Avoid protein reactions by using only Diphtheria Toxin-Antitoxin Squibb, New Formula.

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MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

THE WEST VIRGINIA

MEDICAL JOURNAL

Published by the West Virginia State Medical Association

VOL. XXI.—No. 11 HUNTINGTON, W. VA., NOVEMBER, 1925

CONTENTS

INFANT DIET MEAD'S MATERIALS

Individualized Infant Feeding

There are more babies fed on fresh cow's milk than any other artificial food.

A vast majority of these babies are fed according to the physician's instructions to the mother.

A large number of these physicians use *Dextri-Maltose* as the modifier.

MEAD'S INFANT DIET MATERIALS

are appreciated by all physicians interested in pediatric work.

It is well worth while to every physician to write for our *Pediatric Tool Kit.*

The Mead Policy

Mead's Infant Diet Materials are advertised only to physicians. No feeding directions accompany trade packages. Information in regard to feeding is supplied to the mother by written instructions from her doctor, who changes the feedings from time to time to meet the nutritional requirements of the growing infant. Literature furnished only to physicians.

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INFANT DIET MEAD'S MATERIALS

Feeding Babies in Winter

Neither cow's milk nor breast-milk contains sufficient antirachitic power to protect all infants from RICKETS.

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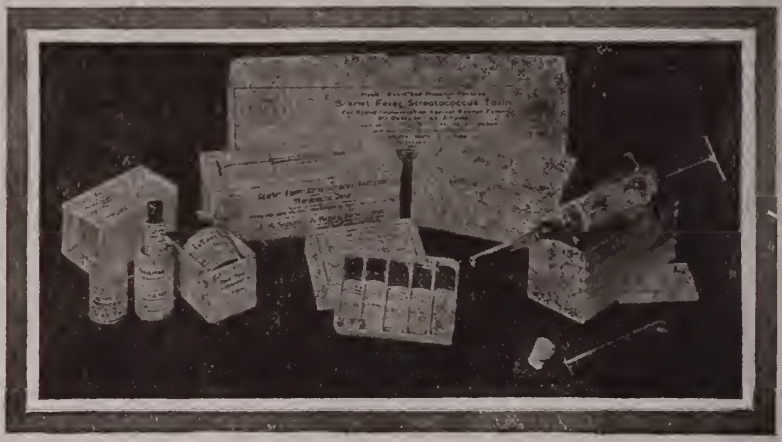

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