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Contents

Original Articles.

The Treatment of Abortion - - -	Wm. Sisson Gardner	1	
Historic Review of Angina Pectoris	Thos. A. Claytor	7	
Work of the Hygienic Laboratory -	Aaron Arkin	10	
Recognition of Different Periods of	Gonorrhea by the Microscope - -	Harry G. Steele	15
The Incidence of Cancer - - - -	J. Ross Hunter	17	

Selections.

Bone Implantation in Potts' Disease,	C. S. Venable	19
--------------------------------------	---------------	----

Infant Feeding - - -	J. M. Brady	21
What is the County Medical Society?	Delaware Medical Journal	22
The Wassermann Reaction - - -	A. Jesionek	23
Essential		
Physiological Changes.		
A County Doctor—A Judge - -		26
Society Proceedings		
Minutes of the State Association—House		27
County Societies - - - -		32
Reviews - - - -		32
Progressive Medicine - - - -		33

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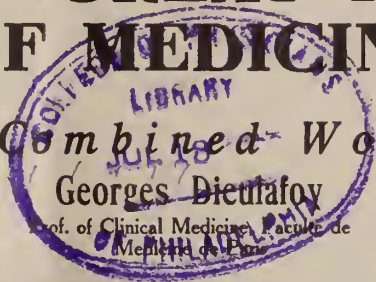
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Original Articles

THE TREATMENT OF ABORTION.

William Sisson Gardner, M.D.,
Professor of Gynecology, College of Physicians and Surgeons, Baltimore, Maryland.

(Read at Annual Meeting State Medical Assn., Bluefield, May, 1914.)

When your secretary was kind enough to ask me to present a paper at this meeting on the treatment of abortion, I took it for granted that he not only wanted my personal ideas on the subject, but that he wanted me to present a consensus of the opinions of those who see many cases. If the treatment of abortion were a treatment of only one condition, it would be easy for us all to agree on some general line of action, but the treatment of abortion covers a great variety of conditions. The stage of pregnancy, the presence or absence of infection, the presence or absence of hemorrhage with the various combinations, produce many different pathological conditions, each of which must be treated in the manner that is adapted to itself and not by any cut-and-dried rule.

The present paper will be limited to the discussion of the treatment of inevitable or incomplete abortions. The treatment of so-called threatened abortion will not be taken up. I will first review briefly the opinions of a number of authorities on the subject. I will then take up the different measures employed in the treatment,

and after that consider the various conditions to which these measures may be applied.

Review of Literature.

At the meeting of the American Medical Association in 1912, McPherson reported his observations of 3500 cases of abortion treated radically. He says: "When a careful examination has been made, and the physician finds the abortion is incomplete or inevitable, let him at once proceed to pack the uterus with iodoform gauze, a quarter of an inch wide, after placing the woman in the lithotomy position, with the usual preliminaries of thorough scrubbing and shaving of the external genitals. The packing may be done with the aid of a bivalve speculum, and volsella forceps on the cervix, using uterine dressing or sponge forceps, to introduce the gauze. The uterus and the vagina should be packed as tightly as may be, without using force, and the patient should be kept absolutely quiet for 24 hours. After the first twenty-four hours of packing, every patient should be prepared for a curettage, since no matter how complete the expulsion may have appeared to be, the curetting will bring down bits of tissue, liable, if not removed, to adhere to the uterine wall." These adherent tissues often produce further uterine troubles. Complete anesthesia is desirable for the second stage of treatment in abortion. If the cervix is not sufficiently dilated, this is accomplished with a Goodell dilator, and the uterine interior is explored with a sponge forceps, for the purpose of extracting any large masses of tissue, within its grasp. Careful curet-

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ting with a large sharp curet is then performed, until the uterine cavity is clean. He does not douche out the cavity of the uterus after curettement, but wipes out the uterine cavity first with dry gauze, and then with tincture of iodine, and inserts an iodoform drain reaching to the fundus. The total mortality of the 3500 cases was 66, or 1.8 per cent. Seventeen hundred and eighty-one of these cases were treated as out-patients, with a mortality of 3, or a per cent of a little over .016 per cent. The mortality among the 1719 hospital cases was 63, or 3.6 per cent.

A part of the report of the committee on the treatment of puerperal fever, appointed by the American Medical Association, deals with the treatment of septic abortions. This portion of the report is as follows:

"Question 1. A primipara with septic abortion at three months, fever two days, hemorrhage negligible, the ovum intact, retained. What would you do?"

"We divided the replies into three groups: First, those who would clean out the uterus; second, those who would treat the uterus expectantly, only interfering when hemorrhage or other condition demanded; and, third, those who would use mild disinfectant and expectant treatment, such as uterine douches and gauze packing."

Table 1—Answers to Question 1.

	Clean out.	Expectant.	Mild Disinfectant and Expectant.
189 Obstetricians and gynecologists.....	139	32	18
51 Surgeons.....	42	4	5
37 European authorities...	32	0	5
14 General practitioners..	11	0	3

"Question 2. A primipara with septic abortion at three months, fever two days, hemorrhage negligible, the fetus expelled, placenta retained. What would you do?"

Table 2—Answers to Question 2.

	Clean out.	Expectant.	Mild Disinfectant and Expectant.
197 Obstetricians and gynecologists.....	156	33	8
49 Surgeons.....	41	3	5
38 European authorities...	33	2	3
13 General practitioners..	10	0	0

Young and Williams, in a paper on douches, packing, and antiseptics in the treatment of abortions, including a review of about 2000 cases, state that among the cultures taken from the uterine cavity in infected cases of miscarriages, 28 different organisms or combination of organisms were recovered. The largest number showed the streptococcus, which was present in pure cultures in 22 instances, but it is interesting to note in these few cases the findings were essentially the same, as in the entire series. Their conclusions are:

"1—Salpingitis has been more common after intra-uterine douches.

"2—Intra-uterine douches of sterile water or salt solution, have not given as good results as simply wiping out the uterine cavity with sterile gauze.

"3—Antiseptic douches have given poorer results than simple solutions.

"4—Swabbing the uterine cavity with tincture of iodine has given the best results.

"5—Packing the uterus to control a hemorrhage does not greatly increase the liability to infection.

"6—For packing, gauze saturated with 50% alcohol in 'clean' and plain sterile gauze, in the infected cases, have given the most satisfactory results."

The same authors (Young and Williams) in another paper dealing with the general subject of abortions arrived at the following conclusions:

"1—First a spontaneous emptying of the uterus takes place in about 13.2 per cent of all miscarriages.

"2—The likelihood of a miscarriage to complete itself increases with the duration of the pregnancy.

"3—When it becomes necessary to use artificial means to complete the miscarriage, the finger, followed by the curet in later miscarriages, and the curet alone in the earlier months of pregnancy have given uniformly satisfactory results in the Boston City Hospital.

"4—Experience has shown that where the cervix is extremely rigid it is better to introduce the curet and break up the fetus and the placenta and remove them piecemeal than to attempt to dilate the cervix sufficiently to introduce the finger.

"5—Packing the vagina and lower segment of the uterus is an unsatisfactory and often unsuccessful method of emptying the uterus. No success whatever was attained in treating incomplete miscarriage in this way.

"6—Packing is, however, of great value in two classes of cases:—

"First in exsanguinated patients, to stop the hemorrhage and give the woman a chance to recover somewhat from the loss of blood before emptying the uterus.

"Second, when the cervix is very rigid a

tight canal pack for 24 hours will soften it so that the dilatation may be attempted with safety.

"7—The results of artificial methods are as good, but not better than where nature has succeeded in emptying the uterus.

"8—Artificial methods are necessary in a majority of cases, however, simply because nature has failed.

"9—In infected cases the essential thing is to get rid of the infectious material by emptying the uterus; the particular method employed making little difference.

"10—The later in pregnancy the miscarriage occurs, the smaller the liability to become infected; but the greater the likelihood of developing grave septic complications if the infection does take place.

"11—The mortality is practically the same at all periods of pregnancy.

"12—Induced abortions have a greater mortality than accidental. The mortality of patients admitted to the hospital after criminal operation is 10%."

Waeber makes a practice of clearing out the uterus at once, and all the patients in the uncomplicated cases recovered.

Ruhl discusses Puppe's recent work on the medico-legal aspect of instrumental perforation of the uterus by physicians. Puppe cited 264 cases between 1907 and 1910, and described in detail two fatal cases in which the attending physician did not know that he had perforated the uterus. Ruhl thinks that the emptying of the uterus by surgical means should be discouraged among general practitioners. He thinks it should never be done except by surgeons in hospitals. In many cases it may be possible to manage without surgical treatment by tamponing, or the use of the finger, instead of the curet.

Traugott is convinced that the principle of the treatment of abortion with streptococci in the vagina or blood is to leave the emptying of the uterus to nature, combating the infection by keeping the uterus still with bed rest and ice and leaving it otherwise entirely alone. Under this expectant quiet the fever goes down, the streptococci do not grow more virulent and they gradually disappear. When this is realized the uterus is curetted; at this stage it is harmless. In forty-two cases managed in this way the patients recovered without complications, including twenty-two who had fever on entering the clinic. The temperature became permanently normal in less than four days, in this latter group. The patients were in the hospital for an average of thirteen and

a half days before curetting was done, and afterwards for an average of four days. The uterine cavity was found entirely empty at the curetting in only nine of the forty cases, but there was no morbidity or mortality in the whole series.

Ebeler, on the other hand, advocates digital evacuation of the uterus after abortion, regardless of whether there is fever or not. His statistics show immediate return of normal temperature in 111 of 148 cases (75.3 per cent); in an additional 12.8 per cent the temperature returned more gradually to normal, without complications. In 4.9 per cent complications developed which terminated in recovery. The mortality was 4.9 per cent, but in only 0.69 per cent could the method of treatment be incriminated.

Stowe reports the results of 750 cases of abortion, and gives a brief review of the literature. The following are part of his abstracts:

In Bumm's clinic from 1900 to 1903, five hundred cases of abortion were treated; the tampon was used in 496 cases, followed by digital curettage. In the remaining four, digital removal was followed by light curettement. Freund treated 180 cases by digital curettage, only six with the curet, and seven with dressing forceps. Stratz used the curet only five times in 486 abortions, and then only because ergot had been administered. Crigoriowitz removes the decidua manually, if the cervix admits of two fingers, otherwise the curet is used. In 60 cases the curet was used 39 times. Kuppenheim treated 84 cases in Heidelberg, the curet was used 53 times. He tries digital curettage first, but if the cervix is too small the curet is used without further dilatation. Franz uses the fingers if the cervix is open, but removes small pieces with the curet. In 844 cases in Halle, the curet was used 709 times. Lantos only uses the curet in chronic abortion, where the swollen decidua blocks the canal. In 300 cases manual curettage was successful in 246 cases. The dressing forceps was used 4 times, and the curet in 50 cases of chronic abortion.

Szabo prefers digital removal where the cervix is sufficiently dilated, otherwise he uses the curet or dressing forceps. Beuttner curetted 27 women in a series of 47 cases. He claims that fragments were re-

tained after digital removal, causing chronic endometritis. Fisher used the curet 69 times in 99 cases. The digital method was resorted to in 30 cases. DeLee advises the tampon, manual removal, and in the early weeks, when the decidua is adherent and the fingers too cramped to work properly, the curet under the guidance of the finger. Among Stowe's own cases are 184 where the fetus was expelled, the cervix closed, the decidua retained in utero, and there was some hemorrhage. All were packed. In 24 cases the decidua was expelled spontaneously on the top of the tampon. The cervix became sufficiently dilated to permit digital curettage in 16 cases. The curet was used 141 times.

Measures Employed.

One point in the care of many of these cases that is frequently neglected is in the method of making the first examination. Many physicians who would not think of touching an open wound on the surface of the body without employing antiseptic precautions will make vaginal examinations in abortion cases without proper preparation. These patients should be handled from the beginning with as thorough surgical technique as is possible to obtain under the circumstances. Before any examination is made at the least the external genitals should be thoroughly cleansed, and the examiner's hands scrubbed. The neglect of these fundamental precautions often introduces infection and converts an otherwise simple case into a complicated one.

Dilators.—In a few of the recent cases, and in many of the long standing cases of incomplete abortion it is necessary to dilate the cervix before anything can be introduced into the cavity of the uterus. For this operation I have always used the parallel bar dilator. Like nearly all efficient instruments, this one is dangerous in the hands of the careless. It is very easy to split the softened cervix with it. To avoid this danger all that is necessary is to remember that the cervix in these cases is usually very easily dilated, and that very little force is necessary to secure a sufficient dilatation to allow the introduction of a curet. Under no circumstances should great force be used. When

the cervix does not open easily with the dilator, other means for enlarging the os should be employed.

The Curet.—There is probably no instrument in the whole armamentarium of the surgeon that has been so much maligned, and on the other hand praised so extravagantly as the curet. These wide divergences of opinion in regard to the value of the curet are due largely to the manner in which it is used. Those who look upon it as a surgical instrument can show a long list of excellent results from its use. Those who use it without proper precautions and with carelessness of technique can and do show many disasters following its use.

We must remember that a curettage is a major operation. That it should not be undertaken under conditions that would not justify the undertaking of any operation of importance; that the danger of hemorrhage, infection and operative accidents are always present and must be guarded against. To guard against introducing infection the minimum requirements are that the patient be thoroughly scrubbed, and that the instruments and the doctor's hands must be clean. The hemorrhage can be guarded against by the use of a curet that will empty the uterus quickly and completely. In exceptional cases if the hemorrhage continues after the uterus is empty it can be controlled by an intra-uterine pack of sterile gauze.

The operative accident that is most feared, or at least spoken of, is that of perforation of the uterus by the curet. This accident can be avoided by remembering that the uterus is never perforated in withdrawing the curet. The perforation is always made in attempts to introduce it into the uterus. It follows that if the curet is introduced, with care and without force, the much dreaded perforation will not occur.

The danger of breaking down the so-called wall of Bumm in the infected cases is a risk that exists, but its importance has been exaggerated because in a very large number of cases in which the curet is useful there is no wall of Bumm, and where it is well formed there is usually nothing to be removed by the curet.

Some of the more important advantages of the curet are that it can be thor-

oroughly sterilized; that it can be used through a comparatively narrow canal; it is the only instrument that will remove small, tightly adhering fragments from the uterine wall.

The type of curet to be used is important. It should be broader than the ordinary curet, and slightly flattened on the end instead of round as the ordinary curet is made. It must be sharp, but the edge must strike the uterine wall at right angles so it will scrape and not cut.

In very recent cases where the cervix is well dilated, the curet can be used without an anesthetic, but even in these cases such use is frequently not satisfactory and it is not to be commended. In the greater part of the very recent cases and in all the later cases an anesthetic should be used.

After the uterus has been curetted it should be swabbed out with gauze. I have been in the habit of using two large strips of gauze soaked in a one to ten thousand bichloride solution, and followed this with a dry strip. With each of these the uterine cavity is thoroughly wiped out and all small loose fragments are removed. If there is hemorrhage after the curettement the uterine cavity is packed with sterile gauze which is removed the following morning. In a majority of cases neither a pack nor a drain is left.

The Finger.—In many of the cases that have passed the third month of pregnancy, and that are seen early, it is quite easy to remove the uterine contents with the finger. Even in some of the cases that are seen later it is possible to forcibly dilate the cervix sufficiently to introduce the finger. I have never been able to convince myself that in the case where much dilatation was necessary that this method was more safe or anything like as sure as the use of the curet. In the case of abortion taking place in very early pregnancy it is entirely inefficient.

Tampons.—Tampons of two distinct types are used. The usual tampon is simply a vaginal pack. A variety of material is used for this tampon; sterile gauze, medicated gauze, such as iodoform gauze; absorbent cotton, either sterile or saturated with some antiseptic solution.

The best form of vaginal tampon is made of absorbent cotton soaked either in sterile water or some very mild antiseptic

solution. The cotton is much more impervious to blood than is gauze and can be packed more firmly around the cervix.

The object sought to be attained by the tampons are the control of hemorrhage, the tampon acting as a mechanical plug, and the softening and dilatation of the cervix. The latter result is attained by the uterine contractions due to irritation set up by the tampon.

The vaginal tampon is of most value in cases in which the fetus has not escaped, and is of very little use in cases where it has escaped.

A combined intra-uterine and vaginal tampon is used in incomplete abortions with hemorrhage and an undilated cervix.

Both plain sterile and iodoform gauze is used. A word of warning should be spoken in regard to the use of iodoform gauze, both in the vagina and in the uterus. Many cases of iodoform poisoning have been reported from its use, and its antiseptic virtues are not sufficient to warrant the risk of its dangers.

Tampons have a useful field but they also have their dangers. A carelessly applied tampon may carry an infection; or it may prevent drainage in a case already infected. It must also be remembered that a hemorrhage apparently controlled by a tampon is not always checked. Rarely it is true, but still it does happen, that a hemorrhage sufficient to cause the death of the patient may take place into the distended uterus.

I have had little experience with the tampon, since most abortions I have seen have been in a hospital, and when there is much hemorrhage I usually prefer to empty the uterus immediately.

Douches.—In the uninfected cases, the intra-uterine douche is of no service in removing fragments of the decidua. Any material that can be washed out will come away of its own accord. In the infected cases pretty much the same statement is true, and in addition there is danger of conveying infection out into the tubes. For these reasons the intra-uterine douche has been abandoned. The vaginal douche is used in a part of our infected cases, primarily as a matter of cleanliness, and, secondarily, to remove whatever drains from the uterus.

Hoening's Method.—Hoening's method of abdomino-vaginal expression of the de-

cidua is useful in cases in which the entire decidua is detached. The technique consists in passing two or more fingers behind the uterus; the external hand is placed over the abdomen, the uterus is thus caught between the two hands, and all fragments are expelled into the vagina. If the uterus lies in anteflexion, the method is comparatively easy, but if the uterus is displaced it is very difficult to accomplish much by this method. Lack of thorough separation of the decidua, insufficient dilatation of the cervix, rigidity or hyper-sensitiveness of the abdominal walls, and infection of the adnexa are contra-indications for the application of this method.

Posture.—In the infected cases there is no other measure that is so universally applicable, and which yields such prompt results, as the upright position of the patient. The first thing to do with a patient of this kind is to set her up, in bed if you can, but much better in a chair, but get her up. Those who have not tried it are always agreeably surprised to find in what a large per cent of the cases the temperature drops promptly, and also how few of them require any other treatment. When the infection is within the uterus, the upright position favors drainage, and when the infection has extended beyond the uterus, it assists in limiting it to the pelvis.

Application of Treatment.

Having reviewed the various methods of treatment, we can now consider the application of these methods to particular classes of cases. It will be noted from the abstracts from the literature, that there is a great variety of opinion, as to the exact method to be pursued. Some curette every case; some absolutely condemn the curet, some do nothing and expect nature to take care of the patient. The truth is that there is a place for all these procedures.

In cases where the abortion has occurred before the third month, and is incomplete, and no symptoms are present, there is no hurry about doing anything, providing the patient is under close observation. Occasionally one of these patients will bleed very profusely, and on this account, if she is at a distance from

the physician, it is much safer for him to empty the uterus at his first visit. If the abortion has not been induced, and a proper technique has been observed in making vaginal examinations, the probability of infection is very small. If hemorrhage is present the decidua should be removed at once. When there is infection without hemorrhage, it is usually best to set the patient up for 24 hours. If the temperature drops it may be well to wait longer before interfering, but if it does not come down, and it is clear that the abortion is not complete, it should be completed. There are, however, many exceptions to be made in this class of cases. The exceptions being those in which the delay would not be justified, and the uterus should be emptied at the earliest time possible. In all these cases, the method of choice in removing the decidua, is by the curet. The reasons for the choice of the curet in these cases are that the cervix is nearly always narrow, and only moderately dilatatable; the uterine walls are relatively thick and firm, and the material to be removed is very friable and usually can not be removed completely in any other way.

When the abortion occurs between the third and sixth month the problem is somewhat different. When the patient is seen soon after the escape of the fetus, it is usually possible to remove without much difficulty the placental tissue with the finger; and the earlier this is attempted, the easier it is to do. When there is much hemorrhage present the uterus should be always emptied at once. It is not often, except in induced abortions, that these patients show evidence of infection, but when they do the debris within the uterus should be removed promptly.

When the patients who have arrived at this period of pregnancy are not seen until several days have elapsed after the escape of the fetus the difficulty of removing the placenta is much greater. When there are no symptoms of either hemorrhage or infection, it is in many cases advisable to let them alone. In the majority of cases the uterus will empty itself, but when either hemorrhage or infection is present, the uterus should be emptied promptly. Empty it with the finger if you can, but empty it. In a very large

per cent of these cases the internal os is contracted so firmly that it is possible to introduce the finger only *jar* enough to feel that there is something present, and it is necessary to resort either to forced dilatation, or the use of the curet. In the majority of cases, I believe that the curet is the lesser evil.

When the abortion is complete and there are no symptoms, it should follow that no active treatment is called for. When infection is present the same general principles apply as those of infection after labor at full term. When the infection is confined to the cavity of the uterus, the mainstay of the treatment is drainage. In the vast majority of cases all that is necessary to secure the drainage is to keep the patient in the upright position. In exceptional cases drainage can be secured only by the use of a strip of gauze, or a rubber drainage tube inserted into the cavity of the uterus. Formerly we used intra-uterine douches in this class of cases, but since we have more fully realized the value of the upright position as a promoter of drainage, the douche has been abandoned. When the infection has spread to the peritoneum the upright position, and ice bags to the abdomen should be relied upon to limit the infection to the pelvis. Under no circumstances should the cavity of the uterus be invaded either by the curet or the fingers. When there is a general blood infection there is no therapeutic measure with which I am familiar, that is of any material value. It is in this class of cases that we would expect to get results with sera, but my own observations agree with Ward of the Sloane Maternity, who stated that he has observed no undoubted benefit from sera or vaccines in puerperal sepsis.

No. 6 West Preston Street.

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A BRIEF HISTORIC REVIEW OF ANGINA PECTORIS.

Thomas A. Claytor, M.D.,
Washington, D. C.

Clinical Prof. of Medicine, George Washington University; Physician to Garfield Hospital, to Providence Hospital and to the Tuberculosis Hospital.

(Read before the West Va. State Med. Ass'n
May 15, 1914.)

Perhaps I should offer an apology for presenting a paper of this kind on such an occasion, but I hope that this short account of angina pectoris from the historical side may prove of some interest to you.

As to who first described this dread disorder there has been considerable discussion, the majority of writers supporting Heberden, while others, particularly Huchard, claim that to Rougnon of Besancon is due the honor. In 1768 Rougnon published a letter to Lorry, calling attention for the first time to a malady new and unknown until then. He spoke of a certain Mr. Charles, a retired cavalry officer, who, after suffering from dyspnoea on slight exertion for several years, began to have such severe attacks that he was unable to speak and was obliged to bend his body forward and hold on to something for several moments; soon afterward he would again assume his natural gait. He finally died in an attack and an autopsy was performed.

Five months later, Heberden of England called attention to this new malady which he called angina pectoris. (Trans. College of Physicians, London, July 22st. 1767. Pub. 1772.)

In point of fact, however, Morgagni (1707), in his section on Aneurism of the Aorta, describes a case presenting the symptoms constituting angina pectoris. The following is, in part, his description:

"A lady, 42 years old, who for a long time had been a valetudinarian, and who within the same period, on using pretty quick exercise of body, was subject to violent attacks of anguish in the upper part of the chest on the left side, accompanied with a difficulty of breathing and a numbness of the left arm; but these paroxysms soon subsided when she ceased from exercising. In these circumstances, but with a cheerfulness of mind, she undertook a journey from Venice, purposing to travel along the Continent, when she was seized with a paroxysm, and died on the spot. I examined the body on the following day * * *. The aorta was considerably dilated at its curvature; and in places through its whole tract, the inner surface was unequal and ossified. These appearances were propagated into the arteria innominata. The aortic valves were indurated." He says further: "The delay of blood in the aorta, in the heart, in the pulmonary vessels, and in the vena cava, would occasion the symptoms of which the woman complained during life; namely, the violent uneasiness, the difficulty of breathing, and the numbness of the arm." **Cook's Morgagni.** Case 5 of Aneurism of Aorta. Vol. I, p. 463.

The great Seneca, who lived about the beginning of the Christian era, is thought by some to have first described the disorder in his own seizures of which he in his fifty-fourth Epistle gives the following account:

"Disease had given me a long furlough. On a sudden it attacked me. Of what kind? You say—I am, as it were, consigned over to one disease only; but by what Greek to call it I know not. It may properly enough be denominated sighing. The attack is very short and like a storm. It usually ends within an hour. I have undergone all bodily infirmities and dangers; but none appears to me more grievous. Why not? Because to have any other malady is only to be sick; to have this is to be dying. But I, in the very midst of the suffocation, have not omitted to indulge in cheerful and resolute reflections. What is this? I say, etc., with these and similar exhortations I have addressed myself; silently, indeed, for I could not speak. At length by degrees that **sighing**, which by this time has begun to change into common breathing, has returned at longer intervals, has become slower and disappeared. But even now, though it has ceased, my breathing is not natural. It seems to be attended with a sort of hesitation and delay. Be it as it will, provided I do not sigh from my heart." (Translation from Seneca by Caleb Hillier Parry, An Inquiry into the Symptoms and Causes of the Syncope Anginosa, Commonly Called Angina Pectoris. 1779.)

His physicians called the disease a **Meditatio Mortis**.

These attacks of Seneca's may have been angina pectoris, but I do not think that a positive conclusion to that effect can be drawn from the above description.

To Heberden, however, is undoubtedly due the credit for having brought to the attention of the medical world, as well as having furnished a name for the combination of symptoms known as angina pectoris. Heberden read on July 21, 1768 (five months after the date of Rougnon's letter), before the Royal College of Physicians, a paper entitled, "Some account of a Disorder of the Breast," which appeared in Vol. II of the Medical Transactions of the College of Physicians, 1772. This matter is of such great importance that I quote the following:

"There is a disorder of the breast marked with strong and peculiar symptoms, considerable for the kind of danger belonging to it * * *. The seat of it and sense of strangling and anxiety with which it is attended may make it not improperly be called angina pectoris. Those who are afflicted with it are seized while they are walking, and more particularly when they walk soon after eating, with a painful and most disagreeable sensation in the breast, which seems as if it would take their life away if it were to increase or continue; the moment they stand still all this uneasiness vanishes. In all other respects the patients are, at the beginning of this disorder, perfectly well, and, in particular, have no shortness of breath, from which it is totally different."

Heberden called attention to the facts that the attacks were entirely different from dyspnoea; that it occurred after 50, in those having a tendency to obesity and apoplexy; that the attacks followed walking and disappeared upon repose; that the nocturnal attacks lasted longer (1 to 2 hours), appeared after the first sleep, at the hour of paroxysms of asthma and apoplexy; that the pain seemed to place the sufferers in imminent danger of death, and that it was situated at the level of the sternum with radiations toward the left arm, and its relief was brought by flexion of the body. He had noted expectoration of pus and blood in several cases and attributed the symptoms to perhaps an ulcer. He had made no autopsy then.)

Some years later an unknown sufferer wrote to him that he was afflicted with this trouble, and that it was a universal pause of all the operations of nature. An autopsy upon this person was his first, and he found several ossified places on the aorta, an hypertrophy with thickening of the left ventricle, which was as free from blood as if it had been washed.

Such has been the origin of the theory attributing it to "spasm of the heart."

Angina pectoris is of peculiar historical interest, too, because of the famous men who have suffered with and died from it.

If Seneca had the disease he should be the first to be mentioned, but there is considerable doubt as to this, for it seems that his attacks might have been some other form of cardiac insufficiency.

In John Hunter we have a most typical example. The history of his case is most interesting, and at the same time should be a source of comfort to those who are subject to attacks, for he lived 20 years after the first seizure in 1773. In 1776, three years later, he had his second attack and visited Bath during his convalescence. Here he was under the observation of his friend and former pupil, Edward Jenner, of Berkeley, who, by the way, was the first to suggest that the symptom complex might be associated with disease of the coronaries. Edward Home, Hunter's nephew, describes the first attack: "While he was walking about the room he cast his eyes upon the looking-glass and observed his countenance to be pale, his lips white, giving the appearance of a dead man. This alarmed him and led him to feel for his pulse, but he found none in either arm; the pain continued and he found himself not breathing. Being afraid of death soon taking place if he did not breathe, he produced the voluntary act of breathing by working his lungs by the power of will.

Edward Jenner wrote to Heberden concerning Hunter's attacks which he considered to be angina, and then made the above suggestion with regard to the probable involvement of the coronaries in these cases. Jenner stated that though he had seen many fall victims of this dreadful disease, yet he had had but two opportunities of examination after death. In the first of these he found no material disease of the heart except that the coronary artery appeared thickened.

As no notice had been taken by others of similar findings in cases which had come to autopsy, Jenner concluded that other causes must be sought. Shortly thereafter, however, he assisted a Mr. Partherus to autopsy the body of a per-

son who had died of angina, and describes the findings thus:

"Here we found the same appearance of the coronary arteries as in the former case. But what I had taken to be an ossification of the vessel itself, Mr. P. discovered to be a kind of firm, fleshy tube formed within the vessel, with a considerable quantity of ossific matter dispersed irregularly through it. This tube did not appear to have any vascular connection with the coats of the artery, but seemed to lie merely in simple contact with it." He then suggests that as the coronaries are generally greatly covered by fat in these cases that their abnormal condition might have been overlooked. "The importance of the coronaries, and how much the heart must suffer from their not being able to duly perform their functions (we cannot be surprised at the painful spasms), is a subject I need not enlarge upon, therefore, shall just remark that it is possible that all symptoms may arise from this one circumstance."

It is interesting to note that Jenner refrained from publishing his views as to the disease of the coronaries being the cause of angina purely out of regard for the feelings of his friend Hunter. When Hunter died his nephew, Mr. Home, wrote to Jenner frankly admitting that he (Jenner) had been right in his belief that the coronaries would show disease. Home had not thought much of Jenner's suggestion before that.

Because of the prominence of the man in the profession, and because his case was so carefully observed as one of the early well authenticated examples of the disease, Hunter's history is familiar to most of us, but I shall cite a few more interesting points: During the last 8 years of his life, following a severe illness in 1785, the attacks became increasingly frequent and were brought on chiefly by exertion and by worry and anger, and he was wont to make the remark, which is so widely quoted "that his life was in the hands of any rascal who chose to annoy and tease him." Hunter continued his activities, however, though the attacks were very frequent, coming on after slight exertion and while he was operating. His end came much as he had predicted. After being flatly contradicted in a meeting of the governors of St. George's Hospital, Oct. 16, 1793, he left the board room in a silent rage and fell dead in the next room. The coronaries were found to have been converted into open bony tubes, and the aorta was dilated.

As an example of the hereditary tend-

ency in angina, the Arnold family is often cited. Wm. Arnold, Collector of Customs of Cowes, died suddenly of spasm of the heart in 1801. His son, Thomas Arnold, of Rugby, and his grandson, Matthew Arnold, also died of angina. Latham's account of Thomas Arnold's attack (he died in the first) (Latham's Works, Vol. I, p. 453, New Sydenham Society, 1876 (Osler), is so graphic that I shall quote from it. "T. A. was within a day of completing his 47th year. Up to a few hours before his death both body and mind seemed equally to give promise of health. He still took his accustomed pleasure and refreshment in strenuous exercise," (which seems very remarkable). * * * He retired at midnight on June 11th, 1842, feeling and believing himself to be in perfect health. He told his medical attendant, Dr. Bucknill, who was called at 6:45 the next morning, that he had had very severe pains in his chest since 5 o'clock at intervals and that it was, he thought, getting worse. This pain was seated in the upper part of the chest on the left side, and extended down the left arm. He said that he had never fainted in his life, that he had had no difficulty in breathing, that he had never had any pain in his chest before. The whole attack lasted a little more than two hours and had come without the slightest warning of any cardiac insufficiency.

At autopsy the heart was found to be soft and flaccid. There was but one coronary artery, and that, considering the size of the heart, of small dimensions. There was a slight atheromatous deposit an inch from its orifice.

In conclusion, I would say that Morgagni described a case of angina pectoris in a patient suffering with an aortic aneurism in 1707; that Rougnon, Professor of Medicine in the University at Besancon, also described a case in a letter to Professor Lorry, dated Feb 23rd, 1768, in which he speaks of the condition as "une maladie nouvelle", but to Heberden of England, whose announcement came five months later in the form of an address before the Royal College of Physicians, must be given the credit for having brought to the notice of the profession and for having given to this dread combination of symptoms the name of angina pectoris.

In closing the discussion I wish to thank those gentlemen who have taken part in it and to say:

First. That all pains in the region of the heart should be carefully considered and never made too light of.

Second. That the diagnosis of angina pectoris must be made almost entirely upon the symptoms and history as given by the patient.

Third. That I believe that some cases of true angina do recover.

Fourth. That treatment should be instituted in the very beginning, in the hope that the cardiac equilibrium may be restored by the proper regulation of life.

Fifth. That some cases of angina pectoris may live for many years, though subject to attacks varying in frequency.

1826 R St., N. W.

THE WORK OF THE HYGIENIC LABORATORY FOR THE PHY- SICIAN AND THE PUBLIC HEALTH.

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(Read at Annual Meeting State Medical Ass'n,
May, 1914.)

There are few things of so great importance to the individual as his health. Upon it depends the attitude of a person toward life and his relationship to his associates. Since the health of a community is the combined health of all the inhabitants of the community, it must be of interest to every individual. Originally man lived, ate and slept in the open air, but with the development of community life certain sanitary procedures became necessary. The excretions of the body had to be removed, the dead had to be buried, foodstuffs and drinking water had to be protected. It was realized very early that the water supplies must be safeguarded, although the ancients could give no scientific reasons for the need of a pure water supply. Among the early people sanitary measures were associated with

directions from heaven and this belief justified our present saying that "Cleanliness is next to Godliness".

Rome was the first city to carefully protect its water supply. This was done by the building of aqueducts which carried the water to tanks. The water was protected by law even at the beginning of the Christian era. But the people of a later period, believing that disease was a visitation of a chastising God, paid little attention to sanitary measures. As a result history has recorded the great pestilences of 550, 1000, and others as late as the eighteenth century.

During the seventeenth and eighteenth centuries municipal sanitation began to occupy a prominent position in government administration. Public water supplies, sewerage systems, paving of streets, quarantine against contagious diseases received the attention of the people. This resulted in the establishment of the state and government health departments, the recognition by the people that the state is responsible for the health of the community.

The health department represents the desire of the people to avoid disease. It is one of the finest results of our civilization, the realization that **health is the right of every human being and its preservation a moral obligation.** It is the result of our knowledge that disease is not a necessary evil but is caused by living forms called germs, which are spread by direct or indirect contact.

As an aid to the valuable work of our State Board of Health, there has been established a Hygienic Laboratory for the prevention and study of contagious diseases. This laboratory of the State Board of Health was established by the Governor and State Board of Health in connection with the School of Medicine of the State University. The laboratory is now prepared to assist physicians and health officers in the diagnosis of contagious diseases and in advising measures for their prevention. In other words, its work is essentially directed toward the preservation of the public health.

The Hygienic Laboratory is now prepared to make the following examinations free of charge for physicians and health officers:

1. Examination of sputum for tubercle bacilli in suspected tuberculosis.
2. Examination of swabs for diphtheria.
3. Examination of blood for typhoid.
4. Examination of smears of pus for gonococci.
5. Examination of brains of animals for the diagnosis of rabies.
6. Examination of water, bacteriological and chemical, for its general fitness for drinking purposes.
7. Examination of specimens for anthrax, actinomycosis, glanders, or trichinosis.
8. Examination of smears for the spirocheta pallida of syphilis.
9. Examination of feces for intestinal parasites, as hookworm, tapeworm, roundworm.
10. Examination of spinal fluid for meningococcus.
11. Toxicological examinations and chemical analyses of milk, food, and drugs.

Complete details concerning the preparation and sending of specimens are given in a bulletin of "Information Concerning the Hygienic Laboratory of the West Virginia Board of Health", which has been sent to every registered physician of the State.

An inspection of the list of examinations made by the Hygienic Laboratory reveals the fact that these are limited to transmissible diseases. It is obviously unfair to expect the community to pay for what is of benefit to a few, so if an examination is desired by an individual for personal reasons, such examination is regarded as private. The examinations of sore throats for diphtheria, of sputa for tubercle bacilli, of blood for evidence of typhoid fever, etc., are of importance to the entire community, for the presence or absence of the disease in question determines the line of action required to prevent its spread. On the other hand, the examination of urine for sugar or albumen, the examination of blood smears to determine the type of anaemia, diagnosis of tumors, etc., are not of importance to the entire community. The investigation of public water supplies is of public interest, but the examination of a local supply used and owned by a private individual is not a public health matter, except as disease

from such a source may be disseminated to the rest of the community. For example, the presence of contamination in a well supplying a dairy may be of considerable importance.

The Hygienic Laboratory of the West Virginia State Board of Health is prepared to deal with health matters of public interest. It was created and is maintained by the State Board of Health in the interest of the entire people of the State. We are trying to protect the well rather than aid the sick. The laboratory findings will, of course, be helpful to the physician in his diagnosis, but the chief interest is the location and localization of foci of disease and contagion in order to protect our community.

When a sample of sputum is sent to the laboratory our chief interest is in determining whether or not the sputum is endangering the public health. Demonstration of tubercle bacilli means that the patient is subjecting his community to infection; that the patient is discharging daily millions of the germs of tuberculosis which, if they are not properly destroyed, are an unseen source of danger. It is the duty of enforcing the laws of preventive medicine, laws gained through the toil of members of our own profession in the discovery of the etiology of the contagious diseases, that each physician is called upon to perform whenever he receives a positive report on a contagious disease.

The diseased individual is not the only source of the spread of the infectious diseases. We must now take into consideration the healthy disease carriers, also indirect transmission. We know that diphtheria bacilli may be found in the throats of apparently normal individuals, organisms capable of producing the typical disease in others. In fact every patient with diphtheria is surrounded by a few temporary carriers who may have no symptoms of the disease, but who may be more dangerous to the community than the patient himself. For the patient is in quarantine, while the carrier is at large. Further evidence for the above statement that apparently normal people harbor the diphtheria bacillus has just been obtained by an investigation which has revealed the fact that a certain number of normal individuals who have never had diphtheria show the presence of diphtheria antitoxin

in the blood. There is probably sufficient antitoxin in the blood to render these individuals immune, although they can infect others.

We know that a typhoid patient may discharge typhoid germs for months or even years after complete recovery, or may harbor the typhoid bacillus in the urinary tract or gall bladder without ever having shown symptoms of the disease. It is in the relief of diphtheria patients from quarantine and the examination of suspected carriers that the Hygienic laboratory may be of service to the health officers of our state. No physician should discharge a diphtheria patient until two negative results are obtained from the throat; no typhoid patient should be turned loose on the community until the feces and urine are free from typhoid germs, or proper precautions taken to disinfect the excreta.

The Hygienic Laboratory is able to furnish facts which will be an aid to the health officer in his work. The relative value of the laboratory findings varies under different circumstances. Often the results are not specific and require interpretation. It is in such cases especially that all possible information should be carefully recorded and sent with the specimens. The best example is in the case of water sent for bacteriological examination. Here the data called for in the outlines sent out by us for each sample must be compiled with great care and sent with the sample before a reliable interpretation of the bacteriological examination can be made. Such data are of even greater importance in the thorough investigation of epidemics of typhoid and other water-borne or milk-borne diseases.

In an outbreak of an epidemic the local health officer can be of great service to us by investigating the conditions before requesting examination of the drinking water. He should (1) make a thorough study of the outbreak and get careful case histories; (2) inspect the general sanitary conditions; (3) examine the sources of the water, milk, food supplies; and (4) request laboratory assistance, as the indications may require. Such a procedure would prevent many unnecessary examinations and more valuable results could be obtained. Epidemics caused by water, milk or flies have each its own peculiari-

ties which can easily be observed by the health officer. Laboratory findings are of little value in milk-borne epidemics, but the examination of local conditions usually makes the source very evident. Water analyses are more valuable and the importance of the condition of the water supply is well known. Many samples of water are sent to me with the request that they be examined for typhoid bacilli. The isolation of the typhoid bacillus from water is attended with great difficulty and has been accomplished but a few times. It does not remain alive as long as the colon bacillus, and it is the latter organism which is used as the index of contamination of water. In other words, a water supply which was the cause of a typhoid epidemic usually shows the presence of colon bacilli and not *B. typhosus*. The importance of the purity of the water supplies in the prevention of typhoid fever requires no demonstration, for not only is the death rate from typhoid fever generally reduced by purification of the water supply, but also the death rate from other associated diseases.

Typhoid fever is one of the greatest sanitary problems of our state as well as of our country. In the United States typhoid fever ranks fourth on the list of mortality statistics. The order is tuberculosis, pneumonia, cancer, typhoid. In 1910 there were 25,000 deaths from typhoid in the United States. This is a very serious situation when one considers that the death rate is about 10%, which means that in 1910 we had 250,000 cases of typhoid fever in the United States. This means an economic loss of upwards of \$100,000,000 per year. But there is a more serious phase than this. To me the most serious side of the typhoid situation is the fact that of the 250,000 people suffering from typhoid fever in 1910 alone, hundreds of typhoid carriers are produced, people who are turned loose on the community to infect our water and milk supplies. Therefore prevention of typhoid fever means prevention of the production of typhoid carriers, unknown sources of infection. In this great work the physician has a dual duty, first to protect the community, second to assist the patient. Every case of typhoid fever means a short circuit between the discharges of one person and

the mouth of another. From the standpoint of preventive medicine the prevalence of typhoid in a community is a reflection on the sanitation of that community.

To aid the physicians and health officers the Hygienic Laboratory will perform a two-fold duty. First, we are prepared to diagnose the disease by means of the Widal or agglutination test and thus aid the physician in locating the foci of infection; second, we examine the water and milk supplies for evidence of contamination, and, what is more important, we hope to prevent water-borne infections by making routine examinations of the water supplies of the state. This work is now under way. We may in the future prepare to distribute typhoid vaccine for prophylactic use. The value of anti-typhoid vaccination has been demonstrated beyond the question of a doubt. It protects against the disease for a period of two to four years.

Let us consider briefly each of the routine examinations made by the Hygienic Laboratory for physicians and health officers:

1. Diagnosis of tuberculosis. The diagnosis of tubercular sputum is accompanied even under the most favorable conditions with some danger. To protect those making the examinations the samples must be sent in outfits furnished by the laboratory. The glass bottle contains some 5% carbolic acid, which should not be thrown away. Reports are sent on the day specimens are received.

2. Diagnosis of diphtheria. The diphtheria outfits consist of a double mailing case containing a sterile swab. The swab is inoculated from the throat or nose, as the case may be, replaced in the sterile test-tube and immediately sent to the laboratory. Laboratory outfits must be used and data cards returned properly filled out. Reports are sent out in 24 hours, by telegraph or telephone if requested.

3. Diagnosis of typhoid fever. The agglutination test for typhoid fever will be made for physicians. Complete outfits with directions are furnished to any physician on request to the laboratory and will be found in stations established in each county.

4. Diagnosis of gonorrhoea. Smears

of pus will be examined for the gonococcus. Outfits for sending the slides can be obtained by physicians on request. Reports are made on the day specimen is received.

5. Diagnosis of rabies. The brains of animals which have bitten humans will be examined for rabies. Wherever possible the animal should be kept alive until it develops symptoms. This occurs within ten days if the animal has rabies. The head should be carefully packed in ice or else placed in glycerin in a jar. The diagnosis is made by examination of the brain for the Negri bodies and by inoculation of a rabbit with an emulsion of the brain tissue. Reports can usually be made within a few hours if the brain is in good condition. These reports will be sent by telegraph at the expense of those concerned whenever requested.

6. Examination of water supplies. The examination of private wells will be undertaken at the request of a health officer when the physician has good reason for suspecting the water to be the cause of some water-borne disease. Public water supplies will be examined for their fitness for drinking purposes as frequently as our facilities will permit. The samples must be sent in containers furnished by our laboratory and must be accompanied by data cards carefully filled out. Full information is sent with every outfit. The outfits will be sent in care of the health officer. The examinations require about five days.

7. Anthrax, actinomycosis, glanders and trichinosis. These examinations will be made on request of a local health officer, physician or state consulting veterinarian. Glanders material must be packed in ice and sent to the laboratory labeled "**Suspected Glanders**," as such material is very dangerous to handle.

8. Diagnosis of syphilis. The laboratory will make microscopic examination of smears from suspected syphilitic lesions for the presence of the spirochaeta of syphilis. Slides in proper mailing cases with data cards will be sent on request.

9. Intestinal parasites. Feces will be examined for the hookworm, tapeworm, round worm and threadworm. For this purpose outfits will be sent to any physician on request. Outfits will also be found at the distributing stations in each county.

10. Diagnosis of meningitis. Specimens of meningeal fluid will be examined for meningococcus in suspected meningitis. The sample must be sent in a sterile vial with a history of the case. Reports will be made by telegraph at expense of those interested.

11. Toxicological examinations and chemical analyses of milk, food and drugs. Toxicological examinations of stomach contents, foods and drugs will be made by the Chemist, State Hygienic Laboratory.

Our laboratory is prepared to do special work in pathology and bacteriology, such as urinalysis, blood examinations, examinations of tumors, preparation of vaccines, etc. For such private work a charge is made, as this is in no way connected with State Board of Health work. For such work all communications must be addressed to Bacteriologist and Pathologist, West Virginia University, Morgantown.

The Pasteur treatment for the prevention of rabies will soon be given at the Hygienic Laboratory. For this treatment arrangements must be made with the Bacteriologist. The laboratory is prepared to make investigations of any matters regarding the public health when they concern bacteriology, hygiene or epidemiology, at the request of the State Board of Health.

I have already mentioned that we hope soon to distribute typhoid vaccine to physicians of the state. We shall soon be prepared to send outfits for the prevention of ophthalmia neonatorum, and I hope we shall soon be able to distribute antitoxins for diphtheria and tetanus. But all of these will depend upon the future action of the State Board of Health.

The field of activity of this laboratory will be extended as rapidly as possible, and we hope that it will supply a long felt need in the state. Our greatest duty will be the protection of the public health. To this work the Hygienic Laboratory is dedicated, and in the performance of this great service we shall need the co-operation of every member of the medical profession in the State of West Virginia.

When tuberculous involvement of the Fallopian tubes is evident to the naked eye, pan-hysterectomy should be performed.—American Journal of Surgery.

RECOGNITION OF THE DIFFERENT PERIODS OF GONORRHOEA BY THE MICROSCOPE.

Harry G. Steele, M.D., Bluefield, W. Va.

(Read at Annual Meeting of State Medical Ass'n, May, 1914.)

The writer of this paper poses neither as a bacteriologist nor as a genito-urinary specialist. The members of the Medical Society of this state have had experience one way or another with this prevalent affection, and it is useless to take your time here to describe the symptoms of gonorrhoea.

Some time in the latter months of 1908, while making frequent examinations of the discharge from the male urethra, the writer discovered that there was a marked difference in the microscopic picture of gonorrhoea pus in the first few days after exposure and that of a month to six weeks duration. So a search was begun to see if there was anything in this idea.

In January, 1909, a young man came into the office and intimated "that that old case had returned on him again," which had received six to eight weeks' treatment in the latter part of August, September, and possibly in October, 1908. He was asked why he did not report as to his condition from time to time, and he was told that he had not been seen around town for a few weeks.

"Oh, I thought I was cured and went down home to Virginia for two weeks to take a rest," was his reply.

Right here a specimen of the urethral discharge was smeared on a glass slide, stained and placed under the microscope for examination. And while this was being examined the patient denied having been exposed since August, when he first came for treatment.

He had been discharged as being practically cured some time in October. No urethral discharge had been seen from that time until about three days before he came for this examination. He had returned to the coal field just eight days previous. He denied absolutely having been exposed for the past five months, and emphasized the fact that "the same old case had returned on him." The writer kept on examining the specimen under the mi-

croscope until convinced that the picture seen showed the discharge to be what is mentioned in this paper of about a week and not more than ten days' duration. Then the patient was emphatically informed that he was not telling the truth, and the symptoms he was then complaining of were not from his old case, but that he had contracted this one in about a week's time. Then he owned up to having been exposed just seven days previous.

With this as a beginning the writer became particularly interested with the microscopical analysis of gonorrhoea. In all perhaps two hundred cases have been examined.

While no effort has been made to keep any definite data, the following ideas have become fixed in my mind. Let us consider these ideas:

A patient comes to you with the symptoms of specific urethritis, and having been exposed to a suspicious character, the diagnosis may or may not be already made. On examination you find that the patient has a discharge from the meatus. You smear some of this on a glass slide and stain it with a saturated solution of methylene blue, Harlow's Hayhurst stain or make a differential stain such as Gismark Brown. On examining this under the microscope you find the biscuit-shaped, coffee-grain diplococci present. You may or may not find them inside the pus cell; they may be found in great clumps or a few scattered here and there over the field. In so-called specific infection, i. e., one free from any other bacteria, these gonococci are the only micro-organisms seen in the field.

The following description taken from Keyes, of New York, is so excellent that I quote verbatim:

"It is a diplococcus. Each individual of a pair of D-shaped (coffee-bean shaped) with the flat (or slightly concave) border opposed to its fellow, so that the couple forms an ovoid made up of two separate hemispheres. The length of the pair averages about 1.25 microns (Bumm), and the interspace is about half as wide as either segment.

"The gonococcus, when it occurs in pus, is found both within and without the pus and the epithelial cells. Indeed, the most characteristic groups are met with inside the cells. The extracellular gonococci may be scattered or irregularly grouped, but the intracellular specimens present a greater regularity of arrangement."—Keyes adds the following footnote:—

"I have never been able to ascertain any relation between the intracellular or the extracellular position of the gonococci and the grade or the stage of the inflammation. Every specimen contains gonococci both inside and outside the cells, and in definite proportion."—(Keyes' "Genito-Urinary Diseases," 1905, pp. 56-7.)

Let us divide this disease into five periods, viz.:

First period—from the third to the seventh day after exposure.

Second period—From the tenth to the fourteenth day.

Third period—In the neighborhood of the fourth week.

Fourth period—From the eighth to the tenth week.

Fifth period—From the fourth to the sixth month or even longer.

For the following reasons I have attempted to classify gonorrhoea into these periods: First, a patient will come to you with a urethral discharge or complains of frequent painful urination, having been exposed at different times to two or more persons. He wants to know if you can tell which one of these exposures caused the trouble. Second, and a very important reason to us, you have given a patient a faithful, judicious, scientific six to eight weeks' treatment and he is supposed to be practically cured; he has paid you your fee. Then he comes back in two to four weeks or even months after you have discharged him and tells you in a very insinuating, disgusted manner that you did not cure him; that the same old case has returned. He denies having been exposed in any way since you first began the treatment. Are you now going to treat him again for from four to six weeks for the fee that he paid you several weeks ago?

Here are the diagnostic periods as I have observed them:

In the **first period**, from the third to the seventh day, you will find pus cells intact, the nuclei normal in appearance, and from four to fifty gonococci in the protoplasm of the cell, i. e., within the cell wall, and a few or none outside of the cell. An average of about twenty-five gonococci are in a leucocyte.

The **second period**, from the tenth to the fourteenth day, shows gonococci still within the cell, of which there are approximately seven in a field, each cell containing an average of five diplococci, a few

are now occasionally found between the leucocytes. They are biscuit-shaped, concave on their adherent sides and of average size. A few lymphocytes may be seen (slide shown).

In the **third period**, i. e., in the neighborhood of the fourth week, gonococci are still present, but fifty per cent or more are extracellular. Gonococci are now in nests of from four to thirty-five; an average of three to five nests are found in a field. The diplococci retain their normal appearance. In this period the protoplasm of the cell is very much diminished or is wanting entirely, allowing the nuclei to continue to separate. A few lymphocytes may be seen scattered throughout the field. After examining several specimens no mucous threads were found present in this period, nor were any other bacteria (Slide shown.)

Fourth Period. The discharge taken in the neighborhood of the eighth to the tenth week shows the cells very extensively broken up. The fragments of the broken up leucocytes have no relation in contour; the nuclei and protoplasm are both quite disintegrated. The gonococci are not so much in clusters, eighty per cent of them being extracellular and comparatively distant from one another in the field. Some are convex at their contiguous borders and vary in size. There are a few epithelial cells and some contain diplococci; some mucous threads are in evidence, but they are broken up.

In the **fifth period** there are scarcely any gonococci present, very few pus cells and no epithelial or blood cells. All the gonococci are free in the field, since the cells are broken up. As to the shape of the bacteria, they are more spherical, i. e., the contiguous portions are convex instead of concave; this is probably due to a certain amount of atrophy having taken place in the old gonococci. When pus cells are found, none are intact and the nuclei are greatly disseminated. The protoplasm is shattered and the whole cell is in fragments which seem to have no relation to one another. (Slide shown.)

Let me report here what White and Martin have to say along this line:

"In the mucoid discharges there are a few bacteria scattered between the cells, in mucopurulent they are abundant and in groups, and in the purulent discharge they exist in myriads,

THE INCIDENCE OF CANCER.

Oration in Surgery.

J. Ross Hunter, M.D., Hansford, W. Va.

(Read at Annual Meeting of State Medical Ass'n, May, 1914.)

It is easy to be a pessimist in dealing with cancer. The great frequency of this disease and the fact that more than half of the cases presenting themselves for operation are too far advanced for any hope of cure, is my apology for bringing the subject to your attention at this time. It has been estimated that of all women living at the age of 35 years, one in nine will die of cancer, and for the present at least surgery offers the only hopeful solution. The word "cancer" will, in this paper, be used to designate only those malignant tumors of epithelial origin.

Is cancer on the increase? According to the mortality statistics of the United States Census, cancer was responsible for the following death rate:

1890.	47.9	cases per	100,000	population
1900.	63	" "	" "	" "
1905.	71.4	" "	" "	" "
1910.	76.2	" "	" "	" "
1912.	77	" "	" "	" "

Thus it will be seen that there has been an actual increase in the number of recorded cases of 14 per 100,000 or 22.2% in the past 12 years. It is not easy to draw definite conclusions from the statistics. The age distribution of the various states from which the figures are taken would be of interest but are not now available. In making up the census report the word "cancer" has unfortunately been used to cover all forms of malignant tumors, and while the vast majority were of course carcinoma, this possible source of error must not be overlooked. Two principal reasons have been advanced to show that this increase is apparent and not real. First, that improved diagnostic methods and increased general interest in the subject have occasioned more accurate diagnosis and more careful death certificates. Second, that improvement in infant mortality and in the treatment of other diseases, notably tuberculosis, has permitted more people to reach the cancer age. Both of these propositions are sound and do in fact account for a large increase.

Taking up the first (i. e., improved diagnosis and more general interest) we can safely assume that the refinements of technique in recent years have permitted us to record some deaths due to cancer of the internal organs that in earlier years would have escaped notice. To offset this, Banks, of England, has called attention to the fact that, however difficult the diagnosis of cancer may be in the earlier stages, it presents little or no difficulty at the time of death when the mortality records are made up. Wiley suggests that earlier diagnosis would imply earlier and more effective surgical treatment. "It is quite possible," says Williams, "that improved diagnosis may also have made some subtractions from cancer records where formerly many unclassified tumors were spoken of as cancer." The second proposition (i. e., that reduction of mortality in other disease has permitted more people to reach the cancer age) has not been so successfully answered, though it is well to remember that the increase in cancer has shown below as well as above 40 years of age. The statistics showing great increase of the large cities is no doubt affected largely by persons going from the smaller communities to the large city hospitals. With the great mass of data on this subject it is difficult to arrive at a definite conclusion. There has certainly been a large increase in the number of recorded cases, but we are not convinced that an actual increase has been shown, nor do we believe it is well to cause alarm in the public mind until such increase is actually demonstrated. One fact, however, seems to stand out clearly, i. e., cancer is more general than the mortality records indicate. There are two reasons for this: First, the presence of cancer in the internal organs of persons who have not the benefit of the best diagnostic skill; second, the popular prejudice against the word "cancer," the result being as pointed out by Coley, that out of respect for this sentiment the family physician has often assigned as the cause of death some minor symptom or some concurrent ailment, and not the true malignant disease. "The extent to which this is true has recently been shown by Guiliot of Reims, France, who made a careful comparison of the cases certified to have died of cancer and the actual number

known to have died of cancer in a given locality in a given period of years, and found that the number who had actually died of cancer was exactly double the number certified to have died of cancer." While it is not possible for us to say that cancer is increasing, the facts that we have at hand show that it is present in large numbers and that its mortality is appalling.

90.7% of cases occur at 40 years old and over. After 65 years there is a noticeable and rapid decline in the mortality. We may therefore consider it, in the main, a disease of middle life and old age. There are, however, many genuine cases reported in persons under 30 years of age and even much younger. Rapid spread and early death characterize these cases occurring in young persons. It may be stated that the younger the victim the worse the prognosis.

An American surgeon, quoting from the German literature, reports carcinoma of the ovary at the age of 12, 14, 17, 19, 20, 21, 23 and 29 years. Schroeder in 492 cases of carcinoma found 22 under 30 years of age, and Bryant in this country, in a series of 600 cases, found 25 under 30 years of age. Reitz reports cancer, confirmed by the pathologist, under 20 years, in the following organs: Stomach, uterus, ovary, larynx, skin, eye, kidney, pancreas and liver.

There seems to be a definite stage of pre-cancer irritation. Single severe injuries do not seem to predispose so readily as repeated small injuries, that is, chronic irritation. Murphy says "the process of healing has a distinct relation to tumor formation." These facts are entirely in accord with the findings.

The Mayos report two series of gastric carcinoma. In the first series the history and pathological findings suggested previous ulcer in 62% of the cases. In the second series 71%. Practically all of the cases of gall-bladder cancer are associated with stones. Cancer of the fundus of the uterus is comparatively rare, but in the cervix of multiparous women, all of whom have lacerations, it is common. Cancer of the lip usually occurs in pipe smokers. Pigmented moles and warts are very liable to malignant degeneration, particularly when they occur on exposed surfaces. In carcinoma of the breast history of injury is not the rule, but here we

have the repeated healing process associated with lactation.

The point where malignancy begins in previously existing tumors is not easy to determine. The necessity of having useless tumors removed ought to be carefully taught. The term "benign tumor" should probably never have been invented. It is well to remember the advice of Chas. Mayo, who, in speaking of breast tumors, said: "Of all tumors occurring in the breast of a woman 40 years old and older, 85% are malignant to begin with, and of the remaining 15% half will become malignant if left alone."

If we are to make any progress in the treatment of carcinoma of the breast, we must teach, first, ourselves and then our patients, that retraction of the nipple, glandular enlargement, and emaciation are not the symptoms of breast cancer but the evidence of its terminal stage. If we are to cure cancer of the uterus we must amputate every lacerated, nodular cervix in a woman approaching 40 years of age. If we are to cure cancer of the stomach, we must treat surgically all cases of gastric ulcer that do not respond promptly to treatment. In other words, if we are to cure cancer we must prevent it.

The following conclusions seem to be justified:

1. Cancer is, and has always been, much more prevalent than the mortality records indicate.
2. It is not uncommon in persons under 30 years of age or even in children.
3. There is usually a distinct, recognizable pre-cancer stage.

Discussion.—Doctor Hupp said that no apology need be offered for bringing so important a subject before this association as cancer, claiming, as it does, more than seventy-five thousand victims in America annually. He seemed to be of the opinion, if more attention were paid to the subject of intestinal stasis, that as physicians we would have fewer cases of carcinoma of the gastro-intestinal tract to treat, because Lane has so forcefully pointed out that ulcer of the duodenum and of the stomach are but end results of chronic intestinal stasis with its diminished resistance and auto-intoxication.

He also made mention of the fact that no satisfactory diagnosis in these intestinal cases could be made without the cooperation of the radiologist, and no thorough exposition of this subject can be complete without a careful consideration and interpretation of the X-Ray findings.

both within and without the cells in chains and in groups.

"The position of the gonococci is exceedingly characteristic. They are always found heaped in the protoplasm of the pus cells and epithelial cells. At times these cells appear entirely filled with these organisms. The number of gonococci in acute typical gonorrhea is very considerable; though there may be an admixture of other micro-organisms, these latter are distinctly in the minority. At the very beginning of an acute, or in the terminal stages, there may be very few gonococci."

Under the heading Incubation the same authors say:

"Three to five days represent the ordinary incubation period,—that is the time elapsing between exposure and development of the first symptom."

To summarize as briefly as possible the changes in cells and micro-organisms: In the early stage the pus cells are practically normal in appearance and contour, except that some have ingested considerable of the gonococci; occasionally we can see a few germs that have not been gathered in by the phagocytes.

As the disease grows older the leucocytes become more and more broken up; the protoplasm of the cell is destroyed and the nuclei are separated until they seem never to have had any relation to one another. The imprisoned gonococci are now set free by degrees.

Finally the field becomes almost or entirely freed of broken down pus cells; a few mucous threads may be seen here and there. The gonococci are very few in number; in the very latent period they may have more of the shape of a spherical diplococcus when their contiguous portions are convex instead of concave which is probably caused by the atrophic condition due to their age.

While examining discharges from the male urethra, a few specimens were discovered to be what might be called leucorrhoea discharges, and proved later to be non-specific and of a few days duration.

Dr. Chas. F. Hicks of Welch, W. Va., after hearing of the above idea brought out in this paper, suggested that one might be prepared now to know just how to treat the different stages of his cases. And Dr. Warner said that the above method of diagnosing the different periods might aid materially in some medico-legal cases.

I am indebted very much to Clyde E.

Shedd of this city for his assistance in getting up this paper.

Please consider this paper anything but complete, due to lack of abundant and accurate data. Being unable to watch the cases from the third day to the end has been more or less of a handicap. It is hoped that enough has been said to cause others, especially genito-urinary specialists or clinical diagnosticians, to investigate the subjects so that we will not lack for more detailed information.

Selections.

BONE IMPLANTATION IN POTTS' DISEASE.

By C. S. Venable, M.D.,
San Antonio, Texas.

(Read before the Section of Surgery, State Medical Association of Texas, San Antonio, May 6, 1913.)

Before coming to a technical description of the subject of this paper I will briefly consider Potts' disease and its pathology in order that we may the better appreciate the mechanical principles involved in its treatment.

Potts' Disease or Tuberculous Spondylitis is a destructive morbid process of the vertebrae and adjacent structures, caused by the invasion and growth of tubercle bacilli. This invasion is most frequent during the early growing period of life, and the spongy bone of the vertebral bodies, which in childhood comprises two-thirds of the spongy bone of the body, is most favorable media for its growth.

The predisposing causes are tuberculous parentage, faulty nutrition and environment and the exanthemata—particularly those involving the air passages; but the one and only direct cause is the invasion and growth of tubercle bacilli, which are conveyed to this fertile soil by the blood stream. Permit me to emphasize the fallacy in the belief that tuberculous disease of the spine is caused by injury. The child gets a fall and in days or months complains of his back, or deformity plain to all is seen. That was not the origin of the morbid process; the invasion had taken place long before and the golden opportunity, when bony destruction was slight, had passed unrecognized.

This tuberculous process may originate in the bodies as central, epiphyseal or peripheral. The blood supply to the vertebral bodies is divided into four sets, namely, three from the posterior spinal artery, distributed to the center of the body, and two epiphyseal plates, which latter communicate through the disc to the plate adjacent, and the fourth from the intercostal arteries on each side supplying the periphery.

The epiphysis is the most frequent site of primary invasion, next is the central portion and last is the periphery; however, when either the epiphysis or periphery is primarily attacked the central portion soon becomes involved through direct tissue destruction; also, when the epiphysis is attacked the adjacent body is shortly involved because of continuity and the distribution of the blood supply.

The pathological sequence is a destruction of spongy bone, the formation of cavities in the bodies of the vertebrae, which become filled with tuberculous material, detritus, small sequestra and pus. The walls of this abscess cavity are the adjacent vertebrae, the shell-like periphery and the softened anterior and posterior spinal ligaments. At the time of injury this shell, which has up to now maintained the contour of the spine, breaks, deformity becomes apparent, there is active escape of the tuberculous mass underneath the spinal ligaments and the rapid destruction has begun. Of course all tuberculous foci do not lead to this gloomy end. Nature takes care of many cases through bodily resistance and by consolidation. This consolidation is what we attempt to bring about. Before repair can take place the debris must be absorbed and replaced by fibrous tissue, and this cicatrization must take place before consolidation is possible; and favorable conditions must prevail before nature can control the progress of the disease, much less commence the repair.

Rest, absolute rest, is the all essential—not the only essential, but the all essential—and is demanded by nature first, last and all the time. This has been the keynote of all treatments and procedures instituted for the cure of this disease since it was described by Potts in 1779, and the object of this paper is to describe a method, not original with me, that is at

this time to my mind the most exact means of acquiring this all to be desired perfect rest.

We have all witnessed the classical treatment, rest in bed, forced decubitus and extention, lasting over periods of months or years, plaster casts, corsets and all the ingenious devices made, all with the one object of fixation of the diseased area so that absorption, cicatrization and consolidation might take place. The results have frequently been anything but good, because the fixation was imperfect and the rest incomplete. Just when it seemed that the goal had been attained there was that remaining infinitesimal focus of infection quite sufficient to bring about a return of the disease upon the least amount of irritation. Therefore, ways of more definite and lasting fixation have been sought, and during the past five years the treatment of this disease has been revolutionized. These I pass over with highest commendation. From some of these Albee got the idea that culminated in the method I am about to describe, the implantation of a strip of bone from the tibia into the spinous processes.

The patient having been placed in the prone position a longitudinal incision is made over the spine of sufficient length to expose at least two spinous processes above and below the vertebrae involved, the soft parts divided and the nucal ligament exposed. This is split longitudinally and with an elevator laid to both sides of the spinous processes, the tips of which are now well exposed, and the intra-spinous ligaments are divided horizontally, to the depth of their laminal attachments. The spinous processes are now split horizontally in their long axis, to the laminae and a trough thereby provided for the reception of the splint. In this step of the operation Albee splits the spines with hammer and chisel, but I have found it easier to saw through each one with the circular saw and then with a single stroke on the chisel the process is split. This field of operation is now temporarily covered. With the leg flexed on the thigh an incision is then made immediately over the anterior border of the tibia of sufficient length to admit of the removal of a V-shaped strip of bone to fill the channel made in the spine. The soft parts are retracted and with a circular saw this V-

shaped strip, together with its periosteum, of sufficient depth as well as length to fill the groove made for it, is removed and cross cut as a carpenter would cut a strip of wood he wished to bend, so that it may be bent to conform with the deformity.

An assistant now closes the wound in the leg while the operator places the splint in its channel with the angle of the V at the bottom, where it is fixed as follows: A stitch is caught through each intra-spinous ligament, bringing the edges together over the splint; the nuchal ligament is brought together and sutured continuously over the spine tips and splint, thus completely imbedding the splint, and the soft parts and skin are closed.

This is a true tongue and groove joint and false motion that would disturb the graft is impossible. The blood supply of the structures of the back is very free and the life of the graft is doubly insured from this source. As rapidly as in a fresh fracture, first fibrous and then bony union ensue between the splint and the inner surfaces of the divided spinous processes.

The mechanical effects may at once be seen. There is complete and absolute fixation, rest obtains and nature may proceed with her process of repair in the area of destruction. Rotation, which is impossible of control under any other circumstances, is inhibited, as is flexion and extension of the spine.

The post-operative care of these patients consists of rest in bed for from six to eight weeks. Of course nourishing food, fresh air and other general measures are not forsaken. I mean simply to emphasize that no plaster or porous jackets are applied nor is the patient kept in one position, but permitted to turn from side to side *ad libitum*.

A correction of the deformity is not the object sought, and such result is not to be expected, though in cases where the deformity is slight the correction is marked and in all cases some improvement is shown.

The mortality is nil in selected cases, but, of course, patients with an actively progressive tuberculous process elsewhere are not fit subjects and in such cases the treatment should not be undertaken until their general condition warrants. In selected cases the recovery is uncomplicated and repair progressive.

The end result is the real feature which interests us, and as in this method the patient has his fixation apparatus with him always, so the likelihood of relapse from removal of external appliances is not so great.

The question may be raised, how much does this fixation incapacitate the patient? It does not incapacitate him at all. During the active disease process he is incapacitated because of pain and in the effort to obtain fixation through muscle spasm the whole back is held rigid. Under the changed condition only these same vertebrae are fixed and the remainder of the column is relieved of the muscle spasm and the real capacity of the patient is increased.

I do not care to take time for a citation of cases, but will tell of one case in point. A tailor, 43 years old, had for eighteen months been unable to work on account of pain. His deformity was in the fourth, fifth and sixth dorsal vertebrae. The body of the fifth dorsal was entirely gone and the fourth and sixth were partly ankylosed. The condition dated from childhood. He was operated on in the manner here described, the splint extending from the third to the seventh vertebrae, inclusive. After an uneventful recovery he was discharged from the hospital in the eighth week, returning to his work, that of tailoring, in the fourteenth week.

In closing I desire to express the belief and feeling that humanity as well as our great profession owes to Dr. Albee of New York a debt of gratitude for giving us a method by which we may with renewed hope and vigor attack this dread disease.

INFANT FEEDING.

Dr. J. M. Brady of St. Louis, in American Journal of Diseases of Children, says he begins with a fat-free diet at birth.

The percentage is gradually raised with the increase in weight of the baby. With additions of fat to the mixture owing to its high heat value, the twenty-four-hour amount must be reduced so as not to exceed the caloric requirements of the infant.

Milk Mixture.

One and one-half ounces by measure of barley flour is cooked with 16 ounces of water at least twenty minutes down to 10 ounces, and

added to 20 ounces of skim sweet or acidified milk. The latter we believe for many reasons is preferable in an institution. One-half ounce by measure of cane sugar and 1 ounce by measure of malted food containing dextrin and maltose are added. The carbohydrate content of the mixture would be represented by lactose 2.66, cane sugar 1.30, maltose and dextrin, 1.70, plus barley, 2.25, which is partly dextrinized. This gives a total carbohydrate percentage of 7.91. One liter has a caloric value of 415.

We have used this mixture over a period of eighteen months. Last July, owing to the favorable results, it was adopted as the routine formula for new-born infants. We do not wish to be understood as believing that the problem of infant feeding is going to be solved by one mixture that need never be varied. The individual infant will always furnish the indications for what is best for its metabolism. In an infant asylum, owing to the large number of babies and the scarcity of help, the best results will be obtained by minimizing the work and prescribing a few formulas which give the best results for the average infant. We are satisfied of the wisdom of supplying the young infant a liberal percentage of protein as represented in this mixture. This percentage we do not change throughout the first year; the same may be said in regard to this mixture of the various carbohydrates. The fat percentage demands a change from time to time; beginning with a fat-free diet the percentage is gradually raised with the progress of the baby.

Clinical Results.

Over a period of eleven months this mixture was adopted as a routine formula in the ward for the young infants. One hundred and seventy babies were cared for; ninety babies received breast milk for the first two weeks of life and then received this mixture. Forty-five received this mixture from birth; eighteen were between two and three months of age and seventeen, owing to nutritional disturbances, were on **Eiweissmilch**; these received this mixture after completion of the **Eiweissmilch** cure. During this period there was a remarkable absence of babies with nutritional disturbances; the stools were uniformly of good color and consistency. No infant on this mixture in this series developed the symptom-complex described by Finkelstein under the caption alimentary intoxication, nor did symptoms arise which could be inter-

preted as **Mehlnahrshaden** (starch injury) in the sense of Czerny and Keller. Twelve babies did not show a satisfactory gain, so they were transferred to **Eiweissmilch**. All the other babies thrived satisfactorily, the fat percentage alone requiring alteration. Eighteen babies died, a mortality of 10.5 per cent. The causes of deaths were as follows: two sudden deaths, nutrition good; autopsy showed enlarged thymus; one, premature birth; one, congenital syphilis; seven, acute bronchopneumonia, nutrition good; one, phlegmon of the scalp; and six, decomposition (Finkelstein).

It will be seen from the above that 170 babies all under three months of age were cared for with only six deaths from nutritional disturbances. It is the experience of all that the great difficulty in an asylum is in establishing the nutrition of the infants. In passing it is to be remarked that while it is the desire to show the favorable results of this polycarbohydrate diet, it must be emphasized that the use of **Eiweissmilch** has prevented the deaths of a number of babies. The routine adoption of this diet for the young infants has limited very much the use of **Eiweissmilch**. Our infants remained under observation for variable periods ranging from one to six months; the large majority for a longer time than three months. I recall that the death rate during the first year in private homes is generally stated to be 20 per cent; Cautley says infant mortality is very high in the first month, sinking to less than half in the second month, and progressively decreasing with each successive month during the first year.

Statistics frequently deceive, and therefore I believe just as much value may be placed on the impressions of the observer; I therefore offer the above figures for what they are worth.

WHAT IS THE COUNTY MEDICAL SOCIETY AND WHY WE SHOULD JOIN IT.

Men in the same pursuit often feel the need to get together to discuss common problems, to exchange views and experiences, to gain inspiration. It is this necessity that brings business men and professional men together. What profession has more problems to meet every hour of the

day than the medical profession? First the problems pertaining to medical practice in general. The constant changes in the science and art of practice, the learning and unlearning of supposed truths, the ever shifting field of practice, the transitions from old to new conceptions,—each gives rise to new problems which must be solved and can only be solved by free discussion and interchange of ideas and experiences. The young doctor brings his theory and the old doctor brings his mature experience—and they swap, each profiting by the deal. The county society, therefore, is the doctor's exchange, and a seat in this exchange should be as valuable as in the stock market, for a profitable deal often means financial success. And, by the way, this is the only kind of stock—the stock of knowledge—that the doctors should deal in, for every other kind usually spells r-u-i-n.

Business men often get together to protect their guild against unfair competition of other conditions inimical to their business interests. Medical practice is a business and requires the same kind of guardianship. The underpaid doctor, the "cheap" doctor, the lodge doctor, the commercial school, the school with a low standard of medical education, the quack, the faker, the patent medicine man, the quack druggist—these are the enemies of the legitimate practitioner, and these enemies we can fight only by combining our forces. The county society is the headquarters of our fighting army.

Intelligent, broad-minded men get together to discuss and take action on matters pertaining to public welfare. They take up politics, industrial conditions and other social problems and by their discussion and co-operative action frequently mold public opinion and help to direct public policy. Is there any other profession that can boast of a larger number of public spirited men than the medical profession? Who looks after the health of the community? Who makes the town and city habitable? Who saves the babies from untimely death? The doctor. Who transformed pest holes into summer resorts? Who made commerce between these same pest holes and the rest of the world possible? Who brought about the successful issue of the greatest engineering undertaking the world has ever wit-

nessed? The doctor. With such great achievements to our credit, it is only proper that the doctors should get together to encourage this social service.

The County Medical Society should be a civic center.

Men of like tastes often get together for social intercourse. During their busy hours they have no time nor opportunity to meet in a social way. To fill this gap clubs of various kinds are formed. The doctors, more than any other people, stand in need of social intercourse. The opportunities of meeting for a friendly chat are so few that unless satisfactory arrangements are made they may go through life perfect strangers to each other. Such opportunities are provided by the County Medical Society.

The County Medical Society should be the social center.

To perfect the organization of the doctors in this country the County Medical Society was made the unit. Therefore, no doctor can belong to the American Medical Association unless he is a member in good standing of his county society. As a matter of fact the American Medical Association has no independent existence. It is the association of county and state societies which control the policies of the association through their delegates—truly a democratic arrangement. Every doctor, therefore, no matter how humble, may help to determine the policies of this great medical body by his influence in the county society.—*Delaware State Medical Journal.*

THE WASSERMAN REACTION.

Dr. H. P. Towle abstracts a critical review of this subject by Dr. A. Jesionek of Giessen, and in conclusion presents the following:

The chief points brought out by this summary of the literature on the Wassermann reaction are, in their order, as follows:

The Wassermann reaction gives a positive guide in the presence of **active** cutaneous manifestations, but is not entirely convincing when the cutaneous symptoms are dubious or lacking.

The Wassermann reaction is not specific for syphilis. It is positive more or

less frequently in a considerable number of other diseases.

The technic is so exceedingly difficult and the sources of error so numerous as to render acceptance of results reported dependent on the qualifications possessed by the maker of the test.

The statistics at hand seem to show that the test responds positively in only about 50 per cent of the total cases.

Therefore, the fundamental conclusion is drawn that the negative reaction has no diagnostic value.

Considered from the point of view of the period of the disease, the reaction does not become positive in the primary stage until after a considerable lapse of time; usually eight to ten weeks from the time of the infection. Occasionally it occurs as early as the third week. During the secondary period, when the activity of the disease is at its height, the reaction is positive with scarcely an exception. The positive reaction is considerably less frequent in the tertiary period, considered as a whole, although, in the presence of undoubted syphilitic symptoms, it is quite constant.

The same laws govern the behavior of the Wassermann reaction in congenital syphilis as in acquired syphilis.

Syphilitic parents with a positive Wassermann reaction may bear children with no trace of the disease and with a persistently negative reaction; or may bear children with no clinical signs of disease, but giving a positive reaction.

The mothers of syphilitic children are immune because, according to the Wassermann reaction, they are themselves syphilitic.

Periods of latency occur during the course of syphilis when no clinical signs of disease can be discovered. The reaction is positive less frequently during these "latent" periods than during the periods of activity, especially if the "latency" occurs late in the course of the syphilitic disease.

The percentage of positive reactions found during the period of "late latency" agrees very closely with the percentage of cases undetected during life, but demonstrated at the autopsy to be syphilitic.

"Latency" may be due to cure (when the symptoms of disease never recur) or to "slumber" (when for some as yet unknown reason manifestations may unex-

pectedly develop at some future time). The Wassermann reaction does not distinguish between the negative reaction resulting from cure and the negative reaction from an infection which merely "slumbers."

The fact that the reaction, negative in the "latent" period, promptly becomes positive when the infection again becomes active, is very suggestive.

It follows from the statements above that the Wassermann reaction is not a constant and invariable accompaniment of the syphilitic disease process, but comes and goes just as do the other individual manifestations of the infection.

The Wassermann reaction is to be regarded as neither more nor less than a symptom which manifests itself in the presence of active disease processes regardless of the stage of the disease. In other words, it is not the period of the disease on which the occurrence of the complement fixation depends, but on the activity of the invading parasite.

When the Wassermann reaction is positive, but lacks clinical confirmation, the suggestion of the existence of a syphilitic process is exceedingly strong, but not absolutely beyond debate. When, however, the reaction is positive in the presence of manifest, or even merely suspicious, symptoms, the doubt is changed to a practical certainty by the fact of its occurrence.

Notwithstanding the statement just made, the tendency is to regard the occurrence of a positive reaction as positive evidence of the existence of active syphilis even when lacking confirmatory evidence.

A negative Wassermann test is of no value in prognosis. Apparently the persistence of the positive reaction under certain conditions has no more value than the negative, as was shown in the discussion of the relation of the test to marriage.

Although the aim from a therapeutic point of view is to convert a positive reaction into a negative, so far as the Wassermann reaction is concerned, we cannot say whether the invading spirochetes have actually been conquered or only temporarily paralyzed. In short, our understanding of the inner meaning of the Wassermann reaction is incomplete and practically limited to the positive phase of the question. But our knowledge of even the positive phase lacks perfection.—*American Journal Diseases of Children.*

The West Virginia Medical Journal

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All articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over 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 will be 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 to the editor and printer.

ADVERTISEMENTS.

Advertising forms will go to press not later than the 5th of each month.

Advertisements of proprietary medicines must be accompanied with formulae. Rate cards sent on application.

REMITTANCES

Should be made by check, draft, money or express order or registered letter to Dr. S. L. Jepson, Ch'm of Pub. Com., 51 Twelfth Street, Wheeling, W. Va.

Editorial

JOURNAL CHANGES.

As will be noticed in the minutes of the Council of the State Medical Association, in whose control the Journal was placed several years ago, a somewhat radical change in the editorial force was made at the last meeting of the association. The present editor was constituted "managing editor" with Dr. L. D. Wilson as assistant. As the other two physicians who have for a number of years served as assistant editors, viz: Drs. Lind and Wingerter, are not named in the reconstruction resolution, we feel compelled reluctantly to omit their names from their usual positions on the Journal. Both are cultured physicians and very capable writers, and we shall take pleasure in admitting to the editorial or other pages of the Journal anything that they may at any time desire to present to our readers. Dr. Wilson's aid and advice have always been invaluable. That the

Journal has been so free from printer's errors is largely due to the Doctor's critical eye and judgment. We are glad indeed that the Journal is still to have his valuable aid, and that his initials will appear in our editorial columns even more frequently than in the past is certainly to be desired.

Six new departments have been created, or rather, what we have called "Medical Outlook" now takes the name of "Progressive Medicine", and is divided into departments with editors as indicated below:

Internal Medicine—Dr. J. N. Simpson.

Surgery—Dr. F. LeMoyné Hupp.

Obstetrics and Gynecology—Dr. R. E. Venning.

Pediatrics—Dr. C. O. Henry.

Genito-Urinary and Dermatology—Dr. A. P. Butt.

Eye, Ear, Nose and Throat—Drs. H. R. Johnson and P. A. Haley.

As yet but two of these department editors have sent in any contributions, (viz: Drs. Hupp and Johnson,) which may be accounted for by their not having yet received official notice of their appointment. We have tried to supply the deficiency and to satisfy the expectation of the Council until the new editors can get into their working clothes. We hope to have some of our exchanges directed to them so that their labors may be facilitated as much as possible, and we here venture the suggestion that our readers will no doubt enjoy and best profit by the new and practical things rather than the old and theoretical, although not all that is old is as yet known to all of us, and if set forth in new and bright clothes, not a little of the old may be made interesting and profitable.

The writer can lay no claim to any credit for the changes here named, since he was not taken into the confidence of the Council nor in any way consulted either as to the re-arrangement of material or the choice of editors for the different departments. His eight years editorial experience would seem to entitle his opinions to some consideration, but as the Council apparently did not think so, credit for the success or criticism for the failure of the new arrangement must not be laid at the editor's door. He congratulates himself, however, that the depart-

ment editors are without exception men with whom he can work most cordially, and whom he will be glad to assist and whose aid he will gladly receive at all times. It shall ever be his aim to cooperate with these men in every possible way, to the end that the Journal may be made more interesting and profitable, and that through its instrumentality the association may increase in numbers and activity until it shall prove a power for good to the whole state.

A word as to the physical make-up of the Journal. It is suggested that "the color and design of the Journal be made more attractive." The color of the cover was changed by the printers several months ago without consulting the editors, and it is not to his liking. As a large stock of this cover paper was specially ordered for the Journal, we cannot change it until this supply is exhausted. In the mean time we shall welcome suggestions from our members as to their choice of color. With the paper and type of the reading pages we are entirely satisfied; and, of the fifty exchanges we receive, we regard our paper as among a half-dozen of the most attractive. In this connection we may call attention to the fact, doubtless often overlooked, that in our thirty-six large double-column pages is material enough to make at least fifty pages of the size of many single-column Journals. Our members, therefore, are getting more reading matter than they may think. It rests entirely with them whether or not the original articles are fully abreast of the times. Certain it is that they are improving in quality from year to year just as the standard of qualification of those entering the profession is being advanced. As the State Board of Health is co-operating with the American Medical Association in exacting higher preliminary requirements from those who are seeking certificates to practice medicine in the state, we have a right to expect that the character of the articles appearing in the Journal from West Virginians will improve in character from year to year. So may it be.

QUERY.

Who wrote, "INFLAMMATIONS OF THE NASAL ACCESSORY SINUSES". Some months ago we received

a paper with the above title and it has no name attached. Will the writer kindly send his name.

Thanks to the friends who have sent copies of the missing numbers of our Journal. "Kind hearts are more than coronets."

A CHIROPRACTOR—A JURY—A JUDGE.

We commend the action of this judge to our West Virginia judges who are too lenient to the ignorant imposters of the State who are practicing medicine without knowledge and without license, and filching from the pockets of the poor and ignorant their hard-earned money. If juries will not protect these people courts should. Juries often need instructions before they will perform their sworn duty.—Editor.

In the beautiful little city of Union City, in West Tennessee, there lives, and plies his trade, one of those artless individuals whose business in life is to persuade his fellow man that the seat of all the ills that flesh is heir to is in the backbone; and that only by the submission of the aforesaid fellow man to the magic manipulation of his aforesaid backbone by the aforesaid artless individual can pain be banished and disease overcome. The artless individual, to better impress the impressionable, proclaims himself a chiropractor. This peculiar animal—the chiropractor—has never been recognized by law in Tennessee as having an excuse for existence outside of the more or less narrow confines of Knox county. And so, when some of the intelligent citizens of the cultured little city, Union City, came to the conclusion that this particular "Chi" had "practored" about as much as was compatible with the dignity and welfare of the community, they made an attempt to persuade the Grand Jury of their county that the story of his activities was worthy of careful consideration at their hands. It seems that backbone was at a premium in this Grand Jury room, for no indictment was brought.

While "Chi" delights to find backbone in abundance under ordinary conditions, he was gleeful over its apparent non-existence in the Grand Jury room, where only three of thirteen jurymen seemed possessed of the useful member upon one end of which is supposed to sit a head, while the other end is sat upon. But the gleeful glee of "Chi" was extinguished in short order when it became apparent that a superabundance of backbone, with a reasonably-sized head on the proper end of it, was incorporated and properly coupled up in the person of the presiding Judge to whom the Grand Jury made report. His Honor promptly and plainly informed the jurymen that if they had the slightest desire to have the records of his court show that they had honorably discharged their duty, they would immediately retire and forthwith return with an indictment against "Chi" for having willfully violated the plain law of the land. This admo-

dition from a Judge who had put the death touch to the festive sport of "night riders" just a few years ago, injected more stiffenin' into the spinal columns of those ten jurymen than all the "practoring" of multitudinous "Chi's" could have put into them. Shortly, very shortly, the Jury decided that it would be an absolute impossibility for them to do anything else but to return an indictment.

"Chi" was fined to the limit. The limit is ridiculously small.

We favor two new laws for the protection of the health of Tennessee: one to make the punishment of frauds and fakers severe enough for one conviction to deter them from further offending; another to provide for the interchange of judges, so that a certain West Tennessee judge may be borrowed for other districts on occasions.—*Jour. Tenn. Med. Society.*

THE MEDICAL CLUB IN THE SMALL TOWN.

"The physicians of Rantoul who belong to the county society have formed a club for scientific and social purposes, and meetings are held once in two weeks to discuss the current diseases, interesting cases and anything that may be for the benefit of the community or fraternity. They also exchange opinions on the new things that are constantly coming before the medical profession. It is said that since the organization started not a meeting has been missed by any member, for it is felt by all that the club promotes harmony, cements friendships, raises the tone of the profession and strengthens ethics. So far as we know this is an innovation for a small town. May the Rantoul Physicians' Club live long and attain great honor!"—*Bulletin of the Champaign County Medical Society.*

Rantoul (Ill.) is a town of 1,600! We have in Wisconsin more than a hundred cities larger than Rantoul. How many have a physician's club which meets every fortnight that they may better serve the public? Is there any reason why every town of that size cannot have a physician's club? Why not start one in your town now? It takes only two members to start a club! If there are only two physicians in your town you have a complete membership. If there are more they will come. You and some other "good fellow" start it and watch it grow!

Now I have never been in Rantoul, but I'll wager 10 pounds of boosterism against your last summer's hat that it is a good place to live in, that the medical men are the best of friends, that they have the respect of the public and that every one of them is happy and having a bully good time doing good, conscientious work. Who will be the first to organize a physicians' club in a Wisconsin town of less than two thousand?—*Rock Sleyster, in Wisconsin Medical Journal, May, 1913.*

Society Proceedings

MINUTES OF THE FORTY-SEVENTH ANNUAL SESSION OF THE WEST VIRGINIA STATE MEDICAL ASSOCIATION, BLUEFIELD.

House of Delegates.

Called to order by President R. E. Venning at 9:37 Tuesday, May 11, 1914.

The following delegates were present: Drs. Venning, Butt, Kessler, Sites, Dupuy, Cherry, Peery, Vermillion, and Coleman.

Dr. Thompson asked to have his report deferred until Wednesday.

Adjourned at 9:43.

Wednesday, 11:22.

President Venning in the chair.

The Secretary called the attention of the House to a resolution to amend the Constitution introduced the preceding year by Drs. Weirich, Sites and Tomkins:

"Be it resolved that Article V of the Constitution be amended to read: The House of Delegates shall be the legislative and business body of the Association and shall consist of

- "(1) Delegates elected by the component societies,
- "(2) the Councilors,
- "(3) all ex-Presidents,
- "(4) ex-officio the President and Secretary of this Association."

On motion of Dr. Linsz, seconded by Dr. Simpson, this amendment was unanimously adopted.

The Secretary read the following report:

Mr. President and Fellow Members of the W. Va. State Medical Association:

Our membership for 1913 is 905, a gain of 62. We received during the year 155 new members; lost by death, 4; by non-payment of dues and removal, 80.

Our component societies number: Barbour-Randolph-Tucker, 59; Boone, 9; Braxton, 10; Brooke, 8; Cabell, 64; Doddridge, 5; Eastern Panhandle, 47; Fayette, 47; Grant-Hampshire-Hardy-Mineral, 29; Greenbrier Valley, 23; Harrison, 60; Hancock, 8; Kanawha, 75; Lewis, 16; Logan, 12; Little Kanawha and Ohio Valley, 48; Marion, 50; Marshall, 27; Mercer, 59; McDowell, 40; Mingo, 18; Monongalia, 17; Nicholas-Webster, 5; Ohio, 70; Pleasants, 5; Preston, 16; Raleigh, 19; Ritchie, 19; Summers, 8; Taylor, 13; Tyler, 6; Upshur, 12.

The following societies show a loss as compared with last year: Barbour-Randolph-Tucker, 1; Grant-Hampshire-Hardy-Mineral, 1; Greenbrier Valley, 3; Lewis, 1; Monongalia, 4; Nicholas-Webster, 12; Preston, 7; Ritchie, 1; Summers, 2; Taylor, 1; Tyler, 2; Upshur, 1.

The following gained: Braxton, 2; Cabell, 14; Eastern Panhandle, 12; Harrison, 3; Hancock, 2; Kanawha, 15; Logan, 6; Little Kanawha and Ohio Valley, 3; Marion, 6; Mercer, 10; Marshall, 5; McDowell, 5; Mingo, 4; Ohio, 1; Pleasants, 1. I am glad to be able to report that every physician in Mercer county is a member.

These neither gained nor lost: Boone,

Doddridge, Fayette, Raleigh.
 Our income for last year amounted to \$3591.00
 Derived as follows:
 Membership dues from 905 members
 at \$2.00.....\$1810.00
 Defense fund of \$1.00 from 834 mem-
 bers 834.00
 From Journal for advertising and sub-
 scriptions 949.00
 Expense.
 Journal Fund, 905 members, at \$1.00..\$ 905.00
 Defense Fund, 834 members, at \$1.00.. 834.00
 Salary of Editor..... 1000.00
 Salary of Secretary..... 300.00
 Salary of Treasurer..... 100.00
 Salary of Assistant Editor..... 25.00
 Printing, postage, badges 142.69
 Bond for Treasurer..... 10.00

\$3316.69

In this expense account there are some items in reality chargeable to 1912 and some have been paid this year for 1913.

The same thing holds true as regards income.
 Thus: During the calendar year of
 1913 we received for 1912 dues.....\$ 36.00
 816 members at \$3.00..... 2448.00
 70 members at \$2.00..... 140.00

\$2624.00

You will note an apparent discrepancy of \$1.00. This is due to the fact that we received one man by transfer.

Yours respectfully,
 A. P. BUTT, Sec'y.

The report of the Secretary was referred to Drs. Henry and Daniels.

Dr. H. G. Nicholson then read his report.
 West Virginia Medical Association
 To Hugh G. Nicholson, Treasurer.
 1913 Dr. Cr.

July 7	To check Dr. S. L. Jepson, salary.....	\$ 500.00
Aug. 8	To check West Va. Medical Journal....	300.00
Sept. 2	To check Medical Defense Fund.....	106.00
Oct. 22	To check Edmundson, Council.....	5.00
Nov. 6	To check Lohmeyer, Goldsmith, Patterson	10.00
	6 To check A. P. Butt, postage, etc.....	34.01
11	To check Dr. G. D. Lind, asst. editor...	25.00
Dec. 18	To check Davis News, printing.....	37.00
Sept. 8	To check Medical Defense Fund.....	111.10
1914		
Jan. 5	To check West Va. Medical Journal...	199.00
14	To check Dr. S. L. Jepson, editor.....	500.00
14	To check The Parsons Advocate, pt'g.	3.50
20	To check Medical Defense Fund.....	250.00

Feb. 17	To check Medical Defense Fund.....	155.00
April 22	To check Dr. A. P. Butt, salary.....	300.00
22	To check Dr. A. P. Butt, postage.....	31.49
22	To check Dr. A. G. Nicholson, salary...	100.00
24	To check Kanawha Bank'g & Trust Co.	3.00
May 5	To check St. Louis Button Co.....	29.00
11	To check cash on hand	1342.17
1913		
May 21	By amount brought forward	\$1130.64
31	By amt. from Dr. A. P. Butt.....	224.50
June 30	By amt. from Dr. A. P. Butt.....	122.00
Aug. 11	By amt. from Dr. A. P. Butt.....	8.00
Oct. 1	By amt. from Dr. A. P. Butt.....	111.00
Nov. 1	By amt. from Dr. A. P. Butt.....	22.00
Dec. 4	By amt. from Dr. A. P. Butt.....	36.00
1914		
Jan. 19	By amt. from Dr. A. P. Butt.....	19.00
14	By amt. from West Va. Med. Journal..	873.13
30	By amt. from Dr. A. P. Butt.....	650.00
Feb. 4	By amt. from Dr. A. P. Butt.....	262.00
April 7	By amt. from Dr. A. P. Butt.....	504.00
24	By amt. from Dr. A. P. Butt.....	326.00
May 4	By amt. from Dr. A. P. Butt.....	3.00

\$4291.27 \$4291.27

Dr. Butt called the attention of the Delegates to an apparent discrepancy between the reports of the Secretary and Treasurer, saying this apparent discrepancy arose because the Secretary was reporting for the calendar year 1913, while the Treasurer was reporting the business actually transacted since our last meeting.

Treasurer's report was referred to council for audit.)

Medical Defense Fund in Account
 with H. G. Nicholson.

1913		
May 20	By cash on hand...\$	686.50
Sept. 2	By cash from General Fund.....	106.00
8	By cash from General Fund.....	111.10
1914		
Jan. 20	By cash from General Fund.....	250.00
Feb. 17	By cash from General Fund.....	155.00

May 7	By cash from interest paid.....	87.25	
1913			
May 26	To cash borrowed at 6%.....	\$600.00	
Aug. 28	To check Dr. H. R. Johnson.....	3.60	
28	To check Dr. O. H. Hoffman.....	300.00	
1914			
Feb. 15	To check Dr. W. W. Golden.....	152.20	
Mch. 12	To check Dr. Hugh Strachen.....	55.75	
Jan. 20	To cash loaned at 6%.....	250.00	
May 11	To cash on hand...	34.50	
			\$1,395.85 \$1,395.85

Total money loaned at 6% interest...\$2,237.60
 Interest due on May 26th..... 36.00
 Interest due on August 6th..... 83.25
 Adjourned at 11:45.

Thursday, 4:45 P. M.

Called to order by President Venning.

On motion a telegram was ordered sent to Dr. W. H. Yeakley, a former counselor, conveying our sympathy and expressing our hope of his early recovery.

The Committee on Presidential Address reported as follows:

We, the Committee on the President's Address, realizing the great merit and wise counsel embodied in this admirable document, beg leave to submit the following report:

Heartily endorsing our worthy President's suggestions with reference to the establishment of definite health districts throughout the state, the necessity for a revision of the state statutes governing the gathering of vital statistics, the appointment of a Committee on Medical Economics, the separation of the editorial and the business departments of the State Medical Journal, and most especially his courageous and well taken stand against the great injustice done our profession by the Workmen's Compensation Act, we recommend:

First. That the West Virginia Medical Association memorialize the State Board of Health to establish definite health districts throughout the state, placing each district under the supervision of a suitably trained and sufficiently paid officer, devoting his entire time to his duties as such under the immediate direction of the State Board of Health, and that the Committee on Legislation be instructed to use every honorable means to procure from the State Legislature sufficient funds and necessary authority to enable the State Board of Health so to do.

Second. That the State Association instruct their President to appoint a Committee on Medical Economics whose duty it shall be to study in detail and devise ways and means of carrying out suggestions of Drs. Hupp and Venning as set forth in the Presidential address, and that if necessary to properly carry on this work in medical economics the officers of the State Association be empowered to in-

corporate the West Virginia State Medical Association.

Third. We recommend that the Council appoint a business manager for the West Virginia State Medical Journal, paying him a reasonable salary, thus relieving the editor of business cares now incident to his office.

Further, that a department of Progressive Medicine be created in connection with the Journal, edited by three carefully selected men, who shall also receive suitable compensation for their work.

And further, that the secretary of each County Society be urged to make a monthly literary contribution of the proceedings of his society.

Fourth. That the Legislative Committee be instructed to urge upon our State Legislature the revision of our state statutes governing the gathering of vital statistics so that they may accord with the requirements of the national code.

And that they be further instructed to vigorously and incessantly urge the repeal of that portion of the Workmen's Compensation Act which authorizes the fixation of any definite fee for any service rendered the sick or injured under its provisions.

C. O. HENRY,
 J. R. BLOSS,
 J. HOWARD ANDERSON,
 Committee.

Dr. Jepson moved that the report be taken up *seriatim*.

Recommendation No. 1 was, on motion of Dr. Jepson, referred to the Committee on Public Policy and Legislation.

Recommendation No. 2. On motion of Dr. Anderson, as amended by Dr. O'Grady, the President was authorized to appoint a committee of three on Medical Economics to act in conjunction with the President, ex-President, President-elect and Secretary.

Recommendation No. 3 was referred to the Council.

Recommendation No. 4 was, on motion of Dr. Cherry, seconded by Dr. St. Clair, referred to the Council.

Dr. C. O. Henry reported as follows:

We, your committee appointed to examine the report of the Secretary, beg leave to submit the following:

We commend the Secretary for his zeal and efficiency; the Mercer County Medical Society for getting every physician in the county as a member, and recommend their action to every county in the state.

(Signed) C. O. HENRY,
 H. W. DANIELS.

Adjourned at 5:37.

Friday, 9:40 A. M.

Called to order by President Venning. The election resulted in the selection of:
 H. P. Linsz as President.
 J. B. Kirk as First Vice President.
 T. K. Oates as Second Vice President.
 I. N. Houston as Third Vice President.
 J. H. Anderson as Secretary.
 H. G. Nicholson as Treasurer.

F. L. Hupp as Delegate to American Medical Association.

Councilor for First District, J. W. McDonald.

Councilor for Second District, H. W. Daniels.

Councilor for Third District, P. A. Haley.

Councilor for Fourth District, W. S. Link.

Councilor for Fifth District, Wade St. Clair.

Next place of meeting, Huntington.

The President appointed as a Committee on Medical Economics Drs. Henry, Ogden and Simpson to act in conjunction with the President and Secretary, the ex-President and the President-elect. (The President is Chairman of this committee.)

Adjourned at 11:34.

Friday Afternoon, 5:25.

President Venning in the chair.

Dr. Butt called the attention of the House to an unintentional irregularity that had occurred in the election during the morning session. On motion of Dr. Butt this irregularity was corrected by unanimous vote.

Council reported as follows:

Minutes of Council, May, 1914.

Bluefield, W. Va., May 14, 1914.

The meeting of the Board of Councilors was called to order by the Chairman, Dr. Linsz.

Present: Drs. McDonald, Link, Johnson, Oates, Haley and Linsz.

The reports from the various Districts were received and read. They showed a general increase in membership throughout the State and a betterment of the conditions of the Association as a whole.

The financial report of the Editor of the Journal, Dr. S. L. Jepson, was examined, audited and found correct. It showed a deficit of \$154.80.

(Signed: Drs. McDonald, Link, Johnson, Oates, Haley, Sec'y.; Linsz, Chm.)

The report of the Treasurer, Dr. H. G. Nicholson, was examined, audited and found correct.

(Signed: Drs. McDonald, Link, Johnson, Oates, Haley, Sec'y.; Linsz, Chm.)

It was resolved that the Board of Councilors recommend to the House of Delegates the following changes in the publication of the Journal of the West Virginia Medical Association in accordance with the recommendation of the Committee on the President's address:

1. That the color and design of this Journal be made more attractive.

2. That the following sections be incorporated in the Journal under separate headings:

(1) Surgery, (2) Internal Medicine and Therapeutics, (3) Obstetrics and Gynecology, (4) Pediatrics, (5) Genito-Urinary and Dermatology, (6) Eye, Ear, Nose and Throat.

Each of the above sections to contain, each month, not less than two typewritten pages of reading matter, consisting of excerpts and current literature, thereby bringing each branch up to date. Such typewritten pages of reading matter to be in the hands of the Managing Editor by the fifteenth day of each month.

3. That the Editorial Staff shall consist of

(1) Managing Editor, (2) an Assistant Editor, and (3) six section Editors, as follows:

(1) Surgery, (2) Internal Medicine and Therapeutics, (3) Obstetrics and Gynecology, (4) Pediatrics, (5) Genito-Urinary and Dermatology, (6) Eye, Ear, Nose and Throat.

4. That the term of office for service of each member of the Editorial Staff shall be one year, commencing July 1, 1914.

5. That the salaries of the Editorial Staff shall be as follows: Managing Editor, \$600.00 per year; Section Editors, \$50.00 each per year.

6. The following Editors were appointed:

(1) Managing Editor—Dr. S. L. Jepson, Wheeling, W. Va.

(2) Assistant Editor—Dr. L. D. Wilson, Wheeling, W. Va.

(1) Surgery—Dr. F. L. Hupp, Wheeling, W. Va.

(2) Internal Medicine and Therapeutics—Dr. J. N. Simpson, Morgantown.

(3) Obstetrics and Gynecology—Dr. Richard Venning, Charles Town, W. Va.

(4) Pediatrics—Dr. C. O. Henry, Fairmont, W. Va.

(5) Genito-Urinary and Dermatology—Dr. A. P. Davis, W. Va.

(6) Eye, Ear, Nose and Throat—Dr. H. R. Johnson, Fairmont, W. Va.; Dr. P. A. Haley, Charleston, W. Va.

The following resolutions were offered and adopted:

RESOLVED: That the secretaries of the local societies be required to mail to the Editor of the Journal, on the first day of April of each year, a list of the members who have not paid their dues, and that the Editor be required to drop such delinquent members from the Journal's mailing list.

RESOLVED: That the secretary of each local society be required to mail to the editor of the Journal a list of the members who have paid their annual dues at the same time such report is made to the Secretary of the State Association.

RESOLVED: That the secretary of each local society be requested to report to the editor of the Journal, each month, the proceedings of his local society and other items of interest to the profession. If such reports are not made promptly, the editor of the Journal shall write and request same.

Secretary: \$200.00 for the ensuing year.

Treasurer: \$100.00 for the ensuing year.

The old Council, together with the newly elected Councilors, met and organized.

Dr. W. S. Link, of Parkersburg, was unanimously selected as Chairman for the ensuing year.

Dr. P. A. Haley, of Charleston, was unanimously selected as Secretary for the ensuing year.

The following Committee on Medical Defense was appointed: Drs. J. W. McDonald, Fairmont, Chairman; H. R. Johnson, Fairmont, and W. S. Link, Parkersburg.

After a detailed report of the Committee on Medical Defense was made by H. P. Linsz, Chairman of the Executive Committee, Council adjourned.

The above report of Council was read in its entirety before the House of Delegates, and was unanimously adopted by that body.

H. P. LINSZ, Chairman.

P. A. HALEY, Secretary.

May 15, 1914.

Report adopted.

Adjourned at 5:30.

A. P. BUTT, Secretary.

Members who attended the Bluefield meeting:

Dr. Richard E. Venning	Charles Town
Dr. A. P. Butt	Davis
Dr. J. R. Vermillion	Princeton
Dr. E. H. Thompson	Bluefield
Dr. E. S. Dupuy	Summerlee
Dr. S. L. Cherry	Clarksburg
Dr. T. E. Peery	Bluefield
Dr. J. McGuire	Princeton
Dr. C. T. St. Clair	Bluefield
Dr. J. E. Coleman	Beckley
Dr. A. K. Kessler	Huntington
Dr. J. McKee Sites	Martinsburg
Dr. P. A. Haley	Charleston
Dr. W. R. Whitman	Roanoke, Va.
Dr. W. P. Bean	Keystone
Dr. Charles F. Hicks	Welch
Dr. C. A. Johnston	Bluefield
Dr. J. H. Bird	Rock
Dr. Uriah Vermillion	Oakvale
Dr. F. F. Holroyd	Athens
Dr. Aaron Arkin	Morgantown
Dr. F. T. Ridley	Bluefield
Dr. J. H. Simpson	Morgantown
Dr. C. C. Ballard	Gap Mills
Dr. Sam Holroyd	Athens
Dr. J. R. Boyd	Oakvale
Dr. E. F. Peters	Maybeury
Dr. J. A. Reyburn	Ravenswood
Dr. W. C. Moser	Morgantown
Dr. E. W. Horton	Bluefield
Dr. S. D. Hatfield	Jaeger
Dr. F. W. Bilger	Yukon
Dr. B. B. Wheeler	McKendree
Dr. H. F. Stiltner	Pineville
Dr. J. Ross Hunter	Hansford
Dr. J. W. McDonald	Fairmont
Dr. C. McRae Banks	Raleigh
Dr. R. H. Pepper	Huntington
Dr. M. H. Tabor	McDowell
Dr. F. LeMoyne Hupp	Wheeling
Dr. V. L. Casto	Ripley
Dr. W. J. Smith	Williamson
Dr. C. O. Henry	Fairmont
Dr. W. S. Link	Parkersburg
Dr. T. H. Becker	Bluefield
Dr. J. B. Kirk	Elk Horn
Dr. H. R. Johnson	Fairmont
Dr. M. L. Steele	Oakvale
Dr. G. J. Stone	Maybeury
Dr. H. G. Nicholson	Charleston
Dr. G. D. Lind	Greenwood
Dr. H. H. Farley	Logan
Dr. H. E. Davis	Logan
Dr. J. H. Smith	Richlands
Dr. J. E. Hatfield	Mohawk
Dr. J. H. Anderson	Marytown
Dr. Chester R. Ogden	Clarksburg
Dr. H. P. Linsz	Wheeling
Dr. H. W. Daniels	Elkins
Dr. J. M. Sheppard	Falls Mills
Dr. Wm. H. Triplett	Williamson
Dr. H. G. Steele	Bluefield
Dr. Jas. R. Bloss	Huntington
Dr. A. L. Anick	Charleston
Dr. W. W. Morton	Bluefield
Dr. Charles A. Barlow	Spencer
Dr. E. E. Clovis	Terra Alta
Dr. G. L. Todd	Princeton
Dr. C. C. Peters	Princeton
Dr. W. H. Wallingford	Princeton
Dr. D. H. Thornton	Princeton
Dr. B. W. Bird	Princeton
Dr. C. A. MacQueen	Charleston
Dr. T. K. Oates	Martinsburg
Dr. A. H. Hoge	Bluefield
Dr. A. D. Wood	Bluefield
Dr. H. R. Fairfax	McComas
Dr. I. W. Taylor	Toodwitt
Dr. E. M. Easley	Bluefield
Dr. B. F. Cornett	Bluefield
Dr. P. J. McElrath	Bramwell
Dr. L. A. Williams	Huntington
Dr. C. G. Morgan	Moundsville
Dr. S. L. Jepson	Wheeling
Dr. J. E. McDonald	Logan
Dr. Charles O'Grady	Charleston
Dr. R. W. Corbitt	Waverly
Dr. S. W. Price	Scarbrow
Dr. C. A. Easley	Bluefield
Dr. J. W. Killey	Vivian
Dr. B. F. Beebe	Cincinnati, Ohio
Dr. W. S. Gardner	Baltimore, Md.
Dr. W. B. Slusher	Bluefield
Dr. W. S. Steele	Spanishburg
Dr. C. W. Vick	Gary
Dr. M. V. Godbey	Charleston
Dr. J. E. Cannaday	Charleston
Dr. J. E. Martin	Bluefield
Dr. J. F. Fox	Bluefield
Dr. C. M. Tanner	Bramwell
Dr. Charles Scott	Bluefield
Dr. L. E. Williams	Huntington
Dr. E. T. Cecil	Bramwell
Dr. W. H. Murray	Bluefield
Dr. H. W. Daniels	Elkins
Dr. Alice Mairs	Charleston
Dr. W. E. Ritter	Whitewood
Dr. W. C. Hall	Welch
Dr. W. G. Camper	Welch
Dr. K. H. Heatherman	Glen Alum
Dr. H. C. Jett	Bluefield
Dr. L. H. Clark	Kyle
Dr. W. H. St. Clair	Bluefield
Dr. O. S. Hare	Bluefield
Dr. B. S. Clemens	Matoaka
Dr. Tunis Nunemaker	Williamson
Dr. F. W. Barger	Hiawatha
Dr. Thomas E. Clayton	Washington, D. C.
Dr. J. C. Killely	Vivian
Dr. G. T. Conley	Williamson
Dr. J. W. Preston	Roanoke, Va.
Dr. H. C. Hays	Princeton
Dr. A. G. Rutherford	Thacker
Dr. W. W. Babcock	Philadelphia, Pa.
Dr. S. G. Gant	New York City
Dr. Tom Williams	Washington, D. C.
Dr. W. B. Stevens	Kimball
Dr. S. A. Daniel	Welch

Dr. S. E. Massey.....	Bramwell
Dr. E. Vermillion.....	Athens
Dr. T. E. Griffin.....	Graham, Va.
Dr. J. H. Craft.....	Springton
Dr. A. D. Lees.....	Huntington
Dr. P. B. Weitzel.....	Ironton, Ohio
Dr. C. H. Lehenall.....	Cincinnati, Ohio
Dr. M. S. Lambert.....	Bluefield
Dr. E. P. Whited.....	Swords Creek, Va.
Dr. W. L. Hunter.....	Red Sulphur Springs
Dr. H. C. Pedigo.....	Bluefield
Dr. J. L. McHasson....	Graham, Va.
Dr. L. A. Franer.....	Bluefield
Dr. L. G. Beall.....	Queensboro, N. C.
Dr. E. A. Rich.....	Graham, Va.
Dr. W. E. Ritter.....	White Wood, Va.

Ohio County Society.

December 22, 1913.

Regular meeting, Dr. Thornton presiding. Twenty-nine members present. Dr. E. A. Hildreth II read a paper on anti-typhoid vaccination; spoke of the excellent work done by Major Russell of the army and the great importance of this prophylactic as an economic measure. He also spoke of the work of Wright, Piffiler and Coley. The doctor described in detail the method of preparation of the vaccine, the mode of administration and the symptoms present when the reaction occurs. He concluded by giving statistics from the United States Army. Dr. Sammons of Calis gave his experience in an epidemic at Dallas, during which he administered 90 injections of the vaccine to 30 people. Deltoid and intrascapular regions were the sites of injections. He had met with no reaction except in the case of a boy 11 years old and there was no case of typhoid among those vaccinated and none that ever had typhoid. Dr. Andrew Wilson urges the use of the anti-typhoid vaccination and believes that in time our statistics will be as voluminous as those in Germany.

Further discussion by Drs. Noome, West, Jepson, Fulton, Osborne and Burns. Dr. Hildreth concluded by advising the use of the vaccine in the evening and to healthy people only. Dr. Wingerter then read a paper on traumatic neuroses. A growing interest is felt in these cases, which are increasing in number. He spoke of functional nervous disturbance as due to bodily injuries or psychic trauma. He referred to the old term hysteria and neurasthenia and then described the modern psycho analysis, saying that mental maladjustment must be readjusted in these cases. Great care is needed and great patience in the management of these cases. No time being spared, gradually one may evolve by successive stages, the personal experience of the patient and great care should be observed that no improper suggestions be given to the patient. The paper was discussed by Drs. Jepson, Hall, Osburn, Noome, Schwinn, Fulton and Hupp. Dr. Wingerter closed by making further remarks on the psychology of suggestion. Dr. Hupp moved that the members of the Marshall County Society be invited to our meetings and to participate in the writing of papers and their discussion. Passed.

J. E. BURNS, Secretary.

Reviews

The Practice of Pediatrics. By Charles Gilmore Kerley, M.D., Professor of Diseases of Children, New York Polyclinic Medical School and Hospital. Octavo of 878 pages, 139 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$6.00 net; Half Morocco, \$7.50 net.

"Kerley's Treatment of the Diseases of Children" has been before the profession for some years and has proved a very satisfying book on the therapeutics of children's diseases. The present book covers the whole field of Pediatrics. It begins with a long chapter on the newly born, describes their early care, discusses fully and clearly the feeding of infants, giving clear directions for the modification of milk and the preparation of the different forms of food, concerning which there has been great change of opinion in recent years. Diseases of the newly born are discussed, as congenital debility, icterus, sepsis, atelectasis, mastitis, etc. All the diseases common to childhood are then fully and satisfactorily presented. The latest views of Flexner and his assistants are presented on acute poliomyelitis and epidemic cerebrospinal meningitis. Quarantine of patient for four weeks is urged in the former. Of the latter he says that "the disease may be transmitted from those affected to the well has never been proved, and it cannot be positively placed in the communicable class." Altogether the book is a most excellent one, and we cordially commend it to our readers.

Infant Feeding. By Clifford G. Grulee, A.M., M.D., Assistant Professor of Pediatrics at Rush Medical College, Chief of Pediatric Staff, Cook County Hospital. Second edition, thoroughly revised. Octavo of 314 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$3.00 net.

It was the writer's pleasure to review the first edition of this work but two years ago. Our prophecy that it would meet with favor has proven correct, as shown by so early a call for a new edition. Errors in the first edition have been corrected, and while we note no material addition to the work it presents the very latest facts on infant feeding as developed by the rapidly advancing science of Pediatrics. We know of no work in which the subject is so fully and satisfactorily presented.

Psychanalysis: Its Theories and Practical Application. By A. A. Brill, Ph.B., M.D., Chief of Clinic of Psychiatry and Clinical Assistant in Neurology, Columbia University Medical School; Chief of the Neurological Department of the Bronx Hospital and Dispensary. Second edition, thoroughly revised. Octavo of 393 pages. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$3.00 net.

The Journal gave a very favorable review of the first edition of this interesting book less than two years ago. The early appearance of a second edition attests the fact that it has met with professional approval. Considerable new material has been added, including an analysis

of dreams, some interesting reports of cases and a glossary of terms not all of which are familiar to the average reader. The author is the leading exponent in America of the Freudian theories which have encountered much opposition. A careful reading of this book will fully inform the reader as to Freud's teachings and put him in a position to form a correct opinion as to their value. They are certainly interesting, and in no other English book can so correct an idea of them be secured. Read before criticising, is our advice.

Clinical Hematology: An Introduction to the Clinical Study of the So-Called Blood Diseases and of Allied Disorders. By Gordon R. Ward, M.D., Fellow of the Royal Society of Medicine, Medical Society of London, etc. Octavo of 394 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$3.50 net.

This is a clinical study of the blood diseases, with an attempt to classify them. Chapter I deals with classification, after introductory remarks. Chapter II names the blood-forming organs (the marrow, lymphoid tissues, spleen, liver) and describes the function of each. Chapter III tells how to make a blood examination, and in the other chapters are discussed lymphæmia, chloroma, myelæmia, Hodgkin's disease, Splenomegaly, lymphoma, multiple myeloma, splenicæmia of adult, lymphatism, cholemia, the different forms of anemia and all other forms of blood disease. The blood in surgical diagnosis has a separate chapter. Chapter XXI is taken up with treatment, and a final chapter presents the blood in various diseases. Many illustrations appear, a number colored. The book is a most valuable one and thoroughly up-to-date.

American Medical Directory, fourth edition. This biennial publication is constantly advancing in quality and usefulness. In addition to the names of every practitioner in the country, as nearly as can be ascertained, by states and by postoffice addresses, it contains a complete alphabetical index of all physicians. The speciality of each physician, if he have one, is also given, with his street address.

In addition to the names much valuable information is given, as the American Medical Association and its officers, the national and interstate societies, medical officers of the army, navy and Public Health Service, list of pension examiners, medical colleges, with their standing, historical information as to colleges and societies, medical libraries, list of medical journals. The medical practice act of each state, with the Boards of Health and Examining Boards and the county and municipal health officers are also given, with the state institutions, hospitals, etc. In short, this Directory is a mine of information. We could not do without it.—S. L. J.

Annual Reports of the Chemical Laboratory of the American Medical Association, Vol. 6, January-December, 1913. This is a report of the work done during 1913 in the examination

of patent and proprietary medicines, chemical questions arising in the course of investigations, the analysis of new remedies, etc. Price 25 cents. Worth more.

Treatment of Chronic Leg Ulcers, a Practical Guide to Its Symptomatology, Diagnosis and Treatment. By Dr. Edward Adams. 122 pages. Cloth, \$1.00. Published by the International Journal of Surgery Company, 100 William street, New York City.

Chronic ulcers are a source of annoyance not only to the patient but the doctor as well. One needs all the information he can get in order to heal them promptly. This little book of 120 pages deals with them much more thoroughly than do our works on surgery. Every form of treatment that can claim merit is here set forth after a discussion of the etiology.

Essentials of Prescription Writing. By Cary Eggleston, M.D., Instructor in Pharmacology, Cornell University Medical College, New York City. W. B. Saunders Co. In this duodecim. volume of 109 pages are given all the facts as to prescription writing that one needs—and much is needed if one may judge from the many imperfect prescriptions written. A close study of this book, which will slip easily into one's pocket, will make prescriptions more correct, elegant and safe.

Progressive Medicine

INTERNAL MEDICINE.

Colonic Alimentation.

Alois Graham, A.M., M.D., Professor of Gastro-Intestinal Surgery, Indiana University School of Medicine, has a very exhaustive paper on this subject in Journal State Medical Association of Indiana for May 15. The following are some of the points he brings out: (1) Water readily absorbed, but more rapidly if salt is added; (2) alcohol well diluted is readily absorbed, but is apt to prove irritating to mucous membrane; (3) Peptones well absorbed, but when used frequently irritate and are not well retained; (4) milk products not well absorbed, should be previously peptonized; (5) eggs alone or in water not readily absorbed, but 15 to 20 gr. sodium chloride to each egg facilitates absorption; (6) raw beef juice very completely absorbed, but prolonged use may produce violent diarrhoea; (7) albuminoids, as gelatin, not absorbed; (8) glucose well absorbed, but if concentrated irritates; (9) starch fairly well absorbed and not irritating, readily absorbed if previously acted upon by ferments; (10) fats are with difficulty absorbed, may be in small proportion with a low melting point and emulsified.

He also shows that the rectum should first be cleansed by normal salt solution. Soap suds should not be used. The high introduction of the rectal tube is not needed. A flexible tube almost invariably coils upon itself within three inches and is therefore impossible as well. The addition of opium enemas is highly objection-

able. The temperature of enemas should be from 98° to 100° F. High and low temperatures both cause irritation.—G. D. L.

Carbolic Acid and Alcohol in Erysipelas.

Judd (Medical Record) advocates, as follows, the use of carbolic acid and alcohol in erysipelas:

The technique consists of painting with a swab of cotton the entire surface of the involved area, and extending about a half inch into the surrounding apparently healthy skin, with a 9 per cent carbolic solution. This is left until the purplish color of the inflamed area is replaced by a pretty complete whitening of the skin. It is essential to the success of the procedure that we await this whitening before we proceed to the next step in the operation. On the other hand, if we allow the whitening to proceed to a thorough blanching we shall produce a burn and a slough of the skin, which will prove painful to our patient and add nothing to the efficacy. Where we have large areas involved it is advisable that only a portion be painted at a time. The second step consists in going over the whitened area very thoroughly with a second swab saturated with pure alcohol. If this swabbing is done thoroughly the whitened area becomes once more pink, and the alcohol must be laid on until this is accomplished. After this we proceed with other areas with the carbolic, neutralizing with alcohol, until our operation is complete. It is essential that we should include a half inch of the apparently sound skin, as the bacteria of erysipelas are found beyond the apparently involved area. In some of our first cases treated we neglected this precaution, and found in 24 hours that, while we had completely controlled the initially inflamed area, a ring of newly inflamed tissue extended out in all directions beyond, much as an advancing ring-worm extends. Our method includes the painting of the hairy scalp, the eyelids, the mucous membrane of the alae of the nose and the nipple of the breast if necessary. We have failed to note any evil result from its use. There has been no toxic action of the carbolic in any case so far observed, although the urine is sometimes darkened and of characteristic odor. The temperature rapidly falls, and in severe cases it is frequently necessary to support the patient with stimulation of strychnine and whiskey.—S. L. J.

SURGERY.

Dr. F. LeMoyné Hupp.

Oil-Ether Anaesthesia: Rectal Administration.—A recent issue of the New York Medical Journal contains Dr. Gwathmey's interesting paper. The following abstract is taken from *The Am. Journ. Clinical Med.*, April:

Doctor Gwathmey ordinarily uses a mixture of 5 per cent of ether with 25 per cent of oil; the quantity employed depending upon the size, age, and general condition of the patient. His rule is, to use 1 ounce of the oil-ether mix-

ture for every 20 pounds of body-weight. Thus, for an adult weighing about 160 pounds, 8 ounces of the anesthetic would be required. This is the usual dose for the average patient. For children, a weaker mixture and a smaller quantity suffices. Thus, in children under 6 years of age, Doctor Gwathmey employs a 50-per cent solution; again allowing 1 ounce for every 20 pounds of weight. With older patients, the strength is gradually increased up to the 75-per cent mixture as a maximum.

In addition, he generally introduces into the rectum, thirty minutes before operation, 5 grains of chloretone dissolved in 2 drams of ether and mixed with an equal amount of olive-oil. At the same time he gives, hypodermically, 1-8 to 1-4 grain of morphine, with 1-1000 grain of atropine; the larger dose being indicated only in the case of athletes and alcoholics.

The apparatus required is very simple, being a small catheter and funnel, two small rectal catheters inserted side by side, and a towel placed over the face from time to time to prevent the dilution of the anesthetic in the air-passages. When the patient is satisfactorily narcotized the towel is withdrawn.

The mixture (2 ounces of olive-oil and 6 ounces of ether) is given with the patient lying in bed on his left side, in the Sims' position, a convenient lifter having previously been placed under him. It is not always necessary that he know that an anesthetic is being administered.

A small catheter, well lubricated, is then inserted 3 to 4 inches within the rectum, and to this catheter a funnel is attached. The mixture then is poured into the funnel very slowly, taking at least five minutes for eight ounces, the usual amount. It is best not to withdraw the tube until the patient is partly unconscious and the muscles are relaxed. From five to twenty minutes (according to the percentage used) should be allowed for the anesthetic to take effect before the patient is moved. Should signs of cyanosis or other disagreeable symptoms appear, 2 or 3 ounces of the mixture should be withdrawn through the small rectal tube. After the operation is completed the rectum is irrigated with cold soap suds, injected into one tube and withdrawn through the other, then 2 to 4 ounces of olive oil is introduced into the rectum and the tube withdrawn.

Intestinal Stasis.—The subject of intestinal stasis has perhaps received more attention during the past year from American surgeons than any other single disease. Sir Arbuthnot Lane, the pioneer in this field of work, has deservedly won the plaudits of his fellows in all countries, and his convincing demonstrations and skillful operative technic exhibited in his ileo-sigmoidostomy or short circuiting operation, with almost miraculous relief for the sufferers, has converted the leading surgeons of our own country to his teachings.

Some interesting observations have been made by Dr. James T. Case, the roentgenologist of Battle Creek, Michigan, who has fol-

lowed a number of these cases after operation. Dr. Case says:

In every instance in which roentgenoscopy has been made following a short-circuiting operation, I have observed retrograde peristalsis in the colon. In many cases of these there was also a reflux of colonic contents through the anastomotic opening into the small intestine, and the resulting stasis converted the terminal ileum into a veritable colon of indefinite length. In some cases the terminal ileum was found to have a caliber of the colon itself, so that it was not easy to differentiate ileum from colon. There is another class of cases in which ileal stasis has existed and no adhesions have been found. A study of these cases leads to the conclusion that a large proportion of ileal stasis is due, not to kinking or adhesion of the terminal ileum, but to incompetency of the ileocolic valve, or to spasm of the ileocecal sphincteric mechanism, or to a combination of these two factors. Certain striking cases have supported the idea that normal ileal stasis is increased in all conditions leading to spasm, probably most marked in acute appendicitis, and less marked in chronic appendicitis. My observations give confirmation to the belief that the normal ileocecal valve is thoroughly competent. Without exception, when the ileocecal valve has been found incompetent to the enema on one occasion, it has been found incompetent at all subsequent observations. In more than fifty cases we have definitely proved the regurgitation of ingested bismuth from the colon back into the ileum, no new bismuth meal having been taken in the interim. In every instance in which the ileocecal valve proved incompetent to the enema, at operation the surgeon found gas or fluid distention of the terminal ileum in spite of thorough efforts at preoperative bowel cleansing. The incompetency has been cured in a number of cases by a simple surgical procedure, consisting in the placing of several sutures in such a manner as to restore the invagination of the bowel without narrowing its lumen. The operation is practically bloodless, does not involve opening the peritoneum, and is quickly accomplished.

Should Lumbar Puncture be Adopted as a Routine Practice?—Urological and Cutaneous Review, March 1914, contains the following interesting editorial:

Notwithstanding that we shall continue to place much dependence upon the Wassermann test of the blood as indicating a previous luetic infection or the presence of a focus somewhere in the body, yet syphilologists are quite well agreed that this reaction has its diagnostic limitations, and particularly in determining the existence of syphilitic foci in the cerebrospinal tissues. This phase of syphilis assumes still more important proportions when we remember how often a Wassermann of the blood may be negative in the face of syphilis of the cord. The largest significance of this latter phenomenon lies in indicating the need for ascertaining the reaction of the spinal fluid and using it as a control during the progress of

treatment. Thus, it should be examined before instituting treatment and the following points determined: Pressure, albumin content, leucocyte count, and Wassermann reaction. Jeanselme, Vernes and Marcel Bloch emphasize this need, and even maintain that examination of the spinal fluid is of more importance to the patient than a Wassermann of his blood. Since an excessive quantity of albumen in the spinal fluid, a leucocytosis or a positive Wassermann of the same indicates a luetic cerebrospinal focus, the prophylactic value of aggressive treatment instituted immediately upon the determination of such findings, is clearly obvious.

It is maintained by some that lumbar punctures should be made from time to time during the course of treatment and the usual therapeutic measures continued until the blood Wassermann is negative, and the cerebrospinal fluid shows a normal albumin content and leucocyte count together with, of course, a negative Wassermann. The single objection to this precaution is, that attached to it, is the necessity of puncturing the lumbar canal, and whilst in the vast majority of instances this is a simple and harmless operation, yet in some cases patients have been subjected to much distress as a result of the operation. However, in such cases there has usually been a gross and easily avoided error of technique. This operation should be done in a hospital; it is not an office procedure. The information disclosed through lumbar puncture is undoubtedly of sufficient importance to lead us to look upon the procedure as well worthy of adoption, if not as a routine measure, at least in those cases which offer the slightest suggestion of the possibility of latent cerebrospinal syphilis.

OBSTETRICS AND GYNECOLOGY.

Prognosis of Pregnancy, Labor and Puerperium in Cardiac Patients.

R. Gaschke (Archiv fuer Gynaekologie, Vol. XCII, No. 2) gives a statistical report of 546 patients afflicted with heart disease who were admitted to the Vienna maternity service. There were 1,525 births with a maternal mortality of 0.59 per cent. This figure he considers low as compared to those reported by other observers. Spontaneous abortion occurred in four per cent of the births, spontaneous premature labor in four and one-half per cent. In one per cent premature labor was induced, marked loss of compensation having been the indication. In ninety-eight per cent of the births labor went on uninfluenced by the cardiac lesions, even in those patients with slight loss of compensation. The prognosis was as good in patients with mitral stenosis as in those with mitral insufficiency. On the other hand pregnant women with myocarditis, accompanied by or not accompanied by endocarditis did not do as well as those patients afflicted with valvular lesions only.

Turpentine in Local Treatment of Puerperal Fever.

Delmas calls attention to the excellent re-

sults he has obtained in a number of cases of puerperal endometritis with turpentine. The long strip of gauze saturated with the oil of turpentine is packed in the uterus, the outer end of the strip left in the vagina, the walls of the latter protected with an isolating sheet of cotton, and the vulva with petrolatum. He leaves the strip of gauze or wick in the uterus for twenty-four hours. The almost elective action of turpentine on the streptococcus is supplemented by the intense afflux of leukocytes which it induces, and by the general antiseptic action of the turpentine absorbed by the gaping vessels in the uterus. Its absorption is rendered evident by the odor of the turpentine in the urine for several days.

S. L. J.

The Significance of Albuminuria in Pregnancy.

The author found marked increase in the cases of post-partum haemorrhage in 289 cases of albuminuria, collected during the last five years from St. Helen's Maternity Hospital, Dunedin, New Zealand. Of this number only five cases became eclamptic, though severe toxic symptoms showed in many. These albumin cases were not necessarily nephritic, though many of them were. They found, out of 1,127 cases of pregnancy, 289 cases of albuminuria, or 25.6 per cent. By comparison it was found that all complications were more numerous in the albumin cases. In multipara showing albumin, histories of previous miscarriages and still-births were more common than in those without albumin.

Placenta praevia or low implantation was 8 per cent in the albumin cases, as against 1.3 per cent in the normal cases. In many of the albumin cases the placenta was degenerate in parts.

Thus it is evident that the albumin is only the visible sign of profound metabolic changes which are taking place in the body, and if the excretory organs fail to respond to the extra demand made upon them, the waste products of cell metabolism, probably from the disintegration of protein, circulate in the blood, act as an irritant, and lead to the development of inflammatory changes in the renal tissue, causing degenerative disease and resulting in that type of nephritis of a transient nature which we usually separate from true inflammatory nephritis. If the condition is not recognized early the waste products accumulate and will lead to more serious disease, ultimately resulting in the death of the mother from eclampsia. It is fortunate that we have this one sign—the presence of albumin—as an indication of the slow toxæmia which is going on, as in many cases there is absolutely no other symptom of the mischief which is brewing. * * * The fact that haemorrhages are more frequent in cases of albuminuria is to be expected, since we know that renal inefficiency is associated with serious disturbances of the vascular system, manifested by an increase in the general blood pressure, by cerebral and retinal haemorrhages and epistaxis, and finally leading to changes in every organ of the body, the uterus included.

The still-births and early deaths which so markedly preponderate in the albumin cases would be accounted for: (1) By the direct effect upon the foetus of the toxæmic blood, as is shown by the occasional occurrence of oedema in the child. Might not the various haemorrhages in the newborn—for example, in the skin, from the mouth, the navel, the nose and the gastro-intestinal tract—be also produced by the circulation of this toxin in the foetal blood? (2) Once degeneration of the placenta sets in, a certain amount of nourishment to the child is cut off and the child dies.—Siedeberg in British Medical Journal.—S. L. J.

PEDIATRICS.

Acute Appendicitis in Children.

In ten years there were 4,000 cases of appendicitis at the London Hospital. Up to the age of twelve there were, on an average, 83 cases a year; up to seven years old, 20 cases; up to five years old, 6 or 7 cases. The details of the series taken, 208 in all, are:

Age	Number of Cases
2	6
3	7
4	21
5	46
6	63
7	65

Eleven of these had had one previous attack and three had had a previous operation. Seven cases had had three previous attacks, and two cases, four.

The sex in these children was two males to one female, the same as in the adult. Most of the children's cases occurred in the months of May, August and September.

Faecal concretions were present in 23 cases, or 11 per cent. Of 208 cases up to seven years of age, there were perforation or gangrene in 31.2 per cent and general peritonitis in 25 per cent. In 14 cases operated upon before complications occurred the average stay in the hospital was twenty-seven days, and there were no deaths. The average mortality in the series was 41.8 per cent.

Localization of suppuration is not so common as in the adult. Skill and speed in the operator are most desirable.

The Fowler position after operation lowers the mortality. In children, continued saline enema is a failure. The children cannot bear starvation, and should be fed such things as albumen water and perhaps a decoction of crushed raisins. Early catharsis is advisable.

Twelve per cent of these cases showed complications, which in nine cases proved fatal. The complications consisted of paralytic obstruction, pneumonia, secondary abscess, empyema, etc.

The author sums up the difference between adults and children as follows:

"Owing to their greater liability to a generalization of the infection, early operation is more imperative in children. It will be seen from the figures given above that the odds are three to two on the generalization of the infection arising; whereas, if they are operated

on within twenty-four hours, the mortality, for this series at least, is nothing per cent.

"A prolonged operation and undue exposure cause relatively greater risks.

"In the after treatment certain special methods of treatment will make all the difference between success and failure."—S. L. J.

Bacillus Bulgaricus in Gastro-Intestinal Diseases.

The method of treating intestinal infectious processes by implantation of the bacillus lactis bulgaricus appears to be growing in favor with American practitioners. Clock's experience in upward of a hundred cases of infantile diarrhea at the Babies' Hospital of the City of New York, as related by him in the Journal of the American Medical Association of July 19, 1913, has undoubtedly played a considerable part in focusing attention upon Bacillus bulgaricus therapy. In the instance referred to 117 cases were treated by the out patient department staff of the hospital under Clock's personal supervision. Of this number 116 recovered, the one death occurring in a severe case of enterocolitis which had persisted for two weeks before treatment began. Noteworthy among the results of the treatment were the gain in weight by the patients despite the number of stools; the rapid change of the stools to yellow; the rapid subsidence of fever; absence of mucus and blood from the stools at the end of forty-eight hours. "The implantation method of treatment," declared the author, "has progressed beyond the experimental stage and the results of its use can no longer be questioned or disputed. The treatment has proved of practical, clinical and scientific value, and its simplicity should appeal to every practitioner."

Among others Parke, Davis & Co. offer Bacillus bulgaricus (a pure culture) in tablets, the form used by Clock and others in the treatment of gastro-intestinal diseases.—S. L. J.

Carbohydrates in Infant-Feeding.

H. D. Chapin, New York (Journal American Medical Association, December 21), describes the effects of carbohydrates in the system and discusses their adaptation to infant-feeding. When an infant is strong and vigorous it has plenty of glycogen in its tissues and liver, and milk-sugar, which is the slowest to produce glycogen, acts well, not overtaxing the liver or causing alimentary glycosuria or abnormal fat production. When the child is weak or poorly nourished, on the other hand, its reserve of energy is small, and rapid glycogen production is called for. For such infants dextrose or maltose, which can be taken directly into the blood and converted at once into glycogen, are more effective. Maltose is especially available, since it is one of the forms through which all the carbohydrates pass before they are utilized in the body, and it can be changed into glycogen, either in the tissues or in the liver, as occasion demands. By adding products of starch digestion, such as dextrin or maltose, to an infant food, we produce the same digestive effect as we produce in the adult by a thorough mixture with saliva by thorough mastication.

The physical condition of the food has marked effects on its nutritional value, even if it is completely digested, in expending energy in digestion. When infants are fed cow's milk the problem of energy expenditure is modified by the physical conditions of the milk after being clotted by the gastric secretion, and the necessity of altering the curd of cow's milk is generally recognized. Conditions vary so with individual infants that Chapin believes that the best method of preparing food for them is to use milk as a basis, or top milk diluted with cereal gruels of definite strength for the mechanical effect on the curd of the milk, and then by altering the character of the carbohydrates adapt them to the digestive requirements of the individual infant. "These methods are simple, inexpensive and almost universally applicable, but they must be applied with an understanding of the purposes various carbohydrates serve in nutrition. They consist essentially in using gruels made from various cereals as a starting point, and then by means of diastase converting the starch into soluble starch, dextrin or maltose, as may be required. The extent of the conversion of the starch is to be regulated by the digestive ability and needs of the infant. A nearly complete conversion into maltose is indicated when rapid assimilation is desired. To obtain the maximum amount of maltose the conversion should take place at about 150 F., but when soluble starch and dextrans are sought the temperature should be about 165 F."—S. L. J.

EYE, EAR, NOSE AND THROAT.

Drs. H. R. Johnson and P. A. Haley.

With this issue of the Journal we are launching under the new editorial arrangement adopted at the Bluefield meeting of the State Association. This change provides for the division of the subject matter into different sections, each section having its own editor.

The honor was accorded to Dr. P. A. Haley of Charleston and the writer to take charge of the section on Eye, Ear, Nose and Throat.

In assuming this responsibility we are keenly sensible of our inexperience and fully realize that our management of this department will not in the beginning measure up to that degree of excellence that comes only with training and practice. Nevertheless it shall be our earnest endeavor, so far as it lies within our ability, to make this section one of the best features of the publication, and to this end we beg your kind indulgence in the outset until we get into the swing of the work and the editorial machinery running smoothly.

This department is the channel through which all interested in these important branches of medicine and surgery may express themselves, and we ask the support of our membership in bringing this section up to the highest possible standard.

Send us all of your papers read before county societies or elsewhere on the Eye, Ear, Nose and Throat.

Give us, as the opportunity may present, the

reports of interesting or unusual cases and all other items of interest in this particular field. Again we earnestly request the co-operation of every Eye, Ear, Nose and Throat specialist in the State in making this section profitable to themselves and a credit to the Journal. As space is limited, reports must be brief.

H. R. JOHNSON.

ACUTE RHEUMATIC INFECTION OF THE CRICO-ARYTENOID ARTICULATION.

Mygind, Copenhagen, Arch. fur. Laryn. und Rhin. Abst. from Index of Oto-Laryngology.

In the diagnosis of this affection, the following points must be observed:—

1. There must be evidence of rheumatism elsewhere than in the larynx.
2. There must be evidence of primary serous synovitis in the crico-arytenoid articulation, manifested by redness, infiltration and swelling, interfering with the movements of the true cords.

The subjective symptoms are dyspepsia, hoarseness, at times almost complete aphonia. There is frequently some dyspnoea, but never urgent enough to require tracheotomy.

In the larynx the process is confined to the crico-arytenoid region. There will be observed redness and swelling, which may with much infiltration be distinctly oedematous, while the rest of the larynx is normal. The true cords are fixed or nearly so.

Besides rheumatism, it may be caused by any of the acute infections. It seldom occurs as the result of the chronic infections, as syphilis, gout or chronic rheumatism.

Prognosis is favorable. Treatment, anti-rheumatic. H. R. J.

CONTROL OF HEMORRHAGE IN TONSILLECTOMY.

In the March issue of the Laryngoscope J. L. Davis gives at length his technique for controlling hemorrhage occurring during tonsillectomy and illustrates his method of removing tonsils. He deplors the fact that many are attempting tonsil surgery who would shrink from doing the most minor surgery in any other field and places the blame for this on the laryngologists, who for years have taught that to operate on the tonsil was a simple and minor procedure, with slight danger of hemorrhage or other consequences.

In reviewing the literature over thirty text books were consulted, and in two only was found mention of any particular location from which hemorrhage might likely occur, while the majority did not suggest any attention necessary unless hemorrhage should become serious or alarming.

As to hemophilia, the author says: "The fre-

quency of its occurrence has been greatly exaggerated, there is not the shadow of a doubt, and the term 'bleeder' has eased the conscience of a multitude of occasional operators and shielded the inability or futile efforts of the more experienced." The writer claims that the tonsillar branch of the facial artery does not enter into the tonsillar circulation at all, but with the dorsalis linguae supplies the structures of the fossa. The main arterial supply comes from an anastomotic branch of the descending palatine or internal maxillary, and the ascending palatine of the facial, and with its vein enters the capsule about its mid-point superior-inferiorly and near the margin of the anterior pillar.

After complete enucleation the anterior pillar is retracted and the field sponged dry. If distinct bleeding from the severed vessels continues which is located just behind the margin of the anterior pillar and somewhat inferiorly, and is indicated by a small projecting stump which usually can be readily grasped with hemostat, then with No. 1 catgut armed with a curved needle, using a needle holder set at right angles to the shaft, the stump is surrounded by suture ligature and tied.

This certainly seems to be the real surgical method of dealing with tonsillar hemorrhage. H. R. J.

TONSILLECTOMY IN THE UPRIGHT POSITION.

W. H. Roberts (Laryngoscope, Vol. XXIV 132.)

Roberts gives the following reasons for favoring the upright position in tonsillectomy under general anaesthesia:—

- (1) The field is more easily and better illuminated.
- (2) The parts are in such a position that orientation is natural and easy.
- (3) The operator does not have to operate in a pool of blood as so often occurs in the horizontal position, thus hemorrhage is more easily controlled at its source and the entry of the blood into the larynx prevented.
- (4) The operative field can be more accurately inspected for tonsil remnants, shreds and bleeding points. H. R. J.

UNILATERAL RESECTION OF JUGULAR VEIN AND PNEUMOGASTRIC NERVE.

Unilateral resection of the jugular vein and pneumogastric nerve has generally been considered harmless, but some recent experiences go to prove that such is not always the case.

Cases are now on record where resection has been followed rapidly by coma, hurried respiration, rapid pulse, pneumonia, hemiplegia and death in from thirty-six to forty-eight hours after operation. The rapid development of pulmonary lesions can only be ascribed to section of the pneumogastric, while the cerebral symptoms evidently were due to ligation of the jugular, causing venous hypertension of the brain, but more marked on the side of ligation.

H. R. J.

GENITO-URINARY AND DERMATOLOGY.

The Treatment of Venereal Ulcers With Hot Irrigations.

Zinsser (Munchener medicinische Wochenschrift, Jahrg. 55, Nr. 18) states that he has for several years used hot irrigations in the treatment of venereal ulcers, and has found that it will in a few days cleanse an unyielding and malignant venereal ulcer and quickly cause subsidence of a phagedenic process. The results have been astonishingly good in cases of gangrenous ulcers with necrosis of the surrounding tissues; excessive, foul exudate; lymphangitis and high fever.

The treatment is very simple, and consists of irrigation three to five times daily with a stream of potassium permanganate solution, 1:4000, as hot as can be borne. There is used at each sitting four or five liters run from a height of two to three meters in a stream about two millimeters thick. All the angles and nooks of the ulcer must be searched out and cleansed. The temperature of the solution can range from 45° to 50° C. After irrigation the ulcer is dried with gauze sprinkled with iodoform and tamponaded with iodoform gauze saturated with spirit of camphor and water equal parts. Over this hot linseed poultices are placed and frequently renewed. In gangrenous cases the treatment should be repeated every two or three hours. Many patients can carry out the treatment themselves when shown how to do it.—Therapeutic Gazette.

The Treatment of Locomotor Ataxia.

Recognizing the futility of anti-syphilitic treatment to materially benefit true cases of ataxia, it occurred to Dr. Graeme M. Hammond several years ago that if we could maintain nutrition of the degenerated cells and maintain the nutrition for a definite length of time possibly the degenerative process might be arrested or at least delayed. About eight years ago he began treating ataxia with gradually increasing doses of strychnine until doses of $\frac{1}{2}$ grain three times a day, or even more than this, were reached. During this time he treated a great many cases, so that he is prepared now to state with some definiteness what this form of treatment has been able to accomplish. In no instance has he ever seen a case of locomotor ataxia cured, but he has seen pains disappear and control regained over the bladder and bowels, and locomotion decidedly improved. In nearly all cases the advance of the disease is checked and a great deal of improvement follows. He has never seen the Argyll-Robertson pupil or the Romberg symptom disappear, nor the knee jerks ever come back, but these symptoms, when present, do not seriously interfere with the patient's life nor materially add to his discomfort; and if we have the means at our disposal of checking the growing ataxia, and even of improving that symptom, of stopping pain, and of giving

better control of the bladder and bowels, we are able to do a great deal to alleviate the suffering of a class of patients whom we have not been able to materially benefit heretofore.

His method of administering this treatment is as follows: Beginning with a dose of $\frac{1}{30}$ of a grain three times a day, at the end of a week he increases this dose to $\frac{1}{20}$ of a grain, and at the end of another week to a $\frac{1}{16}$. These doses are given in tablet form by the mouth. At this time he gives in addition to the tablet of $\frac{1}{16}$ of a grain one drop of a solution containing one grain of strychnine sulphate to one ounce of water; next day two drops are given; next day three drops, and so on, each day increasing one drop until doses of thirty drops three times a day are reached. As thirty drops of this solution just equal $\frac{1}{16}$ of a grain he is able to discontinue the drops and to substitute for them another tablet containing $\frac{1}{16}$ grain; thus the patient will then take two tablets each containing $\frac{1}{16}$ of a grain three times a day or $\frac{1}{8}$ of a grain at a dose. The author maintains this dose for three months, then increases the dose with the solution the same as before until a dose of $\frac{3}{16}$ is reached. He maintains this dose for at least three months, and then gradually increases as before. In this way the increase in dosage is made so gradually that few patients appreciate any difference. Seldom is any improvement found in the patient's condition until a dose of $\frac{1}{4}$ of a grain three times a day is reached, though the patient's general health improves long before this period. After a maximum dose of $\frac{1}{2}$ grain is reached it has been the author's custom to maintain this dose for about a year and then to gradually reduce it. He now has patients under supervision who have not had any strychnine for over two years and who show no signs at present of relapsing.

In addition to this strychnine treatment the author thinks highly of Frankel's exercises, which seem to do a great deal of good as long as they are kept up, but in the author's experience as soon as the exercises are discontinued the patient soon loses all the benefit which he derived from their employment.—Therapeutic Medicine.—S. L. J.

The Origin of Tabes.

J. J. Putnam, Boston (Journal A. M. M., September 25), says that, while the opinion that syphilis is the usual cause of tabes is now almost universally accepted, there still remains a certain percentage of cases in which other causes are sometimes suggested. The most prominent of these is fatigue, not that which is felt but in Edinger's sense, i. e. the physiologic overstrain of certain portions of the nervous system carried to the point of damaging its power of nutritive repair. The questions therefore as to the part played by fatigue and whether or not syphilis is the sole cause are still debatable and Putnam attempts to throw some light on them by contrasting the tabetic group of cases with another group, bearing clinically and also as regards the location of lesions, a certain resemblance to tabes and which, like tabes, owe their characteristics to certain toxic influences, yet which,

when intimately studied, are seen to differ widely from tabes. The cases to which he refers are those presenting anatomically that form of degeneration of the nervous system which sometimes accompanies pernicious anemia and which occur in conditions of nutritive debility not easily classifiable in one category. The nervous symptoms characteristic of these cases resemble those of tabes in affecting primarily and mainly the sensory or afferent functions of the nervous system and leading to well marked incoordination and paresthesias, usually with loss or sometimes increase of the knee jerks. While he has seen nearly or quite a hundred instances of this disorder he has never yet encountered a single case of undoubted syphilis among them, thus differing widely from tabes and strengthening the evidence that syphilis in the latter disease can not be merely a coincidence. The two disorders run true and maintain their special differences without overlapping or even approaching each other, and, in view of these considerations, he thinks that the argument for a special toxin or antitoxin as the essential cause of tabes, while not proved or asserted to be positive in every case, is nevertheless very strong and deserves special recognition as a guide to treatment.—S. L. J.

Hyperemia in Skin Diseases.

From my observations I have formed the opinion that practically all chronic forms of skin disease are benefited by the hyperaemic treatment before applying local remedies. The action of ointments and lotions is considerably facilitated if a local congestion of the part is produced before they are applied. This local hyperaemia probably acts in two ways. In the first place, by producing a passive congestion, it increases the blood-supply, and so improves the nutrition of the part, and at the same time encourages the removal of deleterious products by the venous blood. In the second place, this local hyperaemia assists in the local action of the drugs when they are afterwards applied.

Of the cases so far treated, it would appear that the most satisfactory results have been obtained in psoriasis, especially in some very old-standing cases in which the lesions were very chronic and localized. We so often meet with cases of this complaint of many years' standing where some very persistent lesions are limited to a small area, such as the knees or elbows, and which resist all treatment. This is the class of cases specially benefited by this method.

Some cases of lupus vulgaris have shown rapid improvement—in fact, from some recent observations the hyperaemic method showed earlier and much more satisfactory results than the x-rays had done. Acne, both diffuse and local, reacted well, but these cases required a considerably greater amount of congestion and more frequently repeated treatments, both general to a large affected area, and afterwards local to the individual and more persistent comedones and pustules.

The immediate result of the local treatment is to produce a venous congestion of the skin, which increases the action of the sudoriferous

glands, and gives rise to a varying degree of perspiration. This varies with the nature of the lesion and the degree of hyperaemia produced. In some conditions only an almost imperceptible amount of sweating results—perhaps just sufficient to produce a slight haziness on the sides of the cupping glass without a visible sweat on the skin. In others, such as many eczemas and seborrheas, a profuse perspiration is quickly produced, and after a few minutes the whole part is bathed in sweat. In some instances of non-ulcerated lupus, which as a class perspire very freely under the treatment, a bloodstained serum exuded after a short time, and for this reason the cases require to be very carefully treated and only for very short periods at a time, one minute or so being usually sufficient.—Am. Jour. of Dermatology—S. L. J.

Supervision of the Venereally Diseased.

G. V. R. Merrill (N. Y. State Journal of Medicine, March, 1911) discusses this subject intelligently, with many references to the literature. He believes that in order to obtain the earliest possible results in the endeavor to curtail the extension of gonorrhoea and syphilis, two measures should be put into operation at once, namely, compulsory notification, to boards of health, under seal, and suitable legislation. Under the latter board he would recommend (a) making it a misdemeanor for druggists or others than licensed physicians to treat or prescribe for these diseases; (b) making it a misdemeanor for any syphilitic or gonorrhoeic to cohabit with or expose any other person to the liability of infection, unless pronounced cured by a physician from among such as previously have been designated for that purpose by the State Department of Health; (c) making the wilful transmission of syphilis or gonorrhoea, a crime punishable by imprisonment from two to five years, and liability to civil suit for damages by the injured person.—Med. R. of R.—S. L. J.

Ivy Poisoning.

Dermatitis venenata, always very unpleasant and occasionally dangerous, presents as long a list of possible medicaments as is claimed for pertussis or pneumonia.

Recent studies have demonstrated the cause of the irritation and it is now known that the irritating agent may be neutralized by permanganate of potash solution. The application of the permanganate solution gives great relief and when used soon after exposure or as soon as the first vesicles appear will avert the distressing itching. Treatment should be as follows: First thoroughly wash the part or parts with warm water and soap; then use an alkaline wash, as for example a teaspoonful of bicarbonate of soda to one pint of water. Following this should come several washings in warm 2 per cent. to 4 per cent. solution of permanganate of potash. The strength of the permanganate solution should vary according to the severity of the attack.—Med. Review of Reviews.—S. L. J.

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Original Articles

TYPHOID FEVER AND ILLEGAL PRACTITIONERS

vs.

THE STATE OF WEST VIRGINIA.

By William W. Golden,

President West Virginia State Board of
Health.

(Address delivered at the meetings of the local Health Officers of the State at Parkersburg, November 26th, 1914, and at Charleston, May 6th, 1914.)

Gentlemen:—Section 7a of Chapter 24 of our code says:

"It shall be the duty of every county and municipal health officer to meet with the State Board of Health or its representatives at least once a year, due notice having been given, at such time and place as said Board of Health shall designate, to attend a school of instruction for the purpose of familiarizing such health officers with their duties in the interest of the public health. The actual expenses of the attendance of such county or municipal health officer shall be paid by the county or corporation represented by such local officer."

This is the first school of instruction held under the provision of this new law, and it is the first time that local health officers of the State have come together to discuss their duties and their problems. On behalf of the State Board of Health I extend to you hearty greetings—the greetings of fellow-officers who, like yourselves, are anxious to do their full duty and who, like yourselves, feel the need of the benefit to be derived from a free discussion of the numerous problems which we are daily

called upon to solve. If you will pardon a personal allusion, I will add that it is perhaps particularly fitting that the privilege should have come to me to extend to you this greeting. As you all know, the credit for the actual passage of the new public health law belongs largely to our worthy Governor and to certain physicians who were members of our last Legislature. The bill, however, which embodied the main provisions of this law was drafted by a joint committee of the State Board of Health and the State Medical Association. It was my privilege to have had much to do with this committee's work, and as far as the provision for the school of instruction is concerned, it was inserted entirely at my suggestion.

With the passage of the new law by the last Legislature we have entered upon a new era in public health work. Our public health laws were perhaps never seriously behind many other states and were even more advanced than the same in some states. If one turns to earlier editions of our Code, he is surprised to find the very comprehensive provisions that they contain to safeguard the life and health of our citizens. If the spirit as well as the letter of our public health laws should be taken into consideration, the far-sighted and comprehensive views of our legislators were most remarkable. But there was one fatal defect in all this legislative wisdom. For about thirty years our Code insisted that the total expenses of the State Board of Health should not exceed fifteen hundred dollars a year. At the last session of the Legislature this defect was substantially remedied by raising the limit to fifteen

thousand dollars. There were also provided certain much needed institutions. The following three are the most important of them:

1. The Secretary of the State Board of Health is to officiate as health commissioner, giving his entire time to his duties at a fair salary. In the past the nominal salary allowed the Secretary made it utterly impossible for this officer to give his entire time to the service of the State. He was compelled to continue in active practice for a living.

2. A laboratory was provided for. The need for this has been pressing for many years. Our few large cities were able to look after their water and milk supplies, employing private chemists and bacteriologists when necessary. Our smaller communities were unable to do so, and by far the largest part of our population is to be found in small communities. Only when an alarming epidemic of disease was prevailing did they resort to the aid of the laboratory, and then it proved of small consequence, as the damage was already done. To regularly keep track of the water and milk supplies as a means of preventing serious epidemics was beyond their means. As you know, a State laboratory is now in operation at Morgantown in connection with the State University. We expect to have its scope widened so as to offer clinical as well as hygienic aid. While communities, as such, will have access to the laboratory for the free examination of water, milk and other articles of food or drink, physicians will have the right to send their material for examination to aid them in the early diagnosis of diseases, especially those of a communicable character.

3. Provision was made for the institution of a school of instruction, as already quoted, at which health officers may familiarize themselves not only with their duties, but also with scientific and legal information bearing upon the prevention of disease.

It is hardly to be expected that we shall cover the entire range of public health work at one meeting, and in this address I wish to limit myself to a consideration of two afflictions, and in choosing the two that are named in the title I have been guided by the belief that they are the most serious because the most widespread.

TYPHOID FEVER.

There are four diseases which head the

mortality list in our country—tuberculosis, pneumonia, cancer and typhoid fever. There is comparatively little which we as health officers can do in a direct way to reduce the number of cases of pneumonia and cancer, although it is to be hoped that each of us will do all that he can in reference to these diseases. As to tuberculosis, it is gratifying to know that our State is waging an active warfare against this disease by maintaining a sanatorium and by aiding the Anti-Tuberculosis League with a liberal appropriation of money to carry on its traveling exhibit and lecture course all over the State. The prevention of typhoid fever is left entirely to the State and the auxiliary local boards of health. And outside of typhoid fever there is no communicable disease the prevention of which so directly depends upon the intelligent activities of health officers to control the sanitary conditions in their respective communities. Our duties, therefore, as relating to this disease are clear, but may become more so by the study of a few figures.

The latest vital statistics of our State that are available are contained in the biennial report of the State Board of Health for 1910-1911. In the table of causes of death on pages 118 and 119 one of the columns is headed "Fever." As there are special columns for pneumonia, rheumatism, meningitis, consumption, etc., and as malaria, typhus, etc., are practically unknown in our State, I believe I am right in assuming that by fever is meant typhoid fever. It is undoubtedly true that quite a few cases are included under that head which were not typhoid, but it is equally certain that at least as many, if not more, deaths from typhoid fever are included under the heads of heart disease, meningitis, consumption, dropsy and others. One reason for this belief lies in the fact that many of our physicians in reporting a death give the terminal complication instead of the original disease. (Since the above was written Dr. H. A. Barbee, former Secretary of the State Board of Health, informs me that I was right in this conclusion. By the word "fever" in his table of vital statistics he meant typhoid fever.) The total number of deaths from typhoid fever reported for 1910, as published, is 459. In a personal communication Dr. H. A. Barbee, the compiler of these figures, expresses his belief that "not more than two-thirds of the

deaths are reported, if that many." On that basis we are reasonably safe to assume that in round figures the total number of deaths which occurred in 1910 in West Virginia was about 700. This means that the number of cases of typhoid fever in that year was at least 7,000. Rosenau in his book on Preventive Medicine and Hygiene, published this year, estimates that the number of typhoid cases in the United States in 1910 was 250,000. The number of cases in West Virginia, therefore, during that year constituted very nearly three per cent of the total number in the United States, while our population was only about one and one-half per cent of the entire population of the United States. It is certainly distressing to find our State having twice as many cases as the average in the country at large. These figures are no doubt a surprise to you, as they were to me. If any of you have any doubt as to the correctness of these figures you should note that this, at most, amounts to only about $4\frac{1}{2}$ cases on an average treated by every physician in the State in that year. Looked at in this way, I believe you will be inclined to conclude that these figures are rather under-estimating than over-estimating the true situation. I have often made the assertion at medical gatherings in this State that one-fourth of the average physician's practice in this State consists of treating typhoid fever, and I have never met with a contradiction. It was my statement on this subject that Governor Glasscock quoted in his last message to the Legislature. It is my belief that the year 1913 will make even a worse showing than 1910. The fact that our mines and woods are full of people of an age most susceptible to typhoid fever accounts, to my mind, to some extent for this excess of morbidity. But at the bottom of it all lie unsanitary conditions. We have all been in the habit of speaking disparagingly of the city in reference to healthful living. But as far as typhoid fever is concerned, country life is away behind. West Virginia, a State mostly with a rural population, illustrates this fact to a marked degree. Rosenau in his book gives a table of the death rate per hundred thousand population of fifty cities in 1910, and with the exception of Minneapolis, Minn., every one of them made a better showing than West Virginia. Gentlemen, this state of affairs is wrong and is a reflection upon the effi-

ciency of our health officers. It is true, of course, that we can do little without the cooperation of the public. As long as the public sees fit not to employ whole time health officers and is indifferent to the importance of providing safe water and milk and to the elimination of the conditions which favor the breeding of the typhoid fly, that long will the present degree of typhoid morbidity continue. But an active campaign of education will soon result in a different attitude of the public mind. If the facts of the present typhoid situation be made clear to the public and at the same time the effective means of prevention be fully explained, typhoid fever will soon become a comparatively rare disease instead of one of the most common, as it is at present. And right here I may state that if there is any class of our citizens which is most in need of education on this question of typhoid fever it is our farming class. The vicious circuit between both ends of the alimentary canal is exceptionally short among these good folks on account of the proximity of the primitive privy to the indifferently constructed well. And when the soil water fails to maintain this circuit, the typhoid fly furnishes the missing link.

The problem of how to prevent typhoid fever in this State is not an altogether educational one, however. There are certain important economic features to be reckoned with, especially in the case of our very large number of small towns. Here is a town of fifteen hundred population. The only source of its water supply is a river over whose watershed it has no control. What can it do to make its water supply safe? A filtration plant is beyond its taxable limit and it is already bonded to the limit for school buildings or for its water works. Theoretically, the problem could be solved by stopping the pollution of the river with sewage from communities up the stream. But these communities must dispose of their sewage, and they, too, have not the means with which to construct effective crematories or use other measures for this purpose any more than the community in question has for this purpose or for the purpose of remedying its water supply. It is quite evident that much of the difficulty of our problem lies in the fact that our rivers throughout the State are the sources of our people's water supply and the receptacles for their sewage at the same time, and to cor-

rect this problem constitutes a most serious economic task. Let us hope that before this day has closed we will have learned of practical ways and means with which to solve this most important problem. A representative of the United States Public Health Service is with us, and we trust that the information and suggestions that he will bring to us will prove of direct and practical value. What about vaccination? Its use should be encouraged in the presence of any epidemic and under any other special circumstances. But I am yet to know of an authority who advises its routine general use, and certainly not to the exclusion of sanitary measures which strike at the root of the evil.

ILLEGAL PRACTITIONERS.

Our legislators have assigned a very wide scope of duties to our boards of health. Many of these duties are specified and given in detail, while others are indicated in a general way. Please note the following from chapter 150, section 5, of our Code:

"The Board of Health shall take cognizance of the interests of the life and health of the inhabitants of the State, and shall make or cause to be made, sanitary investigations and inquiries respecting the cause of diseases, especially of epidemics, endemics and the means of prevention, the sources of mortality, habits and circumstances of life on the public health."

It is quite clear that the duties of our health officers do not stop with the prevention of communicable diseases. We must take cognizance of all things and circumstances which affect the life and health of our citizens. And from this broad but clear statement it seems to me that it is our duty to protect life and health from the baneful effects of unlicensed and incompetent practitioners. Our law is quite specific as to who shall be entitled to practice the healing art, and goes into much detail how licensure is to be carried on by the State Board of Health. In addition the State Board of Health is given considerable discretionary power in this matter which it has been using to good purpose. Our law, for instance, does not require a preliminary education from candidates for the practice of medicine in this State as it should do. But it leaves to the State Board to decide what medical schools are worthy of consideration. Since July 1st last our Board is refusing recognition to schools of a grade

lower than B as classified by the American Medical Association. As practically all the schools in classes A and B require a fair degree of preliminary education from all their matriculates, the defect in our law is fairly well remedied. But of what avail is this law when hundreds of persons are actually engaged in the treatment of diseases without any license? There is scarcely a county in the State that has not more than one such practitioner. They fall into two main classes. To one belong practitioners who have had some medical training and who are holding medical diplomas, but who either have been rejected by our Board for incompetence after a fair examination or have never made an attempt to obtain a State license. These men usually attempt to screen themselves behind the claim that they are acting merely in the capacity of assistant to or are employes of a licensed practitioner. Our law does not recognize such exemptions and many of our practitioners know it. It is with much regret that I am compelled to state that a large number of our physicians are guilty of aiding and abetting this practice, and among them are men who pretend to be high in the counsels of the profession. Until the physicians of this State clear their skirts from all complicity in this form of law breaking the health officers and the prosecuting attorneys will find it impossible to rid the State of the other and larger class of illegal practitioners. To this class belong all the nondescript "practors" and "healers" and medicine vendors. Their number in this State is large and the amount of "practice" done by some of them exceeds that of the average legitimate practitioner in the same locality. The harm that these irresponsible persons do to the health and lives of our people is enormous, and I believe that this is generally appreciated not only by the medical profession, but also by the more intelligent lay members of our communities. Of the sixteen or seventeen hundred physicians in this State there is not one who could not recall the loss of a life or the ruin of some person's health which has resulted from the practice of these charlatans. Sometimes the harm is indirect. As I am dictating this there comes to my mind by way of illustration a fatal intestinal hemorrhage produced by the manipulations of one of these fakirs in a case of typhoid fever and

a case of appendiceal abscess which was ruptured by the same process and which very nearly resulted in a fatality. The serious consequences resulting from delay to institute proper treatment in cases of tuberculosis and Bright's disease are not unfamiliar examples of the indirect harm caused by this class of illegal practitioners. While typhoid fever is probably at the head of the list of the causes of death in our State, I believe that I am right in placing the tolerance of illegal practitioners at the head of the list of the causes of invalidism or chronic ill health.

I believe it is the sworn duty of every health officer not only to take cognizance of this state of affairs, but to do something towards removing it. I am not sure which is the worst, the pollution of our streams by sewage or the pollution of the intelligence of our communities by the undisputed claims and practices of these various unlicensed "healers." We have an effective vaccination against typhoid fever which may tide us over with a fair degree of safety until such time when our people learn to improve the sanitary conditions. But no such vaccine is available to afford temporary protection to the masses from the affliction of quackery. Our law amply provides for the prevention and cure of this affliction, but grand juries come and go and the quack continues unmolested. Why? In some instances it is apparently the fault of the prosecuting attorney, and in others the indifference of the jurors seems to be the immediate cause. There is one other cause which is usually not thought of, and that is the indifference of our educated classes. The educated will fairly storm the authorities with protests against any seeming laxity in the control of a contagious disease in their neighborhood. They realize that under the complexity of our social life it is practically impossible to be absolutely safe from certain contagious diseases, no matter how scrupulous they may be in the sanitary and hygienic conditions of their own homes. But against the affliction of quackery those of education and intelligence are perfectly immune, and therefore seem to care little about its prevalence even in their immediate neighborhood. Back of all this, however, is the indifference of our health officers. Why shouldn't the health officer make it his business to suppress the illegal practitioner even as he does the sale of de-

cayed food or impure milk? Is the bereavement of the widow any less when her husband dies through a quack's treatment than when he dies of ptomaine poisoning? Not much help can be expected of physicians in general in this matter owing to the economic phase of this subject which is generally misconstrued. The activities of these quacks materially contribute to the work of the physician and surgeon. There is comparatively little work for the physician and surgeon to do in diseases that are brought under their professional care in the earlier or incipient stages. But when these are neglected through the deluding claims of the quack or are aggravated through his therapeutic assaults, the work becomes considerable. But the people fail to see this in its proper light and prefer to interpret the physician's criticism of the quack as a natural consequence of competition. It is up to you and us as health officers to do this work and do it energetically. Let us begin by stirring up the prosecuting attorneys to do their duties. Let the county and municipal health officers combine their efforts upon the prosecuting attorney, and if they fail report the circumstances to the State Board of Health, and I assure you that you will find the Board back of you in this as in all other matters which are for the benefit of the life and health of our citizens.

ACUTE DIARRHEA OF CHILDREN.

Wade Gaston, M.D., Parkersburg.

(Read before the L. K. & O. V. Medical Society.)

The principal forms of diarrhea of children are acute intestinal indigestion, acute gastro-intestinal infection, cholera infantum and ileo-colitis. A large percentage of these cases occur between the ages of 6 and 18 months and during the hot summer season; the hotter the season the greater the mortality. While diarrheal diseases occur among all classes, it is more prevalent among the poor and in the cities. They are not filth diseases, but their frequency and severity are increased by want of cleanliness, as this leads to contamination of the food. Dentition is supposed to be a cause of diarrhea by the laity, but the infrequency with which it occurs during the cold season

indicates that this is not an important etiological factor.

The manner of feeding is the most important factor in the production of diarrhea. Only three per cent of cases occur in infants fed exclusively from the breast, and fatal cases in breast-fed infants are very rare. Artificially fed babies are almost always improperly and over-fed. If cow's milk is employed as a substitute for breast milk, the difference in composition is either not appreciated or else ignored; so that many artificially fed children suffer from malnutrition. The comparative safety of cow's milk in winter and in the country shows that the difference in chemical composition is not the most important. Articles of food totally unsuitable to the child's digestion are often given.

In acute intestinal indigestion if the attack develops suddenly gastric symptoms are usually present. If more gradually they are usually absent. The local symptoms are colicky pain, tympanites and diarrhoea. The tympanites is rarely marked and may be wanting. The constitutional symptoms are fever, prostration and various nervous disturbances. The stools are always increased in number, at first containing more or less fecal matter, but this character is soon lost. The color is first yellow, then yellowish-green, and finally grass-green, due to biliverdin. The reaction is almost always acid. The stools are thinner than normal and may become fluid. Blood and mucus are not present. Undigested food is always present. In the cases of sudden onset the temperature is invariably high, 102° to 105° . In the case with a more gradual onset the temperature does not often go above 101° . The prognosis is usually favorable.

Acute gastro-intestinal infection is the form of diarrhea most often met in summer. This form may follow closely upon an attack of acute indigestion. When the infection is of sufficient duration it leads to marked structural changes, especially in the ileum and colon. Acute gastro-intestinal infection stands midway between acute indigestion and ileocolitis. While all varieties of diarrhea are more frequent in summer it is this form that is especially prevalent. An average temperature of 60° C. is needed to start an epidemic. There is no doubt that a high atmospheric temperature that produces a constitutional depression may seriously interfere with digestion, and

the thirst caused by excessive perspiration may lead to the giving of too much food, which may also cause indigestion. While this explanation may be sufficient for a small proportion of cases, it is not adequate for a great majority. The view almost universally held regarding summer diarrhea is that it is of infectious origin. Thus it affects infants after weaning and those younger who are partly or entirely fed from cow's milk, or at least are not given breast milk. As ordinarily handled, cow's milk contains an enormous number of bacteria in summer.

No single form of bacteria exists in any form of diarrhea. The form in cholera infantum belong to the proteus group. The forms found in other diarrheas are of the ordinary saprophytic bacteria, common among which is the hay bacillus. The living bacteria may enter the body in most cases, but food may be taken in which the poisonous product has already been formed by the action of the bacteria. The latter seems to be the explanation in some of the cases in which the symptoms come on almost immediately after the ingestion of contaminated milk.

The lesion may be briefly described as a superficial catarrhal inflammation affecting the entire gastro-intestinal tract, varying much in different regions; the colon and lower ileum and stomach suffering most, the duodenum and jejunum least. Clinically there are two quite distinct forms of gastro-enteric infection—a simple form and true cholera infantum.

The microscopical examination of the former is usually disappointing, often showing very little that is abnormal. In the cases of true cholera infantum the changes are more characteristic. The greater part of the small intestines is distended with gas and the mucous membrane has a pale, washed-out appearance. The simple forms may come on gradually or develop very suddenly. In the cases that develop suddenly the attack may begin abruptly in a child previously healthy. The skin is hot and the temperature high; there may be stupor or extreme restlessness and convulsions. There is great thirst and after six or eight hours vomiting begins, first of undigested food that has been taken several hours before, then bilious matter ejected in small quantities after much retching.

Diarrhea soon follows, at first fecal

stools, then great bursts of flatus with the expulsion of a little yellowish material with a foul odor. Or the stools may be green, greenish-yellow and sometimes brown. The most characteristic features are the amount of gas expelled, the colicky pains and the foul odor. The bacteriological examination shows that the normal variety is usually diminished in number, while many new forms are present, chiefly putrefactive bacteria. Under the most favorable circumstances, after one or two days the severe symptoms of the case subside, and the case goes on to rapid convalescence, or if an infant is very young and delicate it may prove fatal, no reaction taking place. The chief diagnostic points in these cases are their sudden onset, severe symptoms, brief duration and usually favorable termination.

Attacks of acute gastro-intestinal infection cannot always be distinguished from acute indigestion. As a rule they are characterized by higher temperatures, greater disturbance of the nervous system, very offensive fluid stools and by occurring epidemically in summer. In the first two or three days it may be impossible to differentiate the cases from ileo-colitis. The onset may be identical in both cases. The continuance of a high temperature the second day points to inflammatory changes. So also does the appearance of blood and mucus in the stools and the existence of continuous pain.

Almost any disease in infants may be ushered in with gastro-enteric symptoms, especially in summer. This is especially true of scarlet fever, pneumonia, tonsillitis and malaria. One should look for some other disease when there is seen very manifest improvement in the gastro-enteric symptoms with a continuance of a high temperature and general prostration. Simple cases of gastro-enteric infection seldom prove fatal except in infants under three months old and those suffering from marasmus. Such cases are often overcome in the first stages of intoxication. It is surprising to see with what few symptoms they may succumb. An apparently mild attack may prove fatal, so a guarded prognosis should be given.

Cholera Infantum—In comparison with the class of cases just considered true cholera infantum is rare. The term should be restricted to genuine choleric form diarrhea. Much confusion has arisen from adopting

this as a generic name for all cases of summer diarrhea. There is no other form of diarrheal disease in which the evidence of infectious origin is so strong. Its close connection with the feeding of impure cow's milk is well established. The symptoms are essentially toxic and are due to the effects of the poison upon the heart, the nerve centers and the vaso-motor nerve of the intestines. The secondary symptoms depend upon the abstraction of fluid.

Cholera infantum seldom occurs in infants previously healthy. As a rule there is some antecedent intestinal disorder. The development of choleric form symptoms in all cases is very rapid. The child may be brought to death's door in the course of five or six hours. Vomiting may precede diarrhea, but both may begin simultaneously. The vomiting is very frequent and persistent. First, whatever food is in the stomach is vomited, then serum and mucus and finally bilious matter. The stools are frequent, large and fluid. They are of a pale green, yellow or brownish color in the beginning. But they often lose all color and are almost entirely serous. The sphincter is sometimes greatly relaxed. The first stools are usually acid, later they are neutral, and when serous may be alkaline. In most cases they are odorless. In rare cases they are exceedingly offensive.

Loss of weight is more rapid than in any other pathological condition of childhood. The fontanel is depressed and in rare instances the cranial bones may overlap. The general prostration is great almost from the onset.

In the early stages the nervous symptoms are those of irritation. Later these symptoms give place to dullness, stupor, relaxation and coma or convulsions. The temperature is elevated in proportion to the severity of the attack. In cases that recover it generally runs from 102° to 103°, while in fatal cases it rises almost at once to 104° and 105° and may reach as high as 106° or 108°. Such a rectal temperature often occurs with a clammy skin and cold extremities. The so-called subnormal temperature seldom occurs. The pulse is always very rapid and often irregular.

The respirations are irregular and frequent and may be stertorous. The tongue is generally coated, but soon becomes dry and red and is often protruded. The abdomen is generally soft and sunken. There

is almost insatiable thirst. Everything taken in the form of fluids is vomited. Very little urine is passed, sometimes none at all for 24 hours. Such symptoms rarely continue for more than one day without a decided change. The diarrhea and vomiting may continue until the end or both may entirely cease for some hours before it occurs. In other cases after the severe symptoms the discharges diminish but the nervous symptoms become especially prominent. There is restlessness or apathy and stupor. The fontanel is sunken and eyes are half open and covered with a mucous film. Respiration is irregular, sometimes Cheyne-Stokes. The pulse is feeble and irregular, the extremities are cold, the muscles of the neck draw back and the abdomen is retracted. No desire for food is shown, the patient arousing only from thirst. The temperature is normal or subnormal. Recovery may take place with gradual abatement of the symptoms, improved pulse and circulation. The stools gradually become more normal or the symptoms may merge into those of ileo-colitis. More frequently they terminate fatally.

In cases going on to recovery vomiting usually ceases first, then the stools become less frequent, containing more solid matter and more color. Improvement in the pulse, a fall in the temperature and a subsidence in the nervous symptoms soon follow. Disappearance of the nervous symptoms is always to be regarded as a favorable indication. Convalescence is never very rapid. Cholera infantum can scarcely be mistaken for any other form of intestinal disease if its chief symptoms are kept in mind, constant vomiting, profuse serous stools, great thirst, dry tongue, high temperature and great restlessness. The prognosis is worse in very young infants and in those badly fed and poorly cared for, but a guarded one should always be given.

Ileo-Colitis—The terms colitis and ileo-colitis are general ones, embracing those forms of intestinal disease in which are found more serious lesions. Most of the etiological factors in gastro-enteric infection apply with equal force to ileo-colitis, and gastro-enteric infection may terminate in ileo-colitis. Ileo-colitis may be secondary to any of the infectious diseases, especially measles, diphtheria and broncho-pneumonia. Little is known of the nature of the infection, but streptococci are almost always

found in the deeper lesions, but whether they are primary or secondary is not definitely known.

The different forms of ileo-colitis are catarrhal inflammation, follicular ulceration and membranous inflammation. The nature of the lesions varies much in the different groups, but their position is quite constant. They affect the lower ileum and colon. In about half the cases only the colon is affected.

In the catarrhal form the onset is usually sudden, with vomiting, pain, fever and frequent thin, green or yellow stools, which are partly fecal and contain undigested food. Later the characteristic stools are seen, which are composed of blood and mucus. They are preceded by pain and are accompanied with tenesmus. Blood is seen in almost every stool, usually streaking the mucus, but rarely in clots. These stools are practically odorless. Prolapsus ani is frequent and often occurs with every stool. After two or three days the blood usually disappears and mucus forms the bulk of the stool.

The temperature is usually high. The prostration is not so great at the onset as in some other forms of diarrhea, but usually increases for several days. Abdominal pain is present and at times very severe, and in most cases there is tenderness along the colon. The duration of the severe symptoms is usually less than a week, but recovery is rarely rapid.

Follicular ulceration is the form in which gastro-enteric infection sometimes terminates, although it may develop suddenly. Vomiting is not a feature of these cases and the temperature is seldom high except at the onset. The most constant feature is the presence of mucus, which is usually abundant. Blood is not generally present and a large quantity is extremely rare. The diagnosis of ulceration is to be made from the whole and not from any special symptoms.

The membranous form is the most severe form of intestinal inflammation seen in children. This form occurs most frequently between the ages of six months and two years and is usually severe from the onset. In some cases the constitutional symptoms, prostration, stupor and delirium are so severe at the onset as to mask the intestinal symptoms and an erroneous diagnosis is often made. The abdomen is usually swol-

len and tender and the pain is severe. There is tenesmus at times with prolapse of two or three inches of the mucous membrane of the rectum. This is intensely congested and shows patches of pseudo-membrane upon its surface, thus establishing the diagnosis. There is usually a large amount of blood and mucus in the stools, but both may disappear and it is seen that the stool consists of only dirty water.

It is probable that almost every case of the severity described terminates fatally when it occurs in an infant. In older children the prognosis is much better as to life, but it may be followed by the chronic form.

Ileo-colitis is to be distinguished from typhoid fever and intussusception. Typhoid is distinguished by the slow invasion, more constant temperature, enlargement of the spleen, tympanites, and most of all by the eruption. A large proportion of the cases of intussusception are regarded in the beginning as ileo-colitis, but if the possibility of this mistake is kept in mind it will not often be made. In intussusception, although we have the sudden onset with acute pain, tenesmus, vomiting and marked prostration, there is no fever. The later symptoms—absolute constipation, tumor, tympanites, rising temperature, stercoraceous vomiting and collapse—have nothing in common with colitis. The principal symptoms of ileo-colitis are bloody stools, much pain, tenderness, tenesmus and fever.

Treatment—In the treatment of all forms of diarrhea the first thing to be accomplished is a thorough evacuation of the bowels. For this there is nothing better than calomel followed by a large dose of castor oil. For the first 24 hours all food should be withheld, giving only such articles as whey, albumen water or cold boiled water in small quantities at short intervals. To check the excessive catharsis bismuth or Dover's powder may be given. The best forms of bismuth are the subnitrate and subgallate, preferably the subnitrate. To be efficient it should be given in large doses—at least two drams daily to a child one year old. It is insoluble and should be given suspended in mucilage. It has the advantage over most drugs that it rarely causes vomiting.

Opium is a most useful drug in diarrhea of children, but it must be used with caution. With a view of preventing an excessive loss of fluid from the body when there

is pain and tenesmus with frequent, large, watery stools it may be given in small doses sufficient to control the number and character. It is contraindicated until the intestinal tract has been thoroughly emptied. Tenesmus is sometimes relieved by the injection of starch solution to which five or ten drops of laudanum are added. Severe tenesmus associated with prolapsus ani is sometimes immediately relieved by cocaine suppositories. One-fourth to one grain of cocaine may be given according to the age of the child.

Irrigation of the colon is advisable in all cases. It should be used in conjunction with the measures to which we have already referred. At least a gallon of normal salt solution should be used at one time and it should be injected high in the colon with a long rectal tube.

In the treatment of cholera infantum the main indications are to empty the stomach and intestines; to neutralize the poison upon the heart and nervous system; to supply fluid to the blood to make up for the great drain of the discharges and to reduce the temperature. To empty the stomach and bowels we must rely on mechanical means—stomach washing and intestinal irrigation—as we have not time to wait for the action of cathartics. For the second indication morphin and atropin are most valuable remedies. For the third indication the only thing that can be depended upon is the injection into the cellular tissues of a saline solution, as it is useless to give fluid by mouth. Only baths are to be relied upon for the reduction of temperature. In all cases during convalescence feeding is more important than drugs.

Medicine

ORATION IN MEDICINE.

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

(Delivered at annual meeting of State Medical Association, May, 1914.)

Members of the West Virginia State Medical Association:—It is useless for me to attempt to express to you the appreciation of the honor conferred upon me by our President when he requested that your humble servant should deliver the Oration in Medicine. I feel now, as I did then, that

there are many others among our members whose ability as orators and achievements as physicians so far overshadow mine that it would have been better to select some one of them. I cannot but feel that the kindness of his heart led him to make this diagnostic error. Let me assure you, gentlemen, that this honor is treasured by me.

In the truest sense medicine includes the treatment of the diseased by any proceedings, be they surgical, hygienic, dietetic, the use of drugs or what not.

Sometimes it has seemed to your orator that the present day is one in which our profession suffers from "surgical intoxication." Do not misunderstand me, brethren, to be in any way decrying surgery. Could any one behold the almost unbelievable triumphs of this branch of our profession and not feel his pulses quicken? Certainly not, and none among our number bows in homage to our surgeons and their miraculous successes more humbly than do I.

But have we not gone too far? Is there not danger lest we forget that by far the greater number of the afflicted do not need surgical therapy? At times it has seemed so.

Have we not in recent years heard the term "Therapeutic Nihilist" applied to one of our most honored physicians?

It is my hope that it is not an inopportune time to dwell a little upon medicine, for methinks that I can hear a far-off ripple which means that the medical tide has begun to run in and that in the near future the achievements of internal medicine will shine as brightly as those of surgery. Yes, even now is this true.

Each time I take up the latest issue of a medical journal it seems to me that over night I've dropped behind the procession. Advances and discoveries crowd so upon the heels of one another that the very best and mostly widely accepted therapy of today is considered out of date on the morrow.

To the followers of the immortal Pasteur, whose industry in the laboratory has laid bare the secret causes of so many diseases, we owe our advances. We have but to mention the serum treatment for meningitis of the cerebro spinal type due to the diplococcus intracellularis and each of us feels a personal pride in Flexner. Personally we should rather give one such discovery to our fellow man than have all the honors our contemporaries might heap upon

us. These discoveries not only relieve pain and suffering during the immediate day, but succeeding generations will be benefited and these tireless investigators will be honored as do we honor those who have preceded us.

We behold an Ehrlich painstakingly pursuing day after day, month after month, a specific for one of our scourges. At last he feels that his investigations have reached a point where the results should be given to the profession to test out clinically. How open-mindedly the rank and file take up the battle with this new weapon! This alone shows the advance of recent years. Not long ago, yes, in the lifetime of men now here, he would have been derided, classed a charlatan. Today his professional brethren are only too anxious to aid him and give praise.

For long it had been good practice to use ipecac in dysenteries. It remained for a practitioner in India to try emetin hypodermically in the amoebic type and, if we are to judge from current literature, find it a specific equal to quinin in malaria, anti-toxin in diphtheria, mercury and salvarsan in syphilis. Think how many more individuals will be helped by this than would be by a new surgical advance.

Walter Reed and the brave and honored coterie of those associated with him proved the source of infection of the yellow plague. Lo! we find Panama a health resort and Havana quarantining against Key West. Prophylactic medicine? Certainly. The advances are such that the physicians of the future generations will of necessity be sanitarians rather than clinicians.

It would seem apropos at this point, since Reed and his associates have been mentioned, to say to our anti-vivisectionist friends that never once has our profession failed to prove its members heroes of sufficient fibre to use themselves for experimental purposes if needs be. They harp upon the cruelty of animal experimentation. How many of them will offer their bodies for experiment, the outcome of which may help the cause of science, will alleviate the sufferings of countless generations yet to come of their fellow men, will make the world a better place to live in? I have not heard of any of them offering themselves. Physicians have offered and are offering and will offer themselves on the altar of experimental medicine. Isn't this sufficient

to refute the childish contentions of the anti-vivisectionists?

As we behold the wonders revealed by the studies of recent years in the field of immunity, the development of vaccine and bacterin therapy, serology, etc., do we hope for too much when we look forward to cures for tuberculosis, carcinoma and so on? No; these things must come; let us but do our part, each in his humble sphere, remembering always that one of us of no renown may discover the missing link which will complete the chain.

Another point upon which to dwell for a moment is diagnosis. In recent years we have made such advances in this branch of our science that we of the younger generation wonder how our professional forefathers ever managed to get along at all. Your orator often wonders if these laboratory advances in diagnosis are an unmixed blessing. There creeps in a fear that it is possible that we have failed to develop that acumen in physical diagnosis which our older confreres have. With all the laboratory aids and nine years' experience he very reverently bows his head to the skill of a number of the older practitioners of his acquaintance in questions of diagnosis.

Is it out of place to say that we fear a larger percentage of our numbers are careless about points of diagnosis than we ever stop to think? It is easy enough to read up on the treatment after a diagnosis is reached. How many of us in our hurry fail to go into a thorough examination as we should? Is it not possible that this accounts for some of our failures? If we are honest with ourselves, gentlemen, we must admit that too many of us are superficial in our examinations. What excuse may one offer for a diagnosis of bronchitis of several months standing, with no chest examination and a failure to call a microscope to one's aid? Another man carefully examines and finds pulmonary tuberculosis. A patient is treated for indigestion, that much abused scapegoat, for some weeks. A stethoscope reveals a failure of compensation, with cardiac dilatation. A glaring inaccuracy? Of course. When attention is called to it one can hardly believe such errors possible.

So it is that it does not seem amiss to say that with all our therapeutic advances and the many aids in diagnosis we are not always doing our best, because we do not always study our patients carefully enough

The present orator feels that we should have some of our failings mentioned at this time as well as to pay tribute to his profession's marvelous achievements. Perchance some of the great gains of various sects of charlatans are due to our own shortcomings. Think on this, my brethren.

In conclusion, my brethren, let me offer a plea that in the present struggle, due to an overcrowded profession, in an age when money seems to be the measure of a man's true worth, we must not lower the dignity of our calling. The splitting of fees and other professional chicaneries may be business expedients from a commercial point of view. To one whose advisors in the profession have been two uncles of an older generation, with strict ideas of professional ethics and an unswerving adherence to an honest, open relation of patients with their physicians, these things are wrong.

Gentlemen, my confreres, our profession is the noblest profession, not barring even the ministry, in the opinion of your orator. Our heritage of achievements is soul-inspiring. In the innermost recesses of our beings each of us from the lowest to the highest feels these things. If we have fallen from our high estate in the estimation of our fellow men we alone are to blame.

Arise, my brethren, and let us consecrate anew our aims, our ideals, our labors, our lives, if needs be, as our forefathers have done, to our profession, the most jealous mistress of them all.

Do this, again we shall enter into our own, and

"When that Angel of the Darker Drink
At last shall find you by the river brink,
And, offering his cup, invite your soul
Forth to your lips to quaff,
You shall not shrink."

INFLAMMATIONS OF THE NASAL ACCESSORY SINUSES.

H. H. Haynes, Clarksburg, W. Va.

First a grouping of the sinuses is necessary. The classification of Hajek based on the clinical phenomena is the one we will follow.

Series I is composed of the maxillary, frontal and anterior ethmoidal.

Series II the posterior ethmoid and sphenoidal.

Series I, or the anterior groups drain into the middle meatus.

Series II, or the posterior groups, drain into the superior meatus.

Etiology and Pathology—Influenza is probably the most common cause, as it is universally distributed and affects by preference the adult. The exanthemata, diphtheria, typhoid, tuberculosis and syphilis are important factors. These infections reach the sinuses by direct extension from the nasal cavity.

Predisposing Factors—Faulty drainage and lack of the normal ventilation, due to mechanical obstruction, is unquestionably the most important. The fact that obstruction to the openings of the sinuses may exist without obstruction to the lower part of the nasal fossae is commonly overlooked. Decayed teeth and unclean dental procedures are important factors in maxillary sinusitis.

The inflammatory changes are acute and chronic catarrhal and acute and chronic purulent. The acute catarrhal inflammation has a strong tendency to recover without treatment, but if it fails in this it becomes chronic. Chronic catarrhal inflammation may become hypertrophic or hyperplastic and transform the mucosæ into a pale, hard membrane. The process may advance to almost complete obliteration of the cavity or become arrested at any stage of transformation.

In acute purulent sinusitis the pathological changes are chiefly confined to the mucosa, which becomes swollen and oedematous. In severe cases when the outlet is blocked (closed empyema) localized hemorrhage is found and pus fills the cavity. In chronic empyema the acute stage is followed by thickening of the mucosa due to connective tissue proliferation with a continuation of pus formation. Polypoid degeneration of the mucosa may be found, but it is more commonly seen in the maxillary sinus.

In the severe types of infection, and especially where the outlet has been persistently occluded, ulceration of the mucosa, periostitis or even necrosis of the bony wall may be found.

Excepting the maxillary sinus, which may be infected through the teeth, a single sinus is seldom involved, and it is very common to find all the sinuses on one side involved at once or even a pansinusitis is not

rare. For this reason and to save time a general consideration of sinus inflammation is preferable to a consideration of each separately.

Beginning with series I we will first consider the frontal sinus. This sinus is an extension upward of the ethmoidal cells between the plates of the frontal bone. This extension does not take place till about puberty. For this reason frontal sinusitis in infants and young children is never seen. The size and shape of these sinuses varies greatly in different individuals as well as in the two sides of the same individual.

The frontal as well as all the accessory nasal sinuses is lined with a continuation of the nasal mucous membrane of the nose, minus the erectile tissue. Each sinus communicates with the nasal cavity by the infundibulum or fronto-nasal duct.

The infundibulum terminates in the hiatus semilunaris, which lies between the bullæ ethmoidalis and the processus uncinatus.

The anterior ethmoid cells are from two to eight in number and they all drain into the middle meatus, usually emptying into the hiatus semilunaris.

The maxillary sinus occupies the entire body of the superior maxilla, and its ostium is situated in the hiatus semilunaris, which corresponds to the very upper part of the antro-nasal wall, and on this account is in the most unfavorable position for drainage.

Take the ostium of the maxillary sinus for a center and a radius of about one-half inch will cover what Ballinger describes as the key to sinus disease or the vicious circle.

It is seen at a glance that high deviations of the septum, hypertrophy, oedema or cystic condition of the anterior part of the middle turbinate bone or enlargement of the bullæ ethmoidalis or uncinatè process or the middle turbinate bone clinging to the outer wall of the nose will partially or completely occlude the openings of all the sinuses in series I, producing pain and reflex symptoms, to say nothing of obstruction and congestion from negative pressure.

Series II. The posterior ethmoid cells are usually fewer in number and larger in size than the anterior, though there is great variation in their size.

The ostei open into the superior meatus and are very near the posterior half of the middle turbinate bone, and on account of the backward sloping of this bone the se-

cretion flows toward the posterior choana, though it also flows over the median borders of the turbinal, through the olfactory fissure. The ostei of the posterior cells are not visible by either anterior or posterior rhinoscopy, nor are they accessible to probe or canula. The symptoms of posterior ethmoidal sinusitis are not so distinct as any of the sinuses of series I.

Sphenoidal Sinus—The opening of the sphenoidal sinus is situated in the anterior wall near the top of the cavity, though it may vary quite a little in the height of its location. It is close to the septum and is hidden from view by the middle turbinate. The secretion from this sinus drains directly through the posterior choana into the epipharynx or on to the posterior end of the middle turbinate. Ocular inspection cannot usually be made without removal of the entire middle turbinate bone.

Pain or headache from sphenoidal inflammation is usually referred to the occipital region of the side affected, though it may be diffuse and vaguely defined. On account of its close relation to the optic and oculomotor nerves they are often affected in closed empyema. Optic neuritis producing complete blindness is by no means rare.

Orbital cellulitis, brain abscess, purulent meningitis or thrombosis of the cavernous sinus may complicate empyema of any of the upper row of sinuses.

General Consideration of Sinusitis—The symptoms may be divided into objective and subjective.

The objective symptoms may be again divided into extranasal and intranasal.

Of the extranasal we have:

(1) Changes in appearance of skin in region of sinus involved due to swelling and hyperemia.

(2) Conjunctival changes and lacrymation, especially seen in affections of series I.

(3) Changes in fundus as shown by ophthalmoscope.

(4) Findings of transillumination.

(5) Findings of radiography.

Of the intranasal we have:

(1) Bulging of intranasal wall is often seen in closed empyema of maxillary sinus.

(2) Appearance of mucous membrane of nose, especially that of anterior part of middle turbinate, is often boggy and velvety in ethmoidal sinusitis.

(3) Pus. Pus in nose is seldom found except in empyema of the sinuses.

Subjective symptoms:

(a) Pain.

(b) Headache.

(c) Tenderness on pressure.

(d) Disturbance of equilibrium.

(e) Disturbance of special senses.

Pain referable to the region of sinus involved may or may not be present. In acute antral or frontal inflammation pain is usually referred to region involved. In ethmoiditis the pain is usually deep seated or may be referred to frontal or occipital region. Frontal headache is usually present more or less in inflammations of any or all of the sinuses.

Headache is due to so many causes that it is not well to lay too much stress on headache without other symptoms, though persistent unilateral headache is always suggestive of sinus trouble.

Headache of sinus origin is increased by sudden jar or upon stooping forward. It is often more severe in the early part of the day, while headache from eye strain is inclined to be worse in the latter part of the day.

Tenderness and pain upon pressure are usually present in diseases of the sinuses near the surface of the face, which includes all of series I.

For the examination of the frontal sinus press over the anterior wall above the supraorbital ridge and under the floor of the sinus near the inner angle of the orbit.

For the anterior ethmoid cells pressure should be made at the inner angle of the orbit against the orbital plate of the ethmoid.

Pressure should be made over the canine fossa when examining the antrum of Highmore.

Disturbance of Equilibrium—Giddiness and vertigo or a momentary sense of blurring or darkened vision or imminent fainting may be present.

Disturbance of Special Sense—The olfactory, visual or auditory senses are frequently disturbed or may be entirely lost. Pain, temperature and toxic symptoms depend on the virulence of the infection, the amount of retention and resistance of the individual.

We will now very briefly consider each sinus separately.

An acute attack of maxillary sinusitis can scarcely be mistaken. The neuralgic and often intermittent pain; lacrymation and

sensitiveness to light; sensitive teeth; swelling and often heat and redness over the antrum; tenderness on pressure in region of canine fossæ; with intermittent flow of pus make a picture not easily mistaken.

Radiography and transillumination are quite a help, but an exploratory puncture followed by aspiration is probably the easiest and most reliable test when in doubt.

Frontal Sinusitis—The characteristic supraorbital, frontal and parietal pain which has been worse on rising and gradually disappearing during the night. Tenderness on pressure or percussion over the region of frontal sinus with discharge of pus in middle meatus is presumptive evidence of frontal sinusitis if you can exclude the ethmoid and maxillary sinuses. Anterior ethmoiditis may be confused with frontal sinusitis on account of the pus being discharged in the hiatus simulmaris and the frontal pain. The pain is not so severe except in very aggravated cases, and then the pain is usually more pronounced between the eyes. This, with absence of tenderness on pressure or percussion over frontal sinuses, will help to differentiate the two.

We will consider the posterior ethmoidal and sphenoidal together, as they usually communicate with each other, and it is rare to find one involved without the other.

The subjective symptoms are very variable and may be misleading. They are:

- (1) Headache.
- (2) Disturbance due to abnormal secretion.
- (3) Interference with the sense of smell.
- (4) Vertigo.

The objective symptoms are:

- (1) Localization of secretion in olfactory fissure and naso-pharynx.
- (2) Secondary changes of the nasal mucosa.
- (3) Findings resultant from rhinoscopy and sounding.

What we want especially to guard against is overlooking chronic suppuration of the sinuses. This is frequently done not only by the general practitioner but by the specialist.

Purulent rhinitis, or offensive exorianting secretion, when you have excluded syphilis, almost invariably means suppurating sinusitis.

These cases are common in persons suffering from more or less nasal obstruction

of one or both sides, and it is often impossible to make a careful examination until some surgery has been done to give a view of the nose.

This is always rational and in my opinion conservative, as drainage and aeration are established, and these are the two most important things in the treatment.

Selections

TREATMENT OF TOXEMIAS OF PREGNANCY WITH PLACENTAL SERUM.

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New York City.

(Read at the Annual Meeting of the Medical Society of the State of New York, at Rochester, April 30, 1914.)

Nearly all of the symptoms incident to pregnancy, from simple morning sickness to pernicious vomiting and eclampsia, are only varying degrees of toxemia. Heretofore all investigations as to its causation were directed to the changes found in the kidneys, liver and even the brain, and the symptom complexes were attributed to the alteration of function in these organs. Recently our conception of the pathology of the toxemias associated with pregnancy, including even some of the persistent skin lesions often found during gestation, has undergone great changes. The pathological changes usually found in the various organs in patients who succumbed to one of the toxemias of pregnancy are at present considered secondary to some poisonous substances circulating in the maternal circulation which have their origin in the product of conception.

Wolf-Eisner and other investigators positively state that during pregnancy foreign protein substances are thrown into the circulation of the mother and there, under certain conditions, bring about a state of intoxication as a result of a process of absorption and the consequent over-sensitiveness.

The nature and exact origin of these substances are as yet not definitely known. It may be in the foetus or placenta, or it may be due to changes brought about in the maternal metabolism consequent to gestation. The preponderance of clinical investigations, however, point to the fact

that these symptoms of intoxication are due to a protein substance, which has its origin in the product of conception.

Normally these substances are neutralized by the antibodies formed in the maternal circulation.

Theis maintains that fetal serum albumin is of a different composition from maternal blood serum albumin; under varying pressure in fetal and maternal systems fetal serum albumin enters the mother's blood by dialysis. It acts as an antigen and provokes the formation of antibodies. When fetal serum enters the mother's blood the union of this antigen with the antibodies leads to anaphylactic symptoms of which eclamptic convulsions are one. The severity of the toxemia will depend upon the amount of these substances in excess of the antibodies. That there are present substances in the maternal circulation of the pregnant woman which are not found in the non-pregnant was fairly well demonstrated by the investigation of Von der Heide and myself in the use of fetal serum to cause the onset of labor. While labor has not been terminated or caused to set in, in all the cases experimented upon, yet we proved conclusively that it causes contraction of the uterus in the majority of cases. Heide termed these unknown substances as "labor substances." It would seem almost reasonable to assume that if, for some reason, these "labor substances" are suddenly thrown into the maternal circulation in excess amounts, that it would cause contraction of the entire muscular structure of the body, producing what is known as the eclamptic convulsion.

We first observed that placental serum has a favorable effect upon toxemia of pregnancy in the course of our investigation of the effect of fetal serum upon the onset of labor. Case 19 of that series was a woman who was admitted to the hospital with severe symptoms of an impending eclampsia. After a careful examination I decided to try to induce labor with fetal serum. After the first injection I noticed improvement in the general condition of the patient. I therefore concluded to use the serum as a therapeutic measure. The result in this patient was such that in addition to onset of labor brought about by the serum all the toxic symptoms improved before labor actually

set in. Realizing the possible therapeutic value of placental serum in late toxemia of pregnancy, I decided to make use of it in the early toxemia, that of pernicious vomiting.

In consulting the literature on the subject it was apparent that no systematic use was made of placental serum in the treatment of vomiting of pregnancy. We were fully familiar with the work of Lockman and Theis, Freund and Pincunsohn, A. Mayer, Wolf-Eisner and other investigators who used placental serum in the treatment of eclampsia and the skin lesions of pregnancy, particularly urticaria. However, S. Fieux, in the *Annals of Gynecology and Obstetrics*, December, 1912, reports his experience with placental serum in the treatment of pernicious vomiting of pregnancy in four cases. The method adopted by him was to inject 15 c.c. of serum of pregnant woman. All his cases improved and he is, therefore, very favorably impressed with the therapeutic action of the serum. He concludes by saying that one must consider the improvement of the symptoms to be due to the presence of antibodies in the blood of normal pregnant women, counteracting the poisonous substances.

My experience with the use of placental serum consists of four cases of severe pernicious vomiting of pregnancy and two cases of threatened eclampsia.

Case 1.—Mrs. J. G. Age 28. Para. 1. Russian, wife of dentist, patient of Dr. P. Hurowitz. Menstruated last September 10, 1912. Gives history of persistent vomiting for the past five weeks. Lost a good deal of weight and seemed exhausted. Interruption of pregnancy was advised by attending physicians. Saw her at her home with Dr. Hurowitz November 21st. We decided to remove her to the hospital and try the injection of fetal serum, and if no signs of improvement were noticed within 36 or 48 hours to induce an abortion.

She was admitted to the Jewish Maternity Hospital the same day. Urine showed slight traces of albumin. Urea was normal. Sp. gr. 1.012. Some granular casts. Blood pressure 95. Ten c.c. of placental serum was injected intramuscularly at 5:50 P. M. Patient continued to vomit. At 8 P. M. 10 c.c. of P. S. was again injected. Patient felt somewhat nauseated, but did not vomit. She slept from 12:30 to 5:50 A. M. and did not vomit during the night.

November 22, 10 A. M., 10 c.c. of P. S. was injected into right thigh. Patient did not vomit during the day, but felt highly nauseated. Passed ounces xxxv of urine during the 24 hours.

November 23d patient did not vomit, but complains of pain in the back and abdomen, also slight headache.

November 24th-25th patient felt very much improved.

November 26th general diet was given. She continued to improve and was discharged from the hospital November 28th.

Patient remained well until December 7th, when she commenced to vomit again. Was not notified until December 10th, when I saw her again. She appeared quite exhausted. She was readmitted to the hospital on the same day. At 4 P. M. 10 c.c. of P. S. was injected and at 8 P. M. 10 c.c. more was injected. Patient did not vomit until 11 P. M.

December 11th, 2 P. M., 15 c.c. was injected. Blood pressure, 110. Felt very much nauseated but did not vomit. At 8 P. M. began to vomit quite severely. Ten c.c. of serum was again injected.

December 12th, 1 A. M., patient vomited fluid tinged with blood, but did not vomit any more during the entire day.

December 13th patient vomited once, but felt nauseated the entire day. December 14th, patient complains of pain in the abdomen. Vomited once at 9 P. M. and feels nauseated.

December 15th, 10 c.c. of P. S. was again injected; did not vomit. General condition better.

December 16th, vomited twice; feels weak.

December 17th vomited a few times, but does not seem to be affected by it. Feels much better.

December 18th patient vomited a few times and felt nauseated. At this stage of her illness her general condition was very much better, while she still vomited a few times, but she retained a good deal of food. I commenced to give her 5ii of the P. S. per mouth every two hours. Patient still vomited occasionally until December 22d, when her vomiting ceased.

She remained in the hospital until December 31st, and was discharged in good condition.

Case 2.—S. B. Age 20. Para. 1. Pregnant eight weeks. Confined at Mt. Vernon Hospital in charge of Dr. Goodwin. General condition very poor. Doubtful if she could withstand interruption of pregnancy. Her pulse remained between 140-150. I suggested to Dr. Goodwin to try placental serum, as "there is not much to lose." Patient was transferred to the Jewish Maternity Hospital the same morning, December 30, 1912. At 3 P. M. 12 c.c. of P. S. was injected intramuscularly. Patient still continued to vomit; 5ii of serum every two hours was given per mouth.

December 31st, patient continued to vomit, but general appearance better, conjunctivae less jaundiced.

January 1st pulse dropped to 108 and is vomiting less, retains some zoolack.

January 2d general condition much better, pulse between 108-116, complains of severe headache.

January 3d patient was put on general diet, and during the following 10 days of her stay in the hospital she gradually improved, vomiting occasionally only.

She was discharged January 13th in good condition.

Case 3.—A. G. Patient of Dr. Ralph Waldo. Admitted to Lebanon Hospital February 24, 1913. Para. iii. Three weeks prior to her admission she commenced to vomit and at the same time began to lose a great deal of weight. Urinary examination showed traces of albumin, $7\frac{1}{2}$ grains of urea to the ounce, few granular and hyaline casts. Notwithstanding all treatment patient still continued to vomit.

March 7th, at the suggestion of the pathologist of the hospital, Dr. E. Bernstein, 15 c.c. of P. S. was injected intramuscularly. Patient vomited one-half ounce of greenish fluid. An hour later she began to retain some broth and soup. March 9th, 10 c.c. of P. S. was again injected; patient takes more nourishment.

March 11th patient developed erysipelas of the right ear and face. March 13th patient died while expelling the fetus.

Case 4.—I. M. Patient of Dr. Dorsey M. Lewis of Middletown, Del. Age 38. Para. vi. Menst. last October 6, 1911. Admitted to the Jewish Maternity Hospital May 12, 1912, with the following history: Three weeks prior to her admission patient commenced to have severe headaches and general weakness, felt nauseous and vomited two to three times daily. At the same time patient noticed that her sight was failing.

On admission patient gave all classical symptoms of an impending eclampsia. Induction of labor by catheter was decided upon, and at the same time 10 c.c. of placental serum intramuscularly was given.

May 13th patient had comfortable night; headache slightly improved. Blood pressure fell from 238 to 180.

May 14th catheter removed, as it failed to induce uterine contraction. She was again injected with 26 c.c. of placental serum. Her general condition much better; passed a greater quantity of urine and eyesight improved. Blood pressure 165.

May 15th general condition good; patient feels comfortable. Blood pressure 190. Five c.c. of P. S. was again injected.

May 16th patient much brighter, was able to write address on an envelope. Five c.c. of P. S. injected.

May 17th patient began to complain of slight abdominal pain. At 9 P. M. active labor pains set in and delivered at 11 P. M. child weighing 4 pounds 11 ounces and alive. Patient gradually improved and was discharged May 29th.

In this patient I am not certain what caused labor to set in, as the catheter was removed three days prior to the onset of labor. It is questionable whether the continued use of P. S. did not incite uterine contractions. However, the general improvement noticed after the first injection of the serum that I was not concerned about the termination of labor any longer.

Case 5.—D. M. Thirty. Para. 11. Menstruated last June 15, 1911. Admitted to the hospital March 4, 1913, complaining of severe headaches, dimness of vision and slight edema of the legs. Urine was full of albumin, hyaline

tient was injected with 11 c.c. of P. S. intravenously. After the first injection she appeared improved, the albumin and casts diminished in amount. She developed a polyuria, and in three days all the symptoms pointing to eclampsia disappeared.

March 6th patient was again injected with 22 c.c. of P. S.

March 7th another injection of 20 c.c. was given.

She was delivered March 7th at 3:45 P. M. of a female child weighing eight pounds.

In this patient the serum was used to cause onset of labor, as mentioned above.

Case 6.—A. S. 28 years. Para. 1. Had two miscarriages. First in the fifth week, second at two months.

Menstruated last December 1, 1912. About two weeks later patient began to complain of some distress over the lower portion of the sternum; same continued until about January 15th, when she began to vomit, increasing in severity and not limited to any period of the day.

She was admitted to the Jewish Maternity Hospital March 17th. Fifteen c.c. of P. S. was given intramuscularly with no appreciable effect. Serum was also administered by mouth, 5ii every two hours.

March 18th 10 c.c. of P. S. injected, patient still vomits, but general appearance better; blood pressure 121.

March 19th, 20th, 21st, 22d patient's condition better; retains some food.

March 23d and 24th patient feels worse, does not retain any food, very restless and has severe headache. Blood pressure 111.

Patient felt slightly better 25th, 26th, 27th.

March 28th patient grew worse and I decided to inject the serum intravenously and 10 c.c. was given. Patient had slight reaction and severe precordial pain lasting about 5 minutes. The following day patient did not vomit.

March 30th patient vomited once during the night.

March 31st patient began to vomit again, but not so severely. She still continued to vomit, but partly retains food. Urine analysis showed no albumin or casts.

The diet for these patients was not limited. The nurse was instructed to give them all the food they asked for. As a general principle they were given lesser quantities at more frequent intervals. Vomiting was not a contra-indication for food. The patient's preference for a particular variety of food was always attended to. They all were given large quantities of water to drink. As a rule they were kept in bed, and as soon as the general conditions improved they were set up on a chair and even walked about the room. These patients, as a rule, do not sleep and are restless, and this was controlled by trional in sufficient doses. Sleep

is very essential in these cases of exhaustion.

The main criterion in these patients, I believe, is the pulse rate and the general appearance. If the pulse remains 100-110 there is no danger, even if they do vomit, the intoxication could not be very severe. A drop in the pulse rate takes place in these patients before the vomiting is controlled. I am fully aware that the number of patients treated in this manner is too few on which to base any definite conclusions as to the value of placental serum in the toxemias of pregnancy, still the marked improvement in Cases I, II, IV and V, I think, warrants its further use, particularly so when we have had so little success in the treatment of the severe forms of vomiting of pregnancy. Heretofore we had no rational method of treatment and in almost all instances we were compelled to wait for the woman's health to be so menaced that a therapeutic abortion became imperative.

Finally I wish to state that I believe that our success in preventing or relieving these various forms of toxemias of pregnancy will be hastened if we direct our attention to the maternal circulation, not to the end results brought about by changes in some of the internal organs, like the kidneys, liver, etc.

The alteration of structure and function of these organs are secondary to some poisonous substances circulating in the maternal blood and the discovery and isolation of these foreign substances is the problem that we shall have to solve in the future.—New York State Journal of Medicine.

OVARIAN PREGNANCY.

This subject is discussed at length and, together with the illustrations, makes a most interesting article in the March number of the *American Journal of Obstetrics*. The author, M. Caturani, of New York, writes:

"Up to a few years ago the best authorities on ectopic pregnancy refused to recognize the possibility of ovarian gestation, and the cases reported as such were not sufficient to really warrant their acceptance. Tait, Sutton and Webster emphatically denied the fertilization and implantation of

the ovum in the ovary. The last author based his opinion on two points.

First, the insufficient evidence in the cases described.

Second, the assumption founded on his theory of the decidual reaction that the implantation and development of the human ovum is possibly only in tissue derived from the Mullerian tract, and consequent inability of the ovary to develop such specific reaction (Webster, *Ectopic Pregnancy*, Edinburgh and London, 1895).

Decidual formation and imbedding of the ovum in the ovary are still unsolved problems, owing to the infrequent occurrence of these cases, and absence of early uninterrupted specimens.

After the most careful study of all the sections, I found what I would only call an attempt at decidual formation. Sparingly grouped cells are found along the margin of the ovum, or better in the boundary between fetal structure and ovarian stroma.

The cells are large polygonal, or oval, with one or two round nuclei, they took the stain very lightly and are embedded in a layer of fibrin which lies at the boundary of the two structures. Cells of similar characters are scattered in the ovarian stroma and around blood-vessels.

The fact is worth considering that no similar cells are found in the fibrin and fibrous tissue covering the inner aspect of the corpus luteum, or in the fibrous tissue constituting the septa of the corpus luteum.

This so-called attempt at decidual formation is more marked where the invasion of fetal elements into the ovarian stroma seems most active.

The shape, the size and the manner of assuming the stain seems to differentiate them from the Langhans and syncytial cells; these last two varieties, however, seem to proceed into the tissue more closely grouped.

Whether the fibrinous layer surrounding the ovum and containing these cells is the representative of a true decidua is only a matter of conjecture. The alteration in the relations of tissue, due to the rupture, and changes due to delayed operation, is responsible for this unfavorable condition.

The principal features of this attempt at decidual formation, viz.:

(a) Its occurrence in the stroma of the ovary.

(b) Its marked appearance where the invasion of chorionic elements is more active.

(c) Its absence in proximity of the corpus luteum and fibrous constituents, are conditions which demand an explanation.

The first fact would indicate the reaction of a connective tissue to the specific action of the ovum. The connective tissue of the ovary would respond to the specific stimulus (invasive properties of the chorionic elements) with an attempt to resist the invasion. It is only logical to admit that the line of defense should be more marked where the invasion is greater.

The third condition is dependent on the unsettled questions connected with the formation and function of the corpus luteum.

The origin which the most recent investigators ascribe to the lutein cells from the connective cells of the internal theca, the apparent affinity of the decidual and lutein cells, the function ascribed to the corpus luteum of directing the normal development of the ovum and controlling the invasive power of the chorionic elements, could possibly explain why the follicle should be considered good ground for the embedding of the ovum, and the synchronous formation of the corpus luteum should offer a relative resistance to the invasion of chorionic elements. In other words, it seems possible for the layer of lutein cells to take the place of the decidua in its functions.

Further, the absence of decidual cells in and about the corpus luteum, and the absence of chorionic cells outside of the corpus luteum, in the corresponding ovarian stroma, would seemingly substantiate such hypothesis.

But we need positive evidence, based on extensive experience, before we may arrive at such a conclusion. I wish here to emphasize the fact of the intimate relation existing between the fetal tissue and the well-formed corpus luteum in my case, considering that only a thin fibrous layer connects the two structures. The most complete evidence of this fact is found in a careful study of the different sections in which it is easy to discern the progressive stages on the relation of the two structures. Some sections show the fetal elements completely enclosed within the corpus luteum, the latter forming a complete ring.

Others show the fetal tissue breaking through the lutein partitions, to pass directly outside into the ovarian stroma.

Still others present the appearance of the ovum almost completely crowding out the corpus luteum with only a small portion of the lutein cells remaining. This evidence seems to be conclusive for the implantation of the ovum directly in the follicle.

In conclusion he states:

First, that macroscopical and microscopical evidence establish beyond any doubt the primary ovarian nature of the gestation.

Second, the intimate relation of fetal tissue and corpus luteum in the various stages might be a proof of the imbedding of the ovum in the follicle.

Third, probably the formation of the corpus luteum partly assumes the function of the decidua only as a preventive of the invasion of the fetal elements. This view is in marked contrast with the views expressed by Teacher and Bryce and the behavior of decidua and chorionic elements in their interlacing in the implantation site.

Fourth, decidual formation is only present as an incomplete attempt in the ovarian pregnancy, and is a result of the reaction of the stroma to the specific action of the ovum. Every connective tissue in the genital organs is probably able to react in the same way as the Mullerian to the genetic influence.

Fifth, the incomplete formation of decidua explains the tremendous invasion of the stroma and its surroundings with chorionic elements.

Sixth, the last condition is the cause of early interruption of ovarian pregnancy.—*Medical Review.*

EUROPEAN CORRESPONDENCE.

Berlin, July 12, 1914.

Editor W. Va. Medical Journal:

It may interest your readers to hear something from "The American Surgeon's European Clinical Tour." You probably know that it is one of the tours suggested by the officers of the Clinical Congress of American Surgeons.

This Congress convenes in London, July 27th, and this particular tour was suggested to meet the desire of those who might wish to visit the Continental clinics while abroad. Dr. J. F. Percy of Galesburg, Ill., active in the Western Surgical Association, was selected President and Dr. R. M. Harbin of Rome, Ga., Secretary

of the Surgeons' Club of Georgia, was made Secretary. These men have been largely responsible in perfecting the arrangements which have resulted in a most profitable and enjoyable trip, and it is at this date but half complete.

The membership of the touring party has far exceeded the expectations of its originators. It has the distinction of being the largest group of surgeons that has ever visited European clinics in a body. It numbers 120, and with guests, wives, children and friends, 197. It is therefore one of the largest, if not the very largest, American parties that has traveled abroad together. Forty states are represented in the personnel.

Illinois leads with 26 members; Wisconsin second with 14 members and remote California with 6.

West Virginia has three representatives—Dr. Cooper of Hinton, Dr. Foreman of Buckhannon and the writer—with Dr. Howells of Bridgeport, Ohio, claimed by "the Southerners."

The Southerners compose one of the five groups into which the entire party is divided. This division was made necessary on account of the unexpectedly large number on the tour, in order that in both hotels and operating amphitheatres crowding should be avoided, with the consequent discomfort and dissatisfaction.

The membership of each section is from 25 to 30, and we are assigned to different hotel and to separate clinics. In this way what promised to be an unwieldy body is controlled and directed to the entire satisfaction of every one.

We left New York June 13 on the steamer Oceanic and arrived at Cherbourg June 20. We virtually monopolized the boat, composing two-thirds of the first cabin passengers. We had smooth sailing and the voyage was delightfully uneventful, no member of the party being a victim of the much dreaded seasickness. Two hours of each morning were profitably devoted to the discussion of surgical and kindred subjects. Such themes as the "Surgical Conscience," "Landmarks for Border Line Cases," "Borderland of Insanity" were ably opened by Jackson of Kansas City, Jones of Omaha, Foreman of Denver, Connell of Oshkosh, Percy of Galesburg.

Our own Dr. Cooper carried off the

honors of the voyage by his thoughtfulness in presenting in an instructive fashion the subject of the "Art Galleries of Europe." He created intelligent interest in the subject in minds filled chiefly with the subject of clinics. He won the hearts of all and has become the accepted mentor of the party, and when morning clinics are over and sightseeing is the order of the afternoon "Follow Cooper" is the word passed down the line.

To give one's impressions of the clinics in each of the famous surgical centers visited would carry the letter to tedious length. However, some of the newer and more striking features of the clinics of each city might be mentioned.

In Paris the name of Tuffier was upon the lips of the tourists above all others. Efforts have been made for some time to help those hopeless cases of pulmonary tuberculosis with cavity already formed and those who are inclined to hemorrhage. Among the suggested remedies an artificial pneumothorax and the use of paraffine, in order to collapse the cavity and place the lung at rest.

Tuffier makes use of adipose tissue. He demonstrated his method for us, which required two patients.

One was a corpulent woman with umbilical hernia.

In the steps of his radical operation for the rupture he first did a lipectomy, excising large strips of fat from the abdominal wall, placing them at once in sterile vessels, then finished the hernial operation.

Upon the tubercular patient he made an incision between the second and third ribs down to the parietal pleura and forcibly held the ribs apart by a special screw retractor. The pleura was then carefully stripped away from the chest wall by finger and gauge on a holder until the pleura over and beyond the apex was made free. Into this cavity the strips of adipose tissue were packed.

It does not become necrotic, he claims, but becomes in a sense organized, receiving its nutrition from its environment.

His arguments given in clear English, with cases that were exhibited, were convincing.

The Faculty of Medicine of Paris gave us a reception with musical entertainment and an elaborate luncheon. The lights of

the scientific world as represented in Paris were present with their wives and daughters, among the most distinguished being the eminent Pettenkoffer.

In the Kocher clinic at Berne nothing markedly original was offered, but every surgeon was in an attitude of mind prepared to worship this fine old master at his own shrine. There was no disappointment. He gave us the entire forenoon, exhibiting interesting cases first, after which he and his son operated separately in the same amphitheatre, Prof. Kocher performing goitre operations and a most difficult case of cancer of the base of the tongue; the son doing hernia and other operations by his father's special and well known technique.

Prof. Kocher, speaking to us in charming English in a gentle yet forcible fashion, operating with the dexterity of a young man, although well into the seventies, and with the consummate skill of an old master, which he emphatically is, completely carried away the hearts of his guests, forever holding them captive by inviting the entire company of tourists to an afternoon reception and tea in his beautiful villa overlooking the river Aar.

In Munich Dr. Ach aroused general admiration for his wonderful rapidity as an operator as well as for the perfection of his technique. He had to offer us his original operation for kidney fixation, the detail of which will not be given, save to state that he utilizes a strip of fascia lata which he passes under a section of the freed fibrous capsules, anchoring it to the lumbar fascia.

It is difficult to limit one's respects to Vienna in a few lines. Every one feels that the clinics here were "worth the trip" even if he had received nothing else.

Prof. Lorenz gave an illuminating clinic on the treatment of ankylosis of joints, with contractions and deformities resulting from old tubercular processes. He, too, speaks English and speaks it with emphasis. He opposes all efforts to mobilize a stiff joint which was once tubercular because of the danger of reviving the old process. He corrected a markedly flexed ankylosed knee by an osteotomy of the femur, put above the joint and the tibia below, by a simple subcutaneous method. This gives a straight and useful limb, though the knee continues stiff. He

dresses the limb in plaster of paris from the ankle to the crest of the iliums and permits the patient to be up on crutches in a few days.

His practice of keeping fixed all ankylosed joints with a tubercular history he defends with logic and statistics that seem unanswerable.

To the very fortunate members of the section who attended the clinic of Prof. Lorenz an invitation was issued for a reception and dinner at his country home 20 miles up the Blue Danube. His hospitality was so genuine and his entertainment so sumptuous that we continue to sing with fervor that old song "We Shall Ne'er Forget that Night in June Upon the Danube River." The Wheeling representatives were among the fortunates.

Prof. Crede at Dresden, son of the distinguished Crede of placenta expression fame and of the silver solution treatment of the eyes of the new born, gave us a valuable morning and offered a new preparation of senna as the result of his own work under the name of senatin. This he gives by injection into the muscle, and for it he claims an ever sure treatment of post-operative tympany and intestinal paresis.

To dismiss Berlin with a sentence is an injustice to the brilliant surgeons who overwhelmed us with most profitable clinics. Profs. Bier, Franz, Bumm and many other distinguished members of the Berlin profession showed their American guests the greatest courtesy, but more concerning their work at some future time.

I may mention, however, our last clinic. Prof. Bumm performed for us two Caesarian sections by the extraperitoneal route, one abdominal, one vaginal. He advocates this method in all cases in which there is the least suspicion of sepsis. We have pleasant anticipations at Leipzig, Jena, Frankfort-on-the-Main, Heidelberg, Brussels and Amsterdam, with the final series at London.

Very sincerely yours,

ROBERT J. REED.

Diagnosis of Cystitis.

Temley says that the appearance through a cystoscope is the only finding upon which a diagnosis of cystitis can be made.

We all know that there are many individuals who have these conventional symptoms of cystitis at some time, and others who have recur-

ring attacks. We know, too, that tuberculosis and other destructive infections above and below the bladder, stones, and tumors of the most serious nature first make their presence known through these same symptoms which are often intermittent. If such a case is seen when symptoms are active and the diagnosis of cystitis is made, the decline of symptoms may be credited to the last drug given, when it is merely what may be called the "negative phase" of the disease. Neither patient nor physician is wiser as a result of the experience but both are deceived.

The diagnosis of cystitis deserves a place in medicine with "peritonitis," "rheumatism," "gastritis," "neuralgia," and many others which have been resolved into their proper component parts. The sooner we banish it from our own and our patients' vocabularies, the sooner will we make complete diagnoses and deal fairly and honestly by our patients, and the sooner shall we close another avenue through which the patent medicine man gains at the expense of our imperfectly treated, because imperfectly diagnosed patients.

I heartily agree with the above if it refers to chronic cystitis. Certainly we see many cases of acute bladder disturbance which disappear in a short time and which we do not believe to be due to disease in other organs.—Abs. by Urologic and Cutaneous Review (Boston Med. and Surgical Journal).—A. P. B.

Treatment of Urticaria With Adrenalin.

B. Scholz reports a case of extremely severe urticaria which had produced edema of the tongue and had rendered the patient sleepless for seventy-two hours, and which was relieved within a quarter of an hour by a subcutaneous injection of adrenalin. On the next afternoon there was a slight recurrence which disappeared immediately after a second injection. His theory is that urticaria is due to irritation of the vasodilators, and that the treatment is purely symptomatic, depending on the stimulation of the vasoconstrictors for its effect.—Zentralblats fur Herz-und Gefasskrankheiten (abstracted from the New York Medical Journal).—A. P. B.

Value of Surgical Treatment in Bright's Disease.

J. Murad.

Murad gives a severe but impartial critical review of the question of surgical intervention in chronic nephritis. From a theoretical and experimental study of the effects of decapsulation and nephrotomy and an examination of the cases published he draws conclusions frankly unfavorable to the method. It seems to him that it is only indicated in acute attacks caused by congestion of the kidney in the course of chronic nephritis; but in such cases the operation is more serious than its advocates admit and the results are not permanent. The nephritis itself has never been really cured by the operation.—International Abstract of Surgery.—A. P. B.

The West Virginia Medical Journal

S. L. JEPSON, A.M., Sc.D., M.D., *Editor.*

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All articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over 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.

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Editorial

DEAD.

Full of years and honored by the entire medical profession of the State, Dr. W. H. Sharp of Parkersburg, an ex-President of the State Medical Association and the only charter member of it who was faithful unto the end, passed to his reward on the morning of August 5th. No member was more highly respected, no one more worthy of the esteem and even affection of his professional brethren. Requiescat in pace.

TAKE A VACATION.

We remember to have once heard of a man who, when asked if he could do a certain great work in twelve months, replied that he could not accomplish the task in twelve, but could do it in eleven months. The meaning intended to be conveyed, though somewhat obscure, was that if com-

elled to work incessantly through the year he would probably fail, but with a month of recreation the task could be accomplished. The story conveys a valuable lesson which too many are prone to forget. Recreation—re creation—is a necessity, alike to man and beast. The one day in seven which releases from toil the weary and heavy laden is a blessing and brings rest to both mind and body, and horse as well as man works the better all the week following because of the Sabbath release from the weary round of toil. The physician, who, of all men, secures the least of this Sabbath repose, is foolish indeed if he fail so to arrange his professional work as to reduce to the minimum that which is to be done on the first day of the week. From long experience we know that this can be easily done, and possibly the patient, together with the physician, may profit by the suggested arrangement.

The country doctor, who necessarily does the most fatiguing work, is least given to recreation. True, the automobile has come to lighten his labors, since it is a great time saver. For this reason his work is more quickly done and with much more comfort, so that he has more time for rest and is not so wearied by his work.

Every man who is able to do so should get away from his accustomed work for a season at least once a year and forget the scenes of his daily calling with its attendant cares. No man has so many causes for worry as the conscientious physician, and during his absence he should cultivate the habit of throwing off cares, forgetting patients and their ills and complaints; otherwise the change will in a measure fail to be a recreation. How often it happens, even when in attendance on the annual meetings of our State Medical Association, that members begin to inquire as to the time of departing trains before they are comfortably located. This should not be. For many busy men this meeting affords the only opportunity for a change and rest. It is our duty to attend these meetings. Our patrons expect it of us, and they are beginning to place a proper estimate upon the physicians who never attend the meetings of medical societies. Duty to ourselves and duty to those who repose confidence in us demand that we attend these meetings, which for a short period lift from us the daily burden, put us in touch with our professional brethren

ren, elevate our spirits and add to our information as to medical progress.

Happy the doctor whose financial success enables him to get away for a few weeks every summer. The specialist can often do this, for in many cases the character of the ailments of his patients is such that they can wait the doctor's convenience. The surgeon can easily convince his patrons that operations are more certain to be successful in cool weather. So the surgeon is the happy man who makes the money and who can the most conveniently secure a few weeks of outing as the hot days come along. Many of them are now on the ocean and one of them tells on another page of the pleasurable and profitable time they are experiencing.

All of which thoughts have been inspired by a few days spent by us off of the beaten path of work and duty. An auto carried us with congenial friends a hundred miles through the beautiful farming country of Pennsylvania and our own state, setting us down on Cheat river at Mount Chateau, of which beautiful spot we confess never to have heard until a month ago, and yet it is but seven miles distant from the "Athens of West Virginia," our University City. The Cheat is an interesting river in its circuitous route through mountains densely wooded from the very water's edge, tumbling in places and foaming over its rocky bed, and then gliding smoothly and noiselessly with a depth of thirty feet or more. These woods, too, are most interesting, containing the densest growth of trees, among which are numerous rocks, mighty in size and of fantastic shapes, with mountain streams dashing madly between, making music captivating to the ears of one who is a lover of nature. And there is fine bathing in the river, in which the huge rocks in some places afford fine points from which the younger bathers delight to dive into the deep waters below. It was interesting also to watch the "mermaids" sporting in the dark water and then drying their hair as they rested in the sun on the great rocks.

And then there are fish in that beautiful stream, as we can testify, having seen ten beautiful bass, averaging nearly a foot in length, caught in one morning.

To conclude, it is good to loaf and rest one's soul. Do it if you can find the time.

S. L. J.

THE BULLET IN MODERN WARFARE, WITH SPECIAL REFERENCE TO ABDOMINAL PENETRATION.

It was, indeed, a rare privilege to be on the firing line and in the improvised military hospitals during the late Balkan war, to have an opportunity to study the effect of the jacketed bullet, and to compare the end results of today with those of the wars of yesterday, with modern methods of surgery, hospital care and nursing.

This privilege was given to many medical officers of all countries. Notably among them were Octave Laurent, surgeon of St. John's Hospital, Brussels, and our own Major Clyde S. Ford, of the United States Army, a former Wheeling physician.

At these times, when there are wars and rumors of war, when the whole of Europe is tense to the point of pain, when the horrors of a general conflict of the powers can hardly be averted, because, forsooth, mad Austria has given way to a passionate resentment against her bankrupt and impotent neighbor, Servia, on account of the assassination of one archduke, for this reason the writings of these two medical officers come to us, alive with interest and meaning.

The "Journal of the American Medical Association" thus comments editorially on the distinguished Belgian surgeon's writings:

"Owing to their high velocity, bullets from the modern rifle often make wounds with surprisingly few serious consequences. Laurent reports cases in which a ball traversed the brain, pierced the chest or penetrated the abdomen, with comparatively mild results. In some of these apparently dangerous cases the wounds healed promptly without any disturbing consequences or symptoms. Sometimes bones were perforated with only insignificant traces of the passage of the bullet, especially when it traversed the epiphyses. On the other hand, the fractures of the large bones were numerous and complicated and deserve special study. The mortality was distributed as follows: 55 per cent due to wounds of the head; from 35 to 40 per cent to wounds of the trunk, and 5 per cent to wounds of limbs.

"Quite contrary to the usual supposition, there were extremely few serious wounds of the abdomen which called for laparotomy in the hospitals. There was a much larger proportion than might have been expected of aneurysms, and especially of nerve-lesions of various kinds.

"Direct rifle-bullet wounds were often almost absolutely innocuous, and wounds of the head as a striking feature were followed with extreme rarity by serious deformities of the face. Amputations were rare, less than one per cent of all the cases treated in the hospitals requiring it, while trephining was relatively much more frequent.

"Summing up, Laurent says that during the single month of July, 1913, 150,000 men were killed and wounded on both sides, and of these more than half, at least 80,000, fell on the banks of the Bregalnitsa in the six days from June 30 to July 5."

Major Ford's discussion of Dr. Winslow's paper on gun-shot wounds of the abdomen at the recent meeting of the A. M. A. is full of interest. It relates, however, to penetrating wounds of the abdomen. Major Ford says:

"As a military surgeon, I feel the onus of defence of my colleagues, inasmuch as their practice of non-interference with abdominal gunshot wounds in war seems to be held in question. From my observations in the late Balkan wars, I have no doubt that the expectant treatment of gunshot wounds of the abdomen, in military surgery, is rational and is amply justified by experience.

"Among 500 cases in my service in Constantinople, all of the abdominal wounds when admitted were on the way to recovery, notwithstanding the danger, distress, and lacking transportation in the flight of a routed army. Many cases, owing to the essential injury or abuse, must have perished on the field. I can offer no comparisons, in figures, but as many of these cases recovered without operation, and as the decidedly great majority died with operation in the field, it seems probable that the soldier will fare better with his abdominal wounds left untouched.

"In Constantinople, 12 cases of abdominal gunshot wounds were received in a military hospital within 24 hours after occurrence; they were all operated upon and all died. No question need be raised as to the skill of the operator, or care in the hospital, because both were under the direction of a most capable and scientific German surgeon, Wieting Pasha, and were vastly superior to anything that could possibly obtain in the field.

"In an evacuation hospital in the Bulgarian army, at Kustendil, 10,000 cases were admitted within a month. Two thousand of these cases were first treated by a Bulgarian colleague and myself—500 in one day. The hospital was in a high school building, with fair facilities for aseptic surgery. Most of our patients were carried four days in bull carts, over the roughest mountain roads, and many of them bore abrasions on their backs to mark the journey's comfort.

Abdominal wounds were found resolving spontaneously or with localized abscess or with general peritonitis. In the latter class the 20 which were operated upon all died. The inci-

dent of transportations, both before and after operation, the lack of operative facilities, and the deficiencies in post-operative treatment, furnish positive indications for non-interference.

"It has been said here that the surgeon must always try to do something—the best he can—for these cases, but it does not follow that he must try an operation. Nature's trial is sometimes better for the patient than the surgeon's interference.

"In the German and Austrian armies instructions are issued to the sanitary service, in unequivocal terms, that gunshot wounds of the abdomen are not to be subjected to operation in the field. Von Oetlinger is the authority for this practice, and his conclusions are based upon experience with military conditions.

"Dr. Winslow's paper has been edifying and instructive and his conclusions from his experience in hospitals, in civil life, are convincing, but the rule of non-interference with abdominal wounds in war is based upon other conditions."

F. LeM. HUPP.

Society Proceedings

The Barbour-Randolph-Tucker Society.

Wildell, W. Va., July 20, 1914.

The B.-R. T. County Medical Society met at Thomas on July 7th. We had a small attendance, largely due to serious sickness. Dr. Murphy, the president, was in the Davis Memorial Hospital, recovering from an operation for appendicitis; Dr. Golden, with his wife, was called to New York by the death of Mrs. Golden's mother; and Dr. Daniels was called to Davis to see his aunt who was seriously ill from cancer, while Dr. Fredlock was called to Piedmont to the bedside of his dying aunt. We had a very interesting meeting with eight members present and two visiting brethren, both of whom joined; viz: Drs. M. N. Martin, of Coketon, and J. C. Tappan, of Pierce.

Dr. O. H. Hoffman was elected an official representative from our society to appear before the Public Service Commission and advocate a closer co-operation in service between the commission and the physicians and a more adequate compensation. He was also selected to prepare a circular letter to be sent to the Medical Legislative Committee and a copy to the Secretary of the State Medical Association, with a request that a copy be sent to each county medical society, requesting their co-operation in the securing of better legislation in perfecting the laws of our state so as to obtain union in the action of county boards of health and the county courts in enforcing sanitary measures, quarantines, and providing means to meet emergencies, etc.

Dr. Hoffman then opened the discussion of "Erysipelas with Special Consideration of an Old Treatment." After discussing the various theories of the nature of this long known disease, with the various theories as to cause, mode of invasion, classification, etc., and the means used to combat its ravages, the doctor

gave his treatment, which he said almost universally gave prompt relief, but he was free to confess he could not explain as to how it accomplished the salutary results.

This is his treatment: Paint around the affected part, overlapping on sound tissue with a solution of nitrate of silver, using 40 grs. to the oz. for children, 60 for women, and 80 to 90 for men. The improvement, both local and constitutional, is very apparent within 24 hours. Dr. Hoffman said he had used this treatment for years, and it had proved as much a specific as quinine for malaria. Drs. Tappan and Martin, as well as Dr. Arbuckle, confirmed the good results from this treatment.

Dr. A. P. Butt gave us a very interesting report of the Bluefield meeting of the State Society and also of the A. M. A. meeting at Atlantic City.

Dr. Butt believes in attending society meetings, whether county, state or national, and he never fails to urge others to attend. He believes these are means of broadening the physician's mental vision, and enlarging his knowledge of men and measures.

The society was elegantly entertained with a lunch at Imperial Hotel in Thomas.

Adjourned to meet in Elkins the first week in October.

J. C. IRONS, Sec'y.

Ohio County Society.

January 5, 1914.

Meeting called to order by Vice-President Hall. Dr. H. E. Osterling read a paper on "The Differential Diagnosis Between Retro-pharyngeal and Peritonsillar Abscess". He gave the pathology, symptomatology and findings on inspection in the two kinds of abscess and presented plates in illustration; stated that peritonsillar abscess is most generally found during the period of adolescence and that the affection was unilateral; said that medicinal remedies gave but little help in treatment; early incision and free drainage were necessary; discussed by Dr. Wingerter and Dr. Hupp.

Dr. J. A. Monroe next read a paper on acute rheumatic fever. He gave the signs and symptoms and stated that the cause was not positively determined. As predisposing causes he named weather and seasonal changes, and said that most cases occurred between 12 and 45 years of age. He regarded indiscretion in diet as a most important positive factor; spoke of the occurrence of endo-carditis before, during, or after an attack. There is no immunity and no period of incubation. He said that acute rheumatic fever could be differentiated from the various forms of arthritis. He regarded the treatment as mostly symptomatic, but advised the use of oil of wintergreen and the salicylates with hot applications, hot compresses, etc. Dr. Howells opened the discussion and stated that the use of antirheumatic remedies in the treatment of tonsillitis is a prophylactic measure. He reported a case of chorea with rheumatic arthritis and recommended especially the use of salicylates. Dr. L. D. Wilson emphasized particularly rest in

bed; spoke of the heart complications apt to occur in children, and the presence of erythema and rheumatic nodes as much more common in children than adults. A number of others discussed the paper.

January 12th.

Meeting called to order by President Thornton. Fourteen members present.

Dr. E. L. Armbrrecht read a paper on post-partum hemorrhage; stated that the average amount of blood lost in normal labor was 350 c.c., although it is sometimes larger than this; the so-called bloodless births generally occur in leukemic patients. Hemorrhage may be due to laceration of any part of the cervix, vagina or vulva, or from uterine inertia. In the latter case death may result unless uterine contractions are quickly secured. Hemorrhage occurs in two per cent of cases and are more frequent in multiparæ and women of the higher class. Hard or prolonged labors, very sudden labors, prolonged use of chloroform, hour glass contractions, retention of parts of placenta were named as causes. In the treatment the writer recommended the kneading of the uterus, ergot, pituitrin, adrenalin, stypticin, hot intra-uterine douches with vinegar, elevating the foot of bed, and in extreme cases bandaging the lower extremities; salt solution subcutaneously or intravenously, and camphorated oil. Physicians should remain with all patients at least an hour after the termination of labor. The immediate repair of lacerations was urged. Dr. Hall advocated compression of the abdominal aorta in cases of severe uterine hemorrhage. A number of others engaged in the discussion. The essayist opposed the use of ergot until the completion of labor.

Dr. Dickey then read a paper on "Cataract". He said that opacity of the lens was due to epithelial degeneration and accumulation of fluid between the lens fibres. Sometimes there are albuminous deposits in the lens. He spoke of the general diseases predisposing to cataract; described the progressive and stationary cataract and cited cases of each variety. The average age of his first hundred cases was 67 years, and of those seen since, 63 years; advised postponing operation until the sight of the second eye became bad; advised to let nature alone in senile cases as nothing will prevent their progress. Dr. Downing urged the importance of urinalysis in the diagnosis and treatment of cataract and said that traumatic cataract might clear up. Dr. Fawcett deprecated the tendency to operate on cases where the cataract was not mature.

January 10th.

Meeting was called to order by President Thornton. Twenty-three members present.

Dr. Taylor presented a case of spina bifida and ventral hernia. Dr. Fulton read a paper on pyloric obstruction, exhibiting a case upon which he had done a gastro-enterostomy. He gave the points of diagnosis between gastric duodenal ulcers and the laboratory findings in the two conditions; said that hemorrhage occurs in 70% of cases and that occult blood can usually be found in the stools. In addition to analysis of gastric contents, he emphasized the

importance of finding undigested food in the stomach 10 to 12 hours after meals; regarded gastro-enterostomy as necessary whether ulcer or cancer be present. Dr. Hupp spoke of the work of Thompson on Fibromatosis of the Stomach, and the work of Creveillier on Innocent Hypertrophy of the Pylorus. Patterson, of London, had proved that the curative effect of gastro-jejunosotomy was not due to drainage but to changes in the constituents of the gastric juice. He referred to the work of Lane on Intestinal Stasis and of its value in the prevention of ulcers. Dr. Schwinn spoke of pyloric-stenosis in babies, the history being typical in these cases, and recommended as an operative procedure cutting through the pyloric spincter down to the mucosa, an operation which is short and effective. Dr. McMillan read a paper on "Alcoholism" (printed in the Journal). Dr. Weinberger exhibited an ulcer excised from the anterior wall of the stomach near the lesser curvature.

State News

Convention of Graduate Nurses' Association of West Virginia.

The graduate nurses of West Virginia and superintendents of training schools will meet in convention in Wheeling on September 1, 2 and 3. An attractive program has been arranged both as to educational and social features.

Special attention is to be given to the superintendents of our training schools for nurses. Physicians who own or have hospitals in charge are earnestly requested not only to allow, but to urge, their superintendents of training schools to attend this meeting.

There should be some uniform standard for our schools for nurses. To this end, all of our superintendents should meet and adopt certain methods, discuss their problems and learn from each other.

Some training school teachers will be present with us and will advise with our West Virginia superintendents.

A curriculum of study put forth by the American Nurses' Association will be presented and discussed.

MRS. H. C. LOUNSBERRY, R. N.,
President.

MRS. J. H. BULLARD, R. N.,
Secretary.

* * *

The committee on public policy and legislation has recently visited Charleston and had a very pleasant and profitable interview with the Public Service Commission. They received the assurance that a new blank will be issued soon which will be materially different from the old one. A full report from the committee will appear in our next issue.

* * *

Dr. W. H. Young, of Sistersville, and Dr.

C. V. Little, of New Matamoras, Ohio, who have recently been doing post-graduate work in New York and more recently taking the summer course at Johns-Hopkins, are again at home.

* * *

News of the death of Dr. W. Holmes Yeakley, of Keyser, was received too late for notice in our July issue. He was drowned on June 25th while on a vacation near Staunton, Va. He was fishing and was accompanied by his wife and his wife's sister, Mrs. Jos. A. Glasgow, who had waded beyond their depth. It was in trying to rescue them that he lost his life. But the ladies succeeded in getting ashore. He was health officer of Keyser and he served several terms in the council. He was surgeon for the Western Maryland railroad at Keyser. Dr. Yeakley was treated recently in a Cumberland hospital for blood poisoning, having pricked his finger with a surgical instrument in performing a minor operation. He was a native of Frederick county, Maryland, where his father resides.

Dr. Yeakley was one of the most active members of the State Medical Association, a man of ability and high character, and we greatly deprecate his untimely death.

* * *

The doctors of Clarksburg may be imitated with profit by the members of other county societies. They have established a library in which the members are greatly interested. They have recently installed a balopticon at a cost of \$80.00, with which they can throw pictures from a book upon a screen eight feet in diameter. With this instrument they are giving public exhibitions of the A. M. A. cartoons in one of the motion picture houses. In this way the public is being educated. Harrison County Society is to be congratulated on its activity.

* * *

In the Clinical Congress of Surgeons' Tour sailing from New York on the Oceanic June 13th, we notice the names of Drs. R. J. Reed, of Wheeling; L. H. Foreman, Bucklannon; and O. O. Cooper, Hinton. On June 17th, on shipboard, Dr. Cooper delivered an address on "Some Great Paintings Surgeons Should See While in Europe." The surgeons in this party are making a tour of the capitals of Europe, concerning which Dr. Reed writes on another page very entertainingly.

* * *

Removals.

Dr. M. T. Hoover, from Palmer to Webster Springs.

Dr. F. F. Farnsworth, from Williamstown to Belleville.

Dr. A. W. Tiesche, from Welch to Davy.

Dr. J. H. McCulloch, from Welch to Charleston.

Dr. J. L. Koble, from Huntington to Staunton, Va.

Dr. B. A. Swint, from Charles Town to place unknown.

Dr. J. M. Quinn, from Pineeeton to Norfolk, Va.

Progressive Medicine

INTERNAL MEDICINE.

Pure Carbolic Acid in the Treatment of Osteomyelitis.

Menciere (Arch. prov. de chir., No. 6, 1910), in a paper on phenolization in the treatment of osteomyelitis of the long bones and of the sacrum publishes the results of seven cases thus treated by himself which favor his opinion that this method, first proposed by Phelps in 1900, has a very high curative value in cases of osseous and articular tuberculosis, and has saved many limbs from amputation and from the shortening caused by resection. This treatment, which is applicable to cases of necrosis and chronic suppuration, consists, after exposure and enlargement of the cavity in the diseased bone and free curetting, in inundating the focus of the osseous lesion by pure carbolic acid. After an interval of one minute the acid is removed and replaced by pure alcohol. Care should be taken in the course of the operation to prevent cauterization of the surfaces of the cutaneous flaps. The good results obtained by the author from this treatment are attributed to the double action of the strong carbolic acid. It acts, in the first place, as a powerful antiseptic and an energetic destroyer of infective agents, and, in the second place, as an energetic stimulant of processes of repair. Phenolization is, it is stated, free from any serious risk. Carbolic acid, when applied to raw surface in weak solutions, is certainly absorbable and capable of acting as a general poison, but, on the other hand, when used in the pure form and neutralized by alcohol, its action is restricted to intense cauterization of the tissues to which it is directly applied, and it is not absorbed into the general system.—British Medical Journal, October 29, 1910.

Typhoid Carriers.

Dr. Henry Albert, in Journal Iowa Society, thus concludes a paper on this subject:

1. Chronic typhoid bacilli carriers must be regarded as a menace to the public health, it having been shown that probably: (a) five per cent of all cases of typhoid fever become chronic typhoid bacilli carriers; (b) three per cent of all cases of typhoid fever continue to excrete typhoid bacilli for more than one year after recovery; (c) twenty-five per cent of all chronic typhoid bacilli carriers have never had typhoid fever; (d) one in every 1,000 of the population is a typhoid bacilli carrier; (e) ten per cent of all cases of typhoid fever are traceable to carriers.

2. Whenever there are household epidemics or a series of outbreaks of the disease in a locality or an institution or among soldiers in the field we should consider that a bacilli carrier is the most probable source.

3. If an individual has an attack of cholecystitis or biliary colic soon after an attack of typhoid fever, we should suspect that such has been caused by typhoid bacilli and that such a person is a typhoid bacilli carrier.

4. Chronic typhoid bacilli carriers transmit

the germs to others, practically, only by the handling of articles of food, consumed without being cooked or handled after being cooked.

5. Persons who have recovered from an attack of typhoid fever should preferably not engage in an occupation such as dairying, doing kitchen work, etc., for at least one year after the attack.

6. Persons who have ever had typhoid fever or within a year been exposed to infection with typhoid fever should thoroughly wash their hands with soap and water before handling any article of food which is to be consumed without being cooked or reheated to the boiling point.

7. That the spirit of the rule of the Iowa State Board of Health, namely, "that no person in the State of Iowa who is known to harbor typhoid bacilli in the body, or in other words, to be a typhoid carrier, shall be permitted to handle milk or other dairy products offered for sale," may very properly be applied to all in whom there is a strong probability that they may be typhoid bacilli carriers.

8. The administration of hexamethylenamin and typhoid vaccines and occasionally the performance of a cholecystotomy may be advantageously employed to remove the carrier condition.—S. L. J.

Hay Fever.

Dr. Beverly Robinson of New York (Merck's Archives) says he has had more satisfaction from a combination of camphor, oleoresin of cubeb, glycerin and petrolatum than from any other local application. The above ingredients, when mixed, are in the form of a relatively soft ointment. They may be used, sniffed well up into the nasal passages, several times a day, and introduced therein, either with the end of the finger or on a camel's-hair brush, before having drawn well up and backward into the nasal passages and until they are felt in the nasopharynx, when the excess of ointment is hawked down and expectorated from the mouth. At present I am making use of the liquid petrolatum, and the ingredients become a thick, oily liquid instead of a soft ointment. These are sprayed by means of a glass atomizer into the nasal passages several times daily, or whenever relief seems to be much needed. The precise formula now employed by me is:

Pulv. Camphorae.....grn. x
 Oleoresinae Cubebae.....mxx
 Glyceriniʒi
 Petrolati Liq.....ad ʒss

M.

It has been claimed that oil of sweet almonds is preferable to liquid petrolatum as a vehicle for oily sprays. It may be worthy of trial, and in that case liquid petrolatum should be replaced by it in the formula. In any instance in which my formula does not relieve, the change might be made before the use of the spray is given up.—S. L. J.

Treatment of Neuralgia and Migraine.

In Le Nord medical for 1910 Huchard is cited as the author of a note on the value of antipyrine as an analgesic in certain forms of

neuralgia and migraine. It is remarked that the cause should not be overlooked—dental caries, diabetes, etc., in the first instance, and dyspeptic conditions in the second. The chief contraindication for antipyrine is renal insufficiency, and the remedy should not be administered to patients who exhibit any sign of this. Apart from that antipyrine is a sovereign remedy against pain. Huchard prescribes it in cachets containing from seven to fifteen grains, to be taken every hour or two hours, as may be necessary. In combination with sodium bicarbonate, as in the following prescriptions, it is better tolerated by the stomach:

℞ Antipyrine.....gr. viiss
 Acetphenetidn } aa.....gr. iv
 Sodium bicarbonate }
 M. Ft. cachet No. 1.

In migraine the following is prescribed:

℞ Antipyrine.....gr. viiss
 Caffeinegr. 3/4
 Potassium bromide.....gr. viiss
 M. Ft. chart. No. 1.

Sig.: One powder three times a day.

℞ Antipyrine } aa.....gr. viiss
 Potassium bromide }
 Cocaine hydrochloride.....gr. 1/7
 Caffeine valerate.....gr. iss
 M. Ft. cachet No. 1.

Sig.: One wafer three times a day.—S. L. J.

Chronic Interstitial Nephritis.

E. F. Wells, Chicago (Journal American Medical Association, October 7), says that during the past ten years in which he has studied the subject of chronic interstitial nephritis, he has accumulated a sufficient array of facts to warrant the deduction that in this disease the kidneys are seldom anatomically or functionally altered to such degree as to preclude the moderate regular excretion of water, urea, chlorids and other of the measurable constituents of the urine, or to prevent it on occasion from showing evidence of correspondingly increased functional activity, which may with propriety be termed reserve renal capacity. This, he says, is an important fact of diagnostic, prognostic and therapeutic value. As a foundation for any dietetic directions there should be a fairly accurate determination of the chlorid excretory capacity of the kidneys, and the greatest interest in the subject lies in estimating comparatively and absolutely the excretory capacity of the kidneys for those nitrogenous substances resulting from proteid metabolism, of which urea is the chief and best known. He describes his method of investigation. The daily urine is examined closely and recorded and charted every day during seven consecutive periods of three days each and the urea excretion computed. During the first of these three-day periods the ordinary diet is kept up. During the second evacuants are added. In the third the diet is a restricted one, confined to water, cream and soups and gruels, all in small quantities, with physical rest. During periods 4, 5, 6 and 7 a full carbohydrate diet, plus gradually increasing amounts of lean meat, is given. During the first three periods there is a gradual but marked reduc-

tion of the already low urea output which increases again rapidly under the subsequent fuller diet, the increase representing reserve renal capacity. With this there is a constant steady improvement in the general condition. It is a fair inference, he says, that if known, the output of the urea can by these simple measures and with safety be stimulated in this way. It will show that the anatomic alterations and physiologic capacity are such as to eliminate urea, chlorids, phosphates, sulphates, etc., with reasonable safety. The great danger to these chronic interstitial nephritics must then lie in the failure of the kidneys to eliminate other toxic substances of a nature that thus far defied analysis. Nevertheless, he is of the opinion, from his observations, that those cases in which there can be demonstrated regularly a fair or large reserve renal capacity have the best chance for long life and physical and mental capacity and usefulness. Notwithstanding its inadequacy to meet all the needs, he thinks his method gives practical data for the management of these cases.—S. L. J.

Taka-Diastase in Diabetes.

Dr. Beardsley of Philadelphia in the Therapeutic Gazette of February reports very favorable results from the use of this drug in this intractable disease. It appears to have a tendency to alleviate all the symptoms; it decreases the amount of sugar for a time, but this finding is not constant, while it is undoubtedly true that even while the sugar increases during the administration of the drug, the symptoms are relieved. The drug has no untoward effects, although it was noted by the families of two patients that even when the symptoms were improving both patients seemed more depressed for a few days following the first administration of the drug, but this symptom soon passed away.

The drug must be continued to keep up its good effects, but the dose can be reduced and increased from time to time as found necessary. It was given in five grain doses.—S. L. J.

Gastrospasm.

Waldfoegel believes true gastrospasm to be very common. He diagnoses this condition by giving the patient the following effervescent mixture: 4 gm. of tartaric acid, each in 100 c.c. of water, two to three hours after breakfast and four to five hours after dinner, and places the patient in a reclining position.

The stomach in a healthy and unexcited person under these conditions reaches to the umbilicus.

He makes a diagnosis of gastrospasm when, with the symptoms of oppression, pain and gaseous eructations without odor or taste, the lower margin of the stomach is a hand's breadth above the umbilicus and two to three finger breadths below the costal arch.

The chief cause is neurasthenia, while gastrospasm is seldom seen with hysteria.

Tremor of the fingers and tongue, accelerated heart action, insomnia and various other symptoms of nervous excitability and relaxed nervous condition are present. Other causes

are lead poisoning, abuse of alcohol, uremia and arterio-sclerosis of the abdominal vessels. —American Journal of Gastro-Enterology.

SURGERY.

Dr. F. L. Hupp.

Surgical Treatment of Puerperal Infection.

After reviewing our present knowledge of the various factors causing puerperal infections and the results of surgical treatment of the condition, P. Findley, Omaha (Interstate Medical Journal, November), comes to the following conclusions: 1. As yet we possess no reliable clinical or bacteriological guides in the early management of puerperal sepsis. 2. Early operative interference may do much good, but untimely or faulty measures produce much harm. 3. Retained placental tissue should be removed before the onset of septic infection. In virulent streptococcal infection it is better to encourage the spontaneous expulsion of placental remains with ergot, failing in which mechanical means are called for. For this purpose the fingers are to be preferred to any curette. If for some reason the infected placenta cannot be removed, hysterectomy is to be considered. 4. Puerperal ulcers should not be curetted. 5. Hysterectomy to accomplish anything must be performed while the infection is confined to the uterus. 6. The timely ligation of veins may forestall a general infection. 7. Pus accumulations within the appendages, the parametrium or the pelvic peritoneal cavity are seldom highly virulent. In such cases drainage is usually best accomplished per vaginam.

Treatment of Fibroids by Deep Roentgen-therapy.—J. J. Levy, Syracuse. N. Y. State Journal of Medicine, April, 1914. Reviewed in Am. Journ. of Surgery, June, 1914. Levy comments upon the brilliant results obtained by Kronig and Gauss in the treatment of fibroid tumors of uterus by x-rays. He states that 75 per cent can be cured by this method. The essential points in the treatment are: 1. Massive doses. 2. The use of a very hard tube, so that the more penetrating rays can be employed. 3. The tube must be near the part to be treated. 4. The use of a thick filter (aluminum), so that the soft rays which injure the skin can be excluded. 5. Cross-fire technique. This means that the rays are allowed to penetrate the abdomen at a different site at each sitting. The rays cure by causing atrophy of the ovaries and in consequence premature menopause. The older the patient the shorter the period of treatment. The method is not indicated in pedunculated fibroids or those undergoing malignant degeneration. Finally the method is perfectly safe.

Cholecystitis and the Factors that Control Results of Operation.—C. H. Mayo, Rochester, Minn. The Journal-Lancet, April 1, 1914. Reviewed in Am. Journ. of Surg., June 1914.

Mayo emphasizes the fact that gastric symptoms are very often reflex, taking their origin in disease of the gall-bladder. Such disease, however, is often difficult to detect, even when

the abdomen is opened, for the external surface of the gall-bladder may appear normal and adhesions may be absent. In such cases Mayo believes that the lymph-nodes extending along the common and hepatic ducts and one or two situated near the cystic duct may be of great use in giving the surgeon the needed information. When these glands, which may best be palpated with one's finger through the foramen of Winslow, become enlarged, it means that there is disease in the duodenum, the pancreas or the gall-bladder. When a definite source of infection is known, the treatment of mild cases, when found surgically, prolonged drainage should rarely be instituted rather than the removal of the gall-bladder.

Mikulicz's Disease.—Carl Fisher, Rochester, Min. The Journal-Lancet, March 15, 1914.

A typical case of this unusual disease is described. It occurred in a male, aged 47 years, and when seen by Fisher had been present for five years. It began with swellings under the lower jaw, followed by enlargements of the lachrymal glands and then the axillary lymph nodes. As shown by the illustration, the tumors had reached an enormous size. X-ray examination showed involvement of the mediastinal nodes. The blood examination, erythrocytes and an anemia, was normal. Specimens except for a slight increase in polynuclear leucocytes were excised from the submaxillary region and from the lachrymal gland. These showed masses of lymphoid cells of rather large size.

The author in a brief discussion is inclined to place the disease in the same class as Hodgkin's disease—it is a clinical type of apparently the same pathological process and is evidently closely related to lymphomata and to the leukaemias.—Am. Journ. of Surg. Reviewed.)

Liver Resection.—Dr. Leon Feingold has an article in the Ill. Med. Journal, from which we extract his conclusions:

1. The removal of large portions of liver is not to be dreaded.

2. Temporary hemostasis is not necessary, as the blood pressure in the portal circulation is low and hepatic vessels can be ligated singly or en masse.

3. The possibility of successfully ligaturing and suturing liver tissue is a demonstrated fact.

4. Suturing liver tissue must be accomplished with ease and with the most simple means in the hands of every operator. This is accomplished by Dr. Frank's method.

5. This perfected technic in dealing with liver resection will not only greatly reduce the mortality, but also postoperative complications.

Dr. Frank, in 16 experiments on dogs, pursued the following plan: Supposing a portion of liver is to be resected for a crushed laceration or growth, situated at or near the liver border, he incises the liver on the upper surface in a bevelled manner, commencing at the liver margin on one side of the part to be removed, carrying the incision to the liver margin at the opposite pole. The incision is continued from this point on the under surface in a similar manner up to the point where the in-

cision was commenced, thus encircling the part to be excluded, which leaves two liver flaps, the latter flopped together, making their approximation easy without any tension whatsoever. This, owing to the low blood pressure in the portal circulation, does away with the employment of temporary hemostasis. A running thread of medium catgut threaded on a non-cutting needle is now taken and sutured in the following manner: one deep suture and one superficial alternatingly. All dead space is thus obliterated. Hemostasis is perfect and a new liver border established.

Should the trouble be located a distance away from the liver border, he follows another plan: A wedge-shaped portion of the entire thickness of the liver is first cut out perpendicularly. The two broad surfaces left by the removal of the wedge-shaped portion are now converted into troughs. This is accomplished by the excision of wedge-shaped pieces. The troughs thus formed each has two flaps. These flaps are approximated with a similar running thread as was done in the first procedure. When the operation is completed the liver remains with a notch and the approximated flaps on either side of this notch form new liver borders. Dr. Frank also emphasizes the fact that if the flaps do not fall into coaptation more tissue should be cut away, as the perfect apposition of the flaps is essential to secure easy hemostasis.—S. L. J.

Typhoid Fever Perforation, Treatment of.

Treatment of typhoid fever perforation is thus summed up by Dr. J. D. S. Davis of Birmingham, Ala.:

1. Typhoid fever is a surgical disease.
2. About five per cent of typhoid fever cases perforate.
3. Nearly all perforating cases die if left to nature's resources.
4. A large per cent may be saved by prompt operative interference.
5. Incision should be large enough for expeditious work, preferably through right rectus fascia.
6. Lavage with hot saline is essential in a large number of cases, especially when fecal extravasation has taken place.
7. If a perfect peritoneal toilet can be secured, abdominal closure may be made without drainage.
8. Treatment by posture (Fowler's position) to confine bacteria and septic material to lower abdomen is important.
9. Treatment should be directed to destroy or impede growth of bacteria already in the tissues and blood—anti-streptococcus serum and unguentum Crede.
10. Elimination should be secured by physiological salt solution hypodermically when in-

dicated for failing heart, and proctoclysis continually until sepsis is overcome.

11. Supportive treatment should consist in transfusion of salt solution or blood; strychnine and digitalis for heart stimulant; spartine, in large doses, for general stimulant and prophylactic against suppression of urine; morphine should be given to control peristalsis and produce rest, control shock; and nourishment should be given as early as possible.—*Medical Times*, March, 1909.

OBSTETRICS AND GYNECOLOGY.

Method of Guarding the Perineum in Labor.

Caie says that in the hands of an expert obstetrician rupture of the perineum should be a very rare accident. He states that the various methods of safeguarding the perineum now in use are weak in the following points: (a) In attempting to pull forward the vertex by passing the left hand between the thighs of the mother and employing traction on the scalp. (b) In "supporting the perineum" in the direct method by pressure thereon of the concavity between the thumb and forefinger of the right hand. (c) In endeavoring to push the fetal head forward by the indirect method either by inserting two fingers in the rectum or by pressure on the anus. (d) In the delivery of the shoulders. The following is the method which he has employed successfully:

When the fetal head is moderately distending the perineum the latter and the parts adjacent are thoroughly dried with a hot sterilized towel; all moisture must be wiped off. At the moment when the tension on the perineum is approaching its maximum—this can be determined easily with a little experience—the left hand of the accoucheur is employed in pressing slightly on the vertex to prevent any premature or sudden expulsion of head; there is no necessity for passing the arm between the thighs of the mother. The right hand then grasps the perineum in the manner alluded to in (b), but with this important difference: that between it and the perineum is interposed a hot sterilized towel in such a way that the edge of the concavity between the thumb and the index finger, the edge of the towel and the lip of the perineum are just in line with each other, a double fold of the towel to fit into the apex of the concavity having previously been made, to supply the deficiency alluded to at that point. Firm pressure is then exerted at every point, through the bitemporal diameter of the fetal head, if there appear to be any undue stretching or tendency to laceration. No attempt is made to push the head forward until the occiput ceases to engage behind the pubic arch. By these maneuvers three purposes are served:

1. By firm pressure through the bitemporal diameter premature extension of the head is prevented, without retarding its progress.
2. By means of the drying of the parts and the hot towel a much firmer grip, and consequently much greater support, of the perineum can be obtained than could possibly be produced by the bare hand on a surface which is usually very slippery.

3. Uniform pressure is obtained on all parts of the perineum, and the part where there is most stretching receives its due measure of support.—Abstract Journal American Medical Association.—S. L. J.

Caesarian Section predisposes to uterine rupture in future pregnancies. So thinks Dr. L. J. Breitein, who, in *American Medicine*, says:

The rupture generally takes place in the scar but not necessarily so. A scar healing by first intention will stand a strain equal to the uterine muscle, but in healing by second intention the picture is entirely different. Here we have granulating tissue in the scar which will not stand the strain of overdilatation of labor.

A placenta implanted in a scar soon invades the soft connective tissue. Trophoblastic tissue and chorionic will penetrate the softened scar and weaken it so that it is a question whether or not it can stand the stress and strain of labor.

1. A Caesarianized woman who gives a history of an infection with a purulent vaginal discharge in the puerperium is a good candidate for rupture of the uterus in one of her subsequent pregnancies.

2. The mere fact that a Caesarianized woman has delivered herself spontaneously is no reason for believing that she is free from the danger of rupture of the uterus with her future pregnancies.

3. Rupture of a Caesarian section scar generally takes place in a scar usually from the improper wound healing in the presence of infection.

4. The implantation of the placenta in the site of the scar may so weaken the uterine tissue that it may rupture under the stress and strain of labor.

5. I firmly believe that Caesarian section should be limited to those cases in which it is strictly necessary. If there is any possible chance for the uterine wound to become infected some operative measure for sterilizing the patient should be employed.

6. A Caesarianized woman should be in a maternity hospital during the last month of her subsequent pregnancies so as to be under constant medical supervision.—S. L. J.

The Treatment of Amenorrhea.

In the amenorrhea of young women permanganate of potash may restore menstruation after the lapse of two years or longer; sometimes it may restore the discharge within a few days, or, the immediately succeeding period being missed, the one next may appear in due course, or it may take six weeks or even two months before the drug succeeds. This salt is useful also in cases of scanty, and perhaps delayed, menstrual flux, the interval varying from six weeks to two months. The permanganate in a case such as this brings on the period at its proper time, together with an increase in the flow. It is useful also when a chill pre-

vents or delays the menstrual flow; thus, in the case of a woman who had prevented menstruation by taking a cold bath on the day when it should have appeared, the usual symptoms arising from arrest of the catamenia made their appearance; three doses of the permanganate having restored the flux, she discontinued the drug, whereupon the discharge ceased. She again returned to the medicine, and after another three doses the flow reappeared and progressed naturally. Permanganate of potash may be given daily until the catamenia appear and complete their course, when the salt should be discontinued; it should be recommenced four days before the access of the next period, and continued till the flow ceases. Permanganate of potash is useful in girls who, on leaving the country and coming to town, suffer from arrested menstruation; also in the amenorrhea induced by sea sickness and in the case of women, between 30 and 40, generally married, who whilst rapidly increasing in weight suffer from a diminished menstruation. Permanganate of potash is given up to one, two or more grains in pill-form thrice daily, after meals. Make the pills according to the following formula: Permanganate of potash, gr. 1; kaolin and petroleum cerate, in equal parts, q.s. Certain observers deny that the permanganate produces abortion, but some cases of abortion apparently due to the drug have been noted.—London Practitioner.

PEDIATRICS.

Tuberculosis in Children.

The most important essentials in the prophylactic treatment of tuberculosis in children, according to Pritchard (*London Practitioner*), are: As far as infancy is concerned, the only satisfactory measure when the environment is known to be one of open infection is to remove the infant from the source of danger. As supplementary prophylactic measures, fresh air, the graduated cold bath and an ample and varied proteid diet are useful. For older children the one important measure, apart from the above, is to maintain their strength during the period of debility following measles, whooping-cough and chicken-pox, and to remove them to convalescent homes in the country. The treatment of established cases of tuberculosis in children is discussed from two points of view: first, from that of specific inoculation, and, second, from that of medicinal and hygienic therapeutics. The tuberculin treatment, he says, has a definite though limited place in the curative treatment of tuberculosis in children; the most valuable expedients, however, are climatic, dietetic and general hygienic treatment. The prevention of intestinal intoxication is a factor of great importance, while of drugs, calx sulphurata, iodid of iron and creosote are the most valuable. In all cases of intestinal intoxication in children, Pritchard says, there is nothing which promotes the healthy function of the bowel so well as petroleum, given in the form of an emulsion and at comparatively short intervals. He gives it, as a rule, in combination with liquor pancreatis as

a digestive, and calcium hypophosphite as a tonic, and orders it to be taken after each meal. For a child of 5 years of age the prescription runs as follows:

	gm. or c.c.	
℞ Liguoris pancreatis.....	℥66	m x
Calcii hypophosphitis....	o6	gr. i
Emulsionis Petrolei.....	4℥	5 i

After each meal.

Cancer in Children.

Usener reports a round-celled sarcoma of the clavicle in a boy of 8, a sarcoma of the right kidney in a girl over 4, a sarcoma in the abdominal wall in a girl of 13, and a sarcoma of the jejunum in a boy of 9. These malignant tumors formed 2.3 per cent of 173 tumors of various kinds encountered in two recent years at the Leipsic children's hospital. It is remarkable that kidney cancer generally occurs at such an early age. Monti found forty-four under 5 in his fifty-five cases, and Steffen 194 in his 222 cases. Only ten of the eighty-eight operative cases had a permanently favorable outcome, the other children succumbing to the operation as in the case described. The cancer in the abdominal wall seems to be the only case of the kind on record; Steffen has reported two cases in infants, probably congenital, and the tumor was in the subcutaneous adipose tissue on the extremities in these cases. The boy of 9 was cured by removal of the round-celled sarcoma in the jejunum. The prognosis of these cases is bad on account of the early metastasis. Of the thirteen known to date, the patients were all boys, but the one here reported is the only one with a favorable outcome, and for this appendicitis was responsible. This compelled operative treatment, and during the operation the invaginated cancer was discovered. The condition would probably have continued a long time without much disturbance if it had not been for the casual discovery during the operation on the appendix. In all the other cases the intestinal sarcoma was practically inoperable when first discovered, and metastasis soon followed.—S. L. J.

Scarlet Fever.

The recent advances in our knowledge of scarlet fever since the summary by Hektoen (*Journal American Medical Association*, April 6, 1907, p. 1158), are reviewed by K. K. Koessler, Chicago (*Journal American Medical Association*, October 26), with special reference to the question as to the primary or secondary role of the streptococcus in the disease. He finds from the facts published that it is plain the serum of scarlatinal patients contains antibodies for the streptococcus, which speaks undeniably for the intimate biologic relation of this germ to scarlet fever. The existence of a specific scarlatinal streptococcus, however, is still demonstrated and the primary etiology is still obscure. A similar condition prevails in small-pox, according to DeWael and Sugg, but this does not justify us in assuming that small-pox is a streptococcal disease. Since the secondary infection, however, often determines the ultimate fate of the patient, a specific treat-

ment is suggested, and Koessler emphasizes that only those antistreptococcal serums should be used which have a potency in content of antibodies or faculty to stimulate their production, ascertained by reliable laboratory tests. He mentions especially the Gabritschewsky prophylactic treatment, and does not accept the view that the results of this vaccination prove the primary etiologic role of the streptococcus as held by Vladimiroff. From his own experiments with the complement deviation method, which are mentioned, he thinks the following conclusions are suggested: 1. The serum of scarlet fever patients contains specific antibodies for an unknown virus. 2. This unknown virus seems to be present, especially in the cervical lymph-nodes. In conclusion, he says that the advances made in the last five years as reviewed by him show that, "though the etiologic agent has not been found and is yet to be discovered, the place to be attributed to the streptococcus has been more clearly recognized. The streptococcus almost constantly present leads to a systemic reaction of the organism which finds its expression in the presence of antibodies against it. The streptococcus, however, can no longer be identified with the virus of scarlet fever, whose existence and presence in the lymph-nodes in a high concentration must be assumed from the presence of specific antibodies in the blood. The experimental transmission of scarlet fever to apes and monkeys substantiates this statement and points to new possibilities for the closer study of the nature of this virus.—S. L. J.

Bichloride of Mercury for Nursing Mothers.

Haas concludes (*Archives of Pediatrics*, July, 1912) that the administration of bichloride of mercury to the nursing mother has a decided effect upon the gastrointestinal condition and the nutrition of the infant.

In specific cases, accompanied by gastrointestinal disturbances, the drug administered in this manner is probably specific in its action upon such process, although the other usual manifestations of syphilis are improved only in slight degree.

The mother of a syphilitic child should be permitted, and even encouraged, to nurse her child, bichloride of mercury being administered to her the while.

Digestive disturbance in nursing infants would appear to be benefited in between 35 to 40 per cent of cases by the administration of 1/32 grain of bichloride of mercury to the mother three times daily after meals.

While not a specific, it is one of the very few drugs capable of influencing the metabolism of the mammary gland, and is indicated in any gastrointestinal disturbance of the infant, as it has thus far proved harmless, even when it failed to benefit.—S. L. J.

Coxa Vara of Infancy and Congenital Luxation of the Hip.

Petit de la Villeon (*Gaz. hebdomadaire de sc. med.*) draws attention to a sign which he considers, in the absence of radiography, is diagnostic of coxa vara, namely, internal hyperrotation. The

patient is examined in the following manner: The child is laid on the healthy side, the suspected thigh flexed to a right angle on the pelvis, and the leg to a right angle on the thigh. The surgeon faces the child and seizes the condyloid process of the femur, the knee is kept above the table, the femur resting in an horizontal plane and parallel to that of the table. The surgeon then performs internal rotation of the femur, and at the maximum of this movement measures the angle made by the leg; if this represents 45 degrees the articulation is normal, if 90 degrees=congenital luxation, if 25 degrees or under=coxa vara.—British Medical Journal.—S. L. J.

Children Warned Against Coughing and Sneezing.

Dr. C. Ward Crampton, director of physical training in the public schools, has sent out a circular to principals and teachers directing their attention to the spread of diphtheria, measles, colds, etc., by coughing and sneezing, and urging them to instruct the pupils in the necessity of carrying a clean handkerchief to guard the mouth and nose when coughing or sneezing, and in case the cough or sneeze is too sudden for this to turn the head away from those about him. The annual recurrence of these infectious diseases in almost epidemic form makes such inroads in attendance as to seriously affect the progress of a large number of children and greatly adds to the expense of the department of education. At this time of the year the combined total of those affected by these diseases reaches about 1,000 each week, so that it is highly important that children should know how to protect themselves and others from infection.—S. L. J.

EYE, EAR, NOSE AND THROAT.

Drs. H. R. Johnson and P. A. Haley.

Scarlet Red in Treatment of Diseases of the Nose and Throat.

Any therapeutic agent offering a prospect of a cure for atrophic rhinitis should receive a cordial reception from the medical profession, for we, who have had experience in the treatment of this malady know, only too well, how our efforts with all the various agents and methods have been futile.

It is then with the pleasure of renewed hope that we welcome a new member into this large group of remedies.

In the October 1913 issue of the "Laryngoscope" Dr. K. K. Wheelock, after discussing the etiology and pathology of atrophic rhinitis, brings forward scarlet red as a remedy to be given first place in the treatment of this trouble.

In two cases he reports that, after ordinary methods of treatment for several months with no appreciable improvement, he began the use of scarlet red ointment, applied to the nasal mucous membrane. In two weeks a marked improvement was noticed, the secretion and crust formation became noticeably less, the secretion changing from a purulent to mucoid in

character. The mucous membrane, instead of being thin and tightly stretched over the turbinates, presenting a dry and shiny appearance, became thick and velvety, and under continued treatment had large bulky growth over the turbinates.

The mucous membrane, before using the scarlet red, was thin, pale and dry, the pharyngeal vault could be plainly seen; now, the faucial wall cannot be seen, and under a weak cocaine solution the membrane contracts normally.

His method of treatment is to remove all crusts and secretions by lavage and wiping dry with cotton, then apply 10% scarlet red ointment over the entire nasal mucus membrane, being careful to miss none. The oropharynx is treated in the same manner.

Once in two weeks, he finds, is often enough to repeat the application.

The author, in conclusion, says: "I am sure that, clinically, a new epithelium has been formed in my cases of atrophic rhinitis, new blood vessels and nerves have made their appearance. How long the regenerated tissue will remain as now seen, time will determine.

Dr. W. C. Wood, Philadelphia, seeing the report made by Wheelock, gave the remedy a tryout, and recorded his experience in the May 1914 issue of the "Laryngoscope."

In reporting his results, he says: "After treating all cases coming to the dispensary for treatment, my results are just as noteworthy as the cases reported by Wheelock, and there is no question that the results obtained from scarlet red during the short time I have used it far surpasses any I have been able to obtain from any of the other methods."

He reports that no case in which this treatment was tried failed to show marked improvement after two weeks. The crusts and secretions rapidly disappeared, the mucous membrane assumed normal color and thickness, while the odor had disappeared.

This, he states, has been the universal history of all on whom this treatment has been tried.

He reports a case that had suffered from atrophic rhinitis with offensive odor, and loss of the sense of smell, for several years, who had been the rounds and had received treatment from a number of good men with negative results. Scarlet red treatment for six weeks, restored the nasal mucous membrane to almost normal condition, with disappearance of crusts and odor, while the sense of smell was restored. He uses a 5% ointment, as he finds the 10% too thick to spread evenly over the mucous membrane. In order to overcome this, he has his druggist prepare his ointment by adding equal parts liquid petroleum to the 10% ointment.—H. R. J.

Orbital Cellulitis With Total Loss of Vision.

Dr. F. B. Tiffany, Kansas City, Mo.

Patient stuck a wheat straw under right upper lid, followed by pain and swelling of lids. Exophthalmus and proptosis forward, downward and outward. Entire loss of sight. Hemorrhagic splotches distributed over the retina.

He made a deep incision through the upper

lid about midway between the superior and external recti, deep into the orbit through the capsule and periosteum, but found no pus only a little serum. The swelling continued until leeches were applied, which reduced it to a considerable extent. Four months later the swelling had not entirely gone, and there was no return of vision.—P. A. H.

Orbital Abscess from Infection Through the Ethmoid.

John O. Roe, Rochester, N. Y. (New York Medical Journal, Dec. 20, 1913).

The writer relates two cases of acute ethmoiditis, illustrating the intimate association of the ethmoid sinuses with the ethmoidal cavity, the readiness with which the ethmoidal disease may extend to the orbit and the ease with which the orbital cavity can be reached and abscesses of this region opened by the nasal route. In his review of several reported cases he advises the opening of the abscess by the nasal route when the orbital abscess is associated with inflammation of the ethmoid, maxillary or sphenoid sinuses only and when the frontal sinus does not require opening.—P. A. H.

Two Unusual Cases of Pulsating Exophthalmus.

Dr. W. O. Maher, Sidney, Australia.

These two cases are interesting, owing to the fact that the pulsation in both cases was arrested by pressure on the carotid artery of the opposite side, and the internal carotid arteries were tied with satisfactory results.

In the first case the right eye first began to protrude and several weeks later was removed. Three weeks after the right eye was removed the left began to protrude and throb, which was completely controlled by pressure on the right carotid. The right internal carotid was tied with good results.

In the second case the left eye was first affected, but after several weeks gradually subsided to its normal position. The right eye then gradually became affected and could be controlled by pressure on the left carotid. The left carotid was tied with good results.—P. A. H.

GENITO-URINARY AND DERMATOLOGY.

Dr. A. P. Butt.

Research Studies in Psoriasis.

Dr. Jay F. Schamberg, Dr. R. W. Raiziss and Dr. John A. Kolmer, of Philadelphia, described the results of varied protein diet upon psoriatic patients as found in research work in psoriasis. A low protein diet, readily demonstrated by confined hospital cases, showed prompt improvement, even to healing of the lesions; while a high protein diet under the same conditions produced an increase of the lesions.

Ambulatory patients, both clinical and private, were not so well controlled—therefore results were not so good. The diet can be readily maintained by eliminating meat, fish,

and fowl, allowing very few eggs and a small amount of milk. Vegetables, cereals and fruits are given in great enough quantities to satisfy hunger, containing just enough protein for the necessary metabolism.

Chrysarobin is a very valuable agent, and both it and its derivatives possibly owe their activity to robbing the tissues of their loose oxygen. It was suggested that this action may be one of the causes of the difficulty in finding the active cause in psoriasis. Novorobin, a derivative of chrysarobin, is more active than any other of the by-products discovered. The cause of psoriasis is still undetermined.—From the report, on Dermatology, at the last meeting of the A. M. A.

Recently Dr. Edward Beecher Finck, who is connected with the dermatological department of Polyclinic and Samaritan Hospitals, reports some excellent results in psoriasis from autoserum treatment.

Blood is withdrawn, serum secured, inactivated by heating to 56° Centigrade for about 20 minutes. Thirty to 40 c.c. of this serum is given intravenously. Repeat in two or three weeks.

Concerning Apparent Cures of Renal Tuberculosis.

(Surg., Gynec. and Obst. 1914, 214. Abs. Int. Abstract of Surgery.)

The author, E. L. Keyes, Jr., reached the following conclusions regarding apparent cures of renal tuberculosis.

(1) The symptoms of renal tuberculosis depend rather upon the extension of the disease to the pelvis, ureter and bladder, or to the perinephritic tissue, than to the lesion in the kidney itself.

(2) Hence tuberculosis may exist for some time in the kidney without causing any symptoms.

(3) Hence, also, long periods of quiescence may occur, corresponding to aseptic occlusion of the tubercular lesion.

(4) During this time no tubercle bacilli may be found in the urine, and the author's cases suggest that pathological examination of the tubercular kidney removed during a quiescent period might suggest the possibility of healing without total destruction of the kidney.

(5) But relapse inevitably occurs and the kidney never ceases to be actively tuberculous until it is totally destroyed.

Can Renal Tuberculosis Be Cured and the Function of the Kidney Preserved?

(International Abs. Surgery, July, 1914.)

The question as to whether renal tuberculosis can be cured by medical treatment without the organ losing its function must at present be answered in the negative.

Few surgeons maintain that there are exceptions to this rule, but these exceptions, even if they can be demonstrated, are rare. Observation has, moreover, shown that renal tuberculosis is subject to remissions, sometimes of long duration, due, not to recovery, but to the walling off of the ulcerocaseous focus. The author, R. Alessandri reports two cases.

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Original Articles

NEWER CONCEPTS OF GALL BLADDER DISEASE.

W. Wayne Babcock, M.D.,

Professor of Surgery, Medical Department of the Temple University, Surgeon to the Samaritan Hospital, Philadelphia.

(Read at annual meeting of West Virginia State Medical Association, May, 1914.)

The gall bladder is not invariably present in mammals, and human beings from whom the gall bladder has been removed may show no functional evidence of the loss. Except in the neighborhood of the ducts the gall bladder is not supplied by sensory nerves, and reflex disturbances of other organs rather than local symptoms predominate in the symptomatology of gall bladder disease. The gall bladder lies outside the main biliary stream, and in its storage capacity for bile also collects foreign substances, especially bacteria. Against many bacteria the bile has no bactericidal property, and as is well known typhoid bacilli may proliferate in the gall bladder for forty or more years. Other bacteria may remain in the gall bladder for considerable periods of time. The infection of the gall bladder may be acquired indirectly through the portal system or by an ascending infection through the common bile ducts. The first is the more likely. Years ago Adami demonstrated that certain microscopic particles found in the liver were the remains of bacteria that had been picked

up from the intestinal canal and carried by the portal circulation to the liver. It was shown that the liver was the great charnel house for the many bacteria gathered by the portal circulation and that the bacterial remains were excreted in the bile. When the bacteria fail to be destroyed in the liver the living organisms carried out with the bile may enter the gall bladder and there proliferate for an indefinite period. It is evident that from drainage into the portal circulation acute or chronic areas of infection along the intestinal tract predispose to gall bladder inflammation. Thus catarrhal or other forms of appendicitis, ulcerative conditions of the colon or small intestine and gastric ulcer may result in biliary infection. Of a special etiologic importance are typhoid fever and appendicitis, and the association between these diseases has been frequently observed. Ascending infections from the duodenum or the pancreas are probably relatively rare, for the duodenum is the most sterile portion of the gastro-intestinal tube, although in certain cases of gastric or duodenal ulcer or cancer an ascending infection may occur. Obstruction or the reversed currents of mucous membranes described by Bond explain these infections. Conversely bacterial proliferation in the gall bladder with a continued contamination of the biliary stream may be a potent factor in causing through the same reversed mucous currents submucous phlegmons about the pylorus or in the duodenum followed by chronic ulceration, pancreatitis or various functional and secretory disturbances of the stomach with pyloro-spasm and possibly gastrectasia may occur as well

as disorders of the intestinal tract, many of which have in the past been considered as cases of primary intestinal indigestion, auto-intoxication, ptosis and the like. An infection once inaugurated in the gall bladder tends to be very persistent; the mucosa is invaded, colloid substances favorable to the formation of stones are produced and the composition of the bile is chemically altered.

Cholecystitis is often not recognized until many months or years have elapsed and some terminal condition has developed. The common terminal condition is the formation of calculi or bile sand, and the patient is operated upon for this terminal condition and perhaps an associated acute empyema or gangrene of the gall bladder five to fifty years after the beginning of the infection. The problem that at present should confront us is not as to whether gall stones should be removed, for as to the advisability of this there should be little dispute, but as to how many months or years the physician is justified in procrastinating while the patient is sustaining progressively increasing tissue damage from those pathological changes that so often result in the formation of gall stones. It would seem to be important to recognize at its inception a cholecystitis that after five years or twenty years will be so seriously complicated as urgently to require operation, and it is a curious feature of the medical mind that for years all efforts had been expended to remedy a disease in its terminal complication rather than at its simple inception.

We would divide cholecystitis into three stages: First, the period of chronic catarrh characterized by digestive symptoms; second, the period following the formation of calculi marked by attacks of colic, and, third, the period of terminal serious catastrophe such as an empyema, gangrene, duct obstruction and infection or pancreatitis.

First Stage.—The symptoms of the first stage of cholecystitis are those of a chronic indigestion. The patient, in over three-fourths of the cases a woman, often gives a history of previous infection in the portal area such as typhoid fever, enteritis or appendicitis. In this stage the suffering is usually not extreme, yet the patient finds that she has an impaired digestion. After eating there is a tendency to gas formation, belching and frequently pyrosis. The appetite is often good and the patient may crave sweet or rich foods, but finds that attacks

of biliousness or indigestion often follow these indiscretions in diet. It has been expressed as a qualitative dyspepsia rather than the quantitative dyspepsia of ulcer. The distress is chiefly in the epigastrium, and except during severe attacks the pain is not as a rule referred to the region of the gall bladder. Often the patient complains of a disagreeable taste in the mouth, of bromidrosis, chromidrosis and of intestinal flatulency. The urine may show an excess of pigment and of ethereal sulphates. The patient may find occasional calomel and saline courses of advantage and frequently resorts to alkalies after meals. Curious remote evidences of toxic absorption at times appear, such as headache, evidences of eye strain, neuralgic attacks, metastatic form of arthritis, even to arthritis deformans, severe asthma, progressive myocardial change or chronic intermittent fever. Usually, however, the condition is afebrile. If time permitted I could give examples of all of the above complications. Locally, the evidence is slight, often there is no swelling, tenderness or rigidity, and jaundice or leukocytosis is not to be expected. During exacerbations there may be slight tenderness over the gall bladder or tenderness by the hooked finger under the ribs or percussion, as described by Murphy. At this time, if the gall bladder be exposed, the color will usually be found to be bluish, suggesting the normal condition. The walls may be somewhat milky and thickened on palpation. No stones can be detected; occasionally near the junction of the cystic and common ducts enlarged lymphatics are palpable by the finger introduced through the foramen of Winslow. On aspiration the bile is found to be dark green, frequently thick with mucus, sometimes tarry. Bacteria may be found on microscopic examination. At times in the more chronic stage of this condition the so-called "strawberry gall bladder" may be observed, the mucous lining on very careful inspection being dotted with minute yellow points or short streaks similar to those seen on a ripe strawberry. This feature has been emphasized at the Mayo clinics. It is due to the loss of epithelium covering some of the papillae.

Diagnosis.—During this stage, as contrasted with gastric ulcer, the pain is less severe and more continuous. The indigestion of ulcer usually lasts for several weeks, to be followed by relief for several weeks

or months. In cholecystitis the symptoms are largely continuous unless the patient carefully regulates her diet, and often alkalis, a calomel course with a saline purge or starvation give periods of relief. Many of these patients find it desirable to take a rather frequent course of laxatives, after which they obtain relief. In ulcer food often gives temporary relief and the use of laxatives is not usually helpful.

Palliative Treatment.—The palliative treatment of this condition consists of saline laxatives, alkalis, sodium salicylate, vaccines and the regulation of the diet. If the typhoid bacillus is the cause of the infection, a course of typhoid vaccines may be of benefit. I have observed striking improvement from the vaccine treatment. If the infection is believed to be due to the colon bacillus or other micro-organisms an appropriate single or mixed vaccine may be tried, although it will not infrequently fail to give relief. An extirpation of such an infected gall bladder relieves the patient of her digestive symptoms and prevents further complications. In all cases of chronic gall bladder dyspepsia not permanently relieved by medical or vaccine treatment we consider cholecystectomy. If there is evidence of a tendency to toxemia or metastatic infections the operation is urged. The ultimate results of cholecystostomy in these cases is less satisfactory. In operating, as a rule, we introduce a hand and systematically explore the entire abdomen in serial order, including the duodenum, pancreas, stomach, spleen, left kidney, pelvis, appendix, intestinal tract, right kidney and liver. The gall bladder is now studied and the finger introduced into the lesser peritoneal cavity through the foramen of Winslow and the ducts and adjacent lymph nodes are palpated. This examination may be quickly performed and by exclusion aids in arriving at a conclusion regarding the gall bladder. A translucent bluish gall bladder, one that empties on pressure, that contains no stones and has no distinct thickening of its coats, may yet be the cause of disturbing and progressive symptoms. If the bile contains bacteria or turbid particles, if it is dark green, thick or tarry, if biliary sand is present, or if the tributary lymph nodes are enlarged, we remove the gall bladder. We consider the character of the bile to be the most constant and reliable evidence of gall bladder infection. Unfortunately lymphatic

enlargement is not invariable. If the gall bladder is adherent or markedly thickened, or if there is mucocele or hydrops cholecystectomy is also done.

In operating placid anesthesia with relaxation, a free incision often with a transverse division of the right rectus muscle is desirable. The liver is displaced through the wound and the gall bladder removed from within outward after the method of Mayo. As a rule we very carefully doubly ligate the cystic duct and use no drain. A piece of gauze is introduced during the later stage of the operation against the stump of the common duct and drainage is used if there is any suggestion of yellow staining or fear of biliary leakage.

Second Stage.—The second stage of cholecystitis is that associated with and characterized by symptoms due to the movement of stones which have formed during the first stage. It is from the diseased endothelial lining of the gall bladder that the cholesterol, the chief constituent of gall stones, is elaborated. The patient is usually an obese woman of middle age who has suffered for years from the type of indigestion characteristic of the first stage of cholecystitis. Frequently she has become so habituated to her chronic disturbance that it is only upon careful questioning that she describes the dyspepsia she has had. The movement of the stones is associated with the production of gall bladder colic. In nine cases out of ten it is not the typical attack of the older text books with the characteristic pain, chill, fever and sweat, jaundice and clay-colored stools and dark frothy urine; but the attacks are described by the patient as an acute and violent form of indigestion. When an obese middle aged woman who has had dyspepsia for some years develops violent transient attacks of abdominal colic the diagnosis of gall stones is rarely in error. They occur in the day time, but not infrequently at night. The transient nature, the nocturnal character, and the fact that the pain is so severe that a physician is called and finds it necessary to administer a hypodermic, give a good clue as to the diagnosis. The attacks begin suddenly, the pain is felt in the region of the stomach or epigastrium and often radiates through to the back below the right shoulder blade. The duration of the pain is usually but a few hours. Vomiting or lavage may be

followed by immediate cessation of pain. The paroxysm is often provoked by indiscretions in diet and the violent pain, short duration of the attack, location of the pain in the stomach or epigastrium with associated tenderness at Robson's point, which lies between the ninth rib and the umbilicus, or tenderness on vertical pressure under the right costal margin are sufficient to make the diagnosis. In those cases especially in which stones have been present for years and there is calcareous deposit the X-ray may give a characteristic picture.

Third Stage.—The third stage of cholecystitis is usually marked by a terminal catastrophe. Cholecystitis and its associated dyspepsia have been present for years.

The occasional nocturnal attacks of acute indigestion have also been present. Now occurs a paroxysm more violent and more prolonged than any that have preceded. If it be due to an empyema or gangrene of the gall bladder, at the beginning the distress may be epigastric, but the tenderness and pain are soon observed in the region of the gall bladder, and within a few hours tenderness and pain may be present close to or just above McBurney's point. The right abdominal wall, often over McBurney's region, becomes rigid, the patient is not relieved by vomiting or simpler measures. Frequently the tense, enlarged gall bladder may be palpated; tender below where in contact with the anterior abdominal wall, while little tenderness is found above when the liver is interposed. The gall bladder may be so large that its tip is felt at the brim of the pelvis or it may lie largely in the flank or the apex may project in the loin just above the iliac crest and be mistaken for an enlarged kidney. Not infrequently it is covered by a broad thin projection of the liver which has been pulled down by the enlargement, the so-called Riedel lobe. The projecting low-lying tip of the gall bladder and the adjacent peritonitis give a symptomatology closely suggesting that of appendicitis, and with this diagnosis the patient is at once sent to the hospital. The resident physician, who has seen one or two such cases, however, promptly learns to make the differential diagnosis. The previous history, the type of patient, the early location of pain and tenderness in the region of the gall bladder, the mass extending below the right costal margin continuous with the liver, which remains somewhat tender close

to the costal margin, although greater tenderness is noted at its apex, usually render the diagnosis fairly certain. On opening the abdomen the peritoneum adjacent to the gall bladder is found edematous, there is often free serous or sero-purulent fluid. The gall bladder area is at least partially walled off by recent and perhaps old adhesions. The gall bladder wall is exceedingly tense, thick, yellowish white or dark mottled and friable. Often it resembles a cucumber. On opening the gall bladder calculi and decomposed bile or mucus intermixed with pus escape. More or less extensive areas of gangrene of the gall bladder are not infrequent. In the later stages the temperature ranges from 101 to 103, the heart sounds are weak and indistinct and there may be slight cyanosis of the extremities and lips. In this condition patients bear anesthetics and operative intervention badly. The gall bladder may become walled off by adhesions, the bile more inspissated or the gall bladder may rupture into the peritoneal cavity and a localized abscess form which may finally point through the umbilicus or abdominal wall or escape into a hollow viscus. These patients are best treated by prompt surgical intervention. Formerly we removed all of these gall bladders, but, although many of the patients made prompt and satisfactory recoveries, the percentage of acute bacterial toxemia was so large that we now simply open the gall bladder, remove the stones and provide for drainage. As these patients often have some degree of myocarditis, the operation is best done under local anesthesia. The skin and deeper tissues are very freely infiltrated with a one and a quarter per cent solution of novocain, the tissues divided by a transverse incision parallel with the eighth or ninth costal cartilage; the deeper muscular layers being partially divided and partially separated. The peritoneum is then divided transversely and the finger passed down, the tip of the gall bladder being caught, lifted up and slipped through the opening. By the transverse incision the enlarged gall bladder may thus be fixed in an extraperitoneal position, where it is isolated by gauze, opened, evacuated and dressed, tube fastened in the opening and the gall bladder returned to the abdominal cavity. If there is much local necrosis the gall bladder area is isolated by gauze or cigarette drains. As a rule the infection does not tend to spread into the

wound area. As in appendicitis primary union may occur in the skin after the removal of a gangrenous, pus filled gall bladder. If it were possible to remove the gall bladder without lacerating or invading the liver substance, and without too great a degree of traumatism or secondary septic absorption, this would be the most satisfactory operation to be done. With a very ill patient and an advanced pathological process the simple drainage is the quicker and safer operation.

Finally, there are certain other complications that, as a rule, should be recognized. A patient who gives the history of the first stage of gall bladder disease and of secondary gall stone colic suddenly develops a paroxysm of excruciating violence. The vomiting is more violent, the tenderness is located in the epigastric region and there is an associated palpable epigastric resistance or mass. The attack may be so violent that the patient gives evidence of shock. In such a condition, on opening the abdomen, the beef broth-like exudate, and especially the grayish speckling of the omental fat, immediately proves the existence of an acute pancreatitis. Most of these cases may be correctly diagnosed. In a perforated gastric or duodenal ulcer there is usually no vomiting unless the patient takes food or medicine. The pain spreads to the lower abdomen, particularly on the right side, with the gravitation of the escaped gastric juice. The presence of free fluid in the abdominal cavity may also early be elicited. Instead of an obese woman of middle age the patient is usually a man of rather spare build between 25 and 40 years of age. In subacute perforation with localization of the escaped fluid by the adherent omentum the diagnosis may be more difficult, but the symptoms are less violent and the previous history different. The evidence of an acute catastrophe in the upper abdomen is, in any case, evident and an exploratory section is indicated and with the opening of the abdomen a prompt diagnosis may usually be made. The areas of fat necrosis of pancreatitis and the diffuse mucilaginous fluid of a perforated gastric ulcer are each characteristic. With a perforated ulcer of the duodenum bright yellow bile intermixed with flakes of intestinal mucus may be found in the peritoneal cavity. From a ruptured gall bladder the dark greenish bile and the absence of intestinal contents lead the

surgeon to at once investigate the leaking organ.

Two of my patients had intestinal obstruction, due in each case to the lodgment of a large gall stone; in one the obstruction was just below the pylorus and in the second in the ileum. Both patients gave a previous history of severe gall bladder attacks.

When surgical measures catch up with our knowledge of the pathologic processes in gall bladder disease, then many of these dangerous sequences of gall bladder disease will be avoided, and with earlier and more thorough surgical intervention the mortality now associated with biliary surgery will become progressively reduced.

2033 Walnut St.

Discussion.—Dr. Cannaday said that we are in a transition stage in regard to gall stone disease. The advisability of the removal of the gall bladder is still a debatable question. I think personally it ought in many cases to be removed. We have threshed out all the obscure points in regard to appendicitis and have now definite conclusions in regard to that malady.

We have been in the habit of looking for the end results of gall bladder disease rather than gall bladder disease itself. Moynihan and a few other pioneers have been blazing the trail toward a newer conception of gall bladder surgery.

Dr. Hupp wanted to make a plea for gentleness in removal of stones from an infected gall bladder, firmly believing that the least traumatism under these circumstances the better. I think disasters often come from meddling surgery. I know of at least two cases where the sloughing stump, resulting from a cholecystectomy, together with the poison-laden lymphatics, carried the infection into the omentum and elsewhere, leading to a thrombophlebitis and a septic overwhelming of the patient with death.

I would like to have Doctor Babcock in closing his discussion to express his opinion with reference to the dealing with these grave cases of empyema of the gall bladder.

My own personal experience has been to freely incise the thick, septic, gangrenous gall bladder, removing the pus, detritus and stones with the greatest gentleness, pack off, drain and get out as soon as possible.

I am convinced that any attempt at an ideal text book technique in these patients will result in many fatalities. As Summer has advised, when you open an infected gall bladder of a very ill patient, and there is a foul smelling pus, no further trauma should be made. If you cannot reach the cystic duct it should be simply incised, opened, drained with the least possible handling of the adjacent parts.

We would all like to have Doctor Babcock tell us something of his experience with McArthur's direct irrigation of the bile ducts and duodenum by passing the soft rubber catheter through the drainage tube. McArthur claims that it will relieve cholemic sepsis and sustain the patient much the same as a proctoclysis would do.

NOTES ON DIABETES INSIPIDUS, WITH REPORT OF CASES.

J. W. Preston, M.D., Roanoke, Virginia.

(Read at annual meeting of West Virginia State Medical Association, May, 1914.)

The discussion of diabetes insipidus is here undertaken for the reason that the writer's personal experience has led him to believe that it is more frequently seen in private practice than a perusal of the text books or hospital reports would indicate, and that it should be more constantly borne in mind in routine examinations, especially in hysterical and neurasthenic subjects, whose urine commonly runs low specific gravities, for when least expected cases are encountered and may be easily overlooked. In truth, a new chapter has been added to the consideration of this disease by our slowly accumulating knowledge of the glands of internal secretion, and a brief review of its recent literature will best bring out the salient points.

As primary may be classed those cases in which no pathological lesion is evident *post mortem*, but which follow closely upon such intangible causes as fright, exposure, hysteria and alcoholic excesses, which on the one hand may never be cured, and upon the other may get well suddenly following an attack of fever, the application of a blister or other things which affect the nervous system in some unknown way. It is, however, the class of cases secondary to some demonstrable lesion which have acted as an entering wedge and cast a gleam of light over the obscure field.

It was in the sixties that Claude Bernard demonstrated that the puncture of the floor of the fourth ventricle in animals produced an excessive flow of urine of low specific gravity, since which time it has been often observed that similar results occur in certain cases of brain tumor in the human located in this region, but it was reserved for Shafer and Mangus to discover, in 1901, that any irritation or congestion of the posterior lobe of the pituitary gland produced the same results, as did also the injection of its substance hypodermically. The work of Cushing is confirmatory, and in his analysis of one hundred cases of disease of this gland six showed polyuria, in five of whom the diagnosis of diabetes insipidus had previously been made clinically. It

should be emphasized, however, that in this field there is still much speculation, some disputing as to whether the middle lobe may not also have to do with this condition as well as other portions of the brain. Among such cases syphilitic lesions seem to predominate and are often widespread at the base.

Then upon the whole, since there is no demonstrable constant lesion of the kidneys or other organs, there is but little doubt that their inability to excrete solids is due largely, if not altogether, to disordered nerve or gland functioning, which in some part of the body has to do with the behavior of the particular cells of the kidneys whose work it is to take care of the different urinary constituents, and it is here, in fact, that a very interesting phenomenon presents itself, in that the total solids of the urine have been shown to exceed, with the one exception of uric acid, their output in health, notwithstanding the fact of the indisposition of the kidneys to take care of them. The gist of the whole situation then is the flux of water necessary to carry off these solids.

Touching the symptoms of the disease, these are well known in typically marked cases and need not be here enumerated. It is the beginning cases and those which do not show the cardinal symptoms which are of more direct interest. In our experience the one thing that oftenest side-tracks a correct conclusion, or, as one may say, a first suspicion of the disease, is the train of symptoms which are common to almost all neurasthenic or hysterical conditions, as above alluded to, notably vague indefinite pains throughout the back, sleeplessness, frequent urination and sometimes thirst. There is also one other factor which tends to complicate the matter, particularly if one have not the disease under consideration in mind, and that is the low specific gravity of the urine characteristic of these conditions in common. However, with one's suspicion aroused, a few specimens from a twenty-four-hour collection, will usually determine the matter, showing a constant low specific gravity with a much increased total quantity, but one must, in this connection, exclude interstitial nephritis, which, of course, can be done by appropriate tests.

There is, however, one crucial test deserving greater publicity, which is that of the behavior of the urine in reference to the

excretion of sodium chloride. Given an excessive amount of sodium chloride, the total quantity of urine of the normal individual does not rise, but the sodium chloride does in proportion to the amount ingested. On the contrary in diabetes insipidus the sodium chloride content does not rise and neither does the specific gravity, but the quantity of urine excreted rises sufficiently to carry off the solids in a given time.

Touching the prognosis, it is to be regretted that recent work has helped but little except possibly in the one particular of the aid afforded by the Wasserman reaction in selecting those cases which have a syphilitic basis, thus enabling one to get more directly at the causative agent.

Benario reports a number of cases in point and concludes that "in every case of diabetes insipidus, therefore, acquired or inherited, syphilis should be suspected even in the absence of any history or sign of it. Examination of the blood and of the cerebrospinal fluid by the Wasserman technic will aid in the differentiation."

As to the treatment, this is one disease in which, insofar as the writer is aware, no one has ever even proposed a specific. A successful remedy in one case may not in the least benefit another. Tyson states that of all drugs, iodide of potash has rendered him service in the greatest number of cases, but it is not even mentioned by other authors of equal standing. It goes without saying that if a causative factor is in evidence it should receive appropriate attention. A full discussion of drugs, however, cannot here be entered into, but suffice to say that those meeting with favor have been, for the most part, such as would tend to quiet the nervous system and tonics as indicated. It would seem that attention to the proper elimination by the skin would tend to relieve the tax upon the kidneys to a considerable degree and should not be overlooked.

The one measure, however, standing far and away ahead of all others is that of limiting the amount of sodium chloride ingested, and it goes without saying that the articles of food containing the greatest amount of this are the ones tending most to overwork the kidneys, and their enumeration need not here be made.

Following closely upon these is the question of the proteids, which, as we know, are largely excreted by this route, but it seems

to be concluded that they are of somewhat secondary importance, provided, of course, their salt content be low. There is no need of limiting the various condiments and relishes, which is so necessary in inflammatory conditions of the kidneys.

In a disease dependent primarily to so great an extent upon the fickle influence of nerve and psychic factors it is indeed remarkable that quackery has not played a greater part than it seems to have done, and it may be that psychotherapy has a legitimate field here. Electricity in its various forms applied over the lumbar region seems to be of real good in some cases, but whether this results from its effect through the nervous system directly or indirectly as a psychic agent may be an open question.

CASE No. 1—Mrs. A. G. S. Age 22. Married one year. Weight 116; at marriage 150. Consulted me October, 1911, on account of a pustular eruption over hands and forearm simulating impetigo. No evidence of syphilis. Complained of discomfort about back and lower bowels; pain across shoulder blades like "something pulling down;" constant neuralgic-like pains through temples and around eyes; slight cough, but no other evidence of tuberculosis. Bites finger nails constantly; sleeps very poorly; no appetite except for sweets. Says she catches herself staring and cannot read with any satisfaction, as attention seems riveted on one word or phrase. She noted on-set of these symptoms about six months ago and at same time began passing too much urine, as she thought, and drinking too much water. Not sure which began first. It should be stated that she complained of being "parched inside." One week later obtained specimen of twenty-four-hour urine, showing a total quantity of three gallons, alkaline reaction, specific gravity 1005, albumen negative, sugar negative, indican negative, which disclosed the true nature of her trouble.

She was put upon valerianate of zinc, and given appropriate instructions as to diet and hygiene. She reported at the end of the second week that she was very much better, and I flattered myself upon the good results of the medication ordered until she made the frank statement that the capsules smelled so bad she had not taken them. A second specimen of urine showed practically the same finding as the first. At this time information was elicited that serious family troubles were brewing and that a separation from her husband was imminent. This was the last heard from her, much to my regret.

CASE No. 2—Mr. F. B. T. Age 27. Came in August 19th, 1912, complaining of discomfort across the sacral region and down legs to back of knees; constipation and some loss of weight, which at this time was 133 pounds; pulse 100. His work being that of a pipe fitter, pains were ascribed to straining in a bending position, as there was no suspicion of any diseased condition; but being somewhat puzzled as to a definite diagnosis, more as a routine than otherwise, a specimen of his urine was requested, which showed it

to be perfectly clear, of acid reaction, 1.002 specific gravity Squibb's urinometer; a thin ring of albumen present by the nitric acid test, but no precipitation on boiling, and on microscopical examination no casts or other abnormality.

Two days following a specimen from a twenty-four-hour output showed a total quantity of eight and one-half pints, other findings the same as above except the specific gravity had risen to 1.004. He then stated that he was drinking a great deal of water, which he attributed to aspirin given for relief of pains in the back.

The true nature of his trouble now being evident, he was placed upon a diet in which the sodium chloride and proteids were reduced to a minimum and upon a prescription for bromide, for which a little later valerianate of zinc in four-grain doses was substituted. September 7th the total quantity of urine had dropped to six pints, still maintaining a specific gravity 1.004. On September 15th total quantity was reduced to five pints, and on the 18th specific gravity had risen to 1.005, and pains in the back and lower limbs had very much diminished.

At the end of a month's treatment total quantity was five pints, specific gravity 1.012, pulse 81, systolic blood pressure 100. From this time on the treatment was varied by the addition of ferruginous tonics and a laxative as necessary. Slight discomfort continued in the back and down the limbs, and when he passed from observation after three months' treatment he showed the slight gain in weight of four pounds; specific gravity of urine 1.015 and general symptoms somewhat improved.

In reply to a letter of inquiry he now advises that he sailed for Panama on January 12th, 1914, and that just before his departure from home an examination made by a physician in another city showed that his trouble continued to such an extent that he was doubtful as to passing the government examination, but as no questions were asked along this line and no information volunteered he did not experience any trouble in securing his position. He further stated the significant fact that within the brief period of eight weeks' residence and work in the Canal Zone he has gained thirty-four pounds, and that he not only feels perfectly well, but that a recent examination of his urine shows it to be normal in every respect.

In reviewing these two cases two interesting facts present themselves in common, namely, that both patients had been married within the year, likewise that both came in for treatment of conditions apparently foreign to the underlying cause, and neither had thought particularly of the abundance of urine as being of consequence, and indeed this fact did not occur to the writer until he came to a routine examination.

And further, what would seem also most pertinent in connection with the last case is the quick and very decided gain in weight and sense of well being on removal to a hot climate, suggesting that the relief of the kidneys afforded by their work being

taken up in a large measure by the skin, may have been a key to the situation, and since this disease is one so essentially rebellious to treatment, so annoying and debilitating, this may be worth looking into further as a means of relief for these unfortunate people.

Discussion.—Dr. Pepper: "I notice the essayist in speaking of the treatment of diabetes mentions electricity with electrodes to the lumbar spine. It has been my habit to use in these cases the high frequency current by auto-condensation with very happy results. This treatment equalizes the circulation and produces diaphoresis without the depressing effects of the hot bath. It may be used as an adjuvant to any medicinal treatment you may think indicated."

METASTATIC INFECTIONS OF JOINTS—SOME ETIOLOGICAL FACTORS, DIAGNOSIS AND TREATMENT.

E. F. Peters, M.D., Maybeury, W. Va.

(Read at annual meeting of West Virginia State Medical Association, May, 1914.)

That all non-traumatic joint inflammations are metastatic in origin and not due to metabolic changes within the body is now, by many competent observers, conceded to be a fact. To go into the various theories regarding the causes of arthritis would require unnecessary time and space, and to attempt to classify joint infections in accordance with these theories would complicate matters, and in a great measure defeat the purpose of this paper, which is intended to deal with the practical side of this subject.

McCrae divides the arthritides into two classes—first, those cases in which an etiological factor can be demonstrated, and, secondly, those cases in which no etiological factor can be demonstrated.

It is the time-honored custom of grouping all of these joint infections together under the head of acute and chronic rheumatism and the so-called "rheumatic conditions," which has given rise to so many diagnostic and therapeutic errors and allowed the helpless patient to drift along on salicylic acid or some of its derivatives until he is ultimately overtaken by grave cardio-vascular changes or left a helpless sufferer from ankylosis of one or more joints.

It is not my purpose to deal with traumatic arthritis, so we shall pass on to the consideration of acute infectious arthritis or rheumatic fever.

Osler classifies rheumatic fever with infectious diseases, but states that "the bacteriology is still under dispute." Strumpell states that "acute articular rheumatism is an infectious disease," and after enumerating many of the exciting causes of the disease, such as the prolonged exposure to dampness and cold and the dangers of certain occupations in contributing to "rheumatogenous influences," he says: "And yet it is possible to regard all these influences as being merely indirect causes, assuming that they favor the development or action of the specific micro-organisms, and furthermore it is by no means exceptional to see a case of articular rheumatism in which no history of exposure to cold can be obtained." Dieulafoy teaches that acute articular rheumatism is most probably due to microbes, and with the exception of pseudo-rheumatism, under which he classifies joint infections which occur in the course of blennorrhagia, scarlatina, puerperal infections, erysipelas, mumps, pneumonia, etc., he believes that all other varieties of acute and chronic rheumatism belong to the same family.

In the February (1914) number of John B. Murphy's *Clinics* he says: "It is my conviction that every type of non-traumatic joint inflammation is a metastatic manifestation of a primary infection in some other portion of the body. It is my further conviction that there is no idiopathic rheumatic arthritis any more than there is an idiopathic peritonitis."

Among the many organisms which have been described as causes of rheumatic fever the streptococcus rheumaticus, described by Poynton, Payne and others, seems to be a causative factor from the fact that it has repeatedly been isolated from the throats and joints of persons suffering from acute rheumatism, but in dealing with these so-called rheumatic infections we should not forget that a pure culture infection is the exception and not the rule, and while the streptococcus rheumaticus is probably the predominating organism in the acute cases many other micro-organisms have been found at the focus or point of infection, and in the subendothelial lymph spaces of the joints and in the joint cavity, indicating

that in most if not all cases we are dealing with a mixed infection, and the more the case deviates from the classical symptoms of rheumatic fever and the less the response to salicylic acid treatment the stronger the evidence that we are not dealing with an infection due solely to the streptococcus rheumaticus. Many micro-organisms are capable of producing cardio-vascular and joint changes. Cole, in Osler's Clinic, produced experimentally arthritis, endocarditis and pericarditis by the injection of streptococci.

Rheumatic fever differs in some respects from a true septic infection, but the two have many symptoms in common. It is a well known fact that endocarditis, pericarditis and arthritis are pathognomonic of both diseases, but in a true septicemia or pyemia suppuration of the joints often occurs, while in rheumatic fever suppuration is never met with.

In accordance with the latest teachings, which are substantiated by actual observation and experience of competent men, we are beginning to look at the so-called rheumatic conditions in an entirely different light and to govern ourselves in their treatment accordingly. We realize that true rheumatic fever and even the group of arthritides classified collectively under the name of chronic rheumatism, in a strict sense, occupy a contracted field as compared with ten years ago.

We as physicians are too prone to use the term rheumatism and rheumatic conditions to cover a multitude of errors in diagnosis, and with the sense of false security given by these diagnoses we fail to search for or treat the real cause of the arthritis.

With the evidence at hand it seems that we are safe in assuming that rheumatic fever is an infectious disease, and that the streptococcus rheumaticus is the principal causative factor, but how does it gain access to the joints? These micro-organisms and others which may contribute to the pathology of the joints in this disease do not belong to the blood or lymph stream of normal patients; hence they must have some port of entry. This form of arthritis together with the common accompaniments, endocarditis and pericarditis, are most often found in patients suffering from acute or chronic infections of the tonsils, pharynx, naso-pharynx, nose and accessory sinuses or alveolar processes, and it is the earnest

belief of the writer that these acute infections of the joints as well as the chronic infections are metastatic in origin and carried directly from the focus of infection to the joints through the blood or lymph stream.

It is in this type of acute arthritis that salicylic acid and its derivatives do the most good, and it is very probable that the good results obtained from the administration of these remedies are due directly to their destructive action on this particular organism, the streptococcus rheumaticus, and the nearer a pure culture infection is approached the better results we get from these remedies.

Dieuilafoy says: "The varieties of acute and chronic rheumatism which appear sometimes distinct when present in extreme types have such close relationship that it is necessary to place them in the same family."

Strumpell, in his chapter on chronic polyarthritis, says, in part: "It is hardly possible to doubt that the same specific poison which excited the acute arthritis maintains possession of the joints and produces the chronic inflammatory changes." In the same chapter he says further, that "chronic synovitis may pass imperceptibly into arthritis deformans." Even gout presents many clinical symptoms which would lead us to the belief that it is also infectious, while at present we must hold to the uric acid and faulty metabolism theory and acknowledge, as Osler and others do, that we know nothing more. As the old verse goes, "Wine is the father of gout, feasting is its mother, and Venus is the midwife." This sums up the exciting causes of gout in a majority of cases so far as we know at present, but when we take into consideration the train of gastro-intestinal symptoms which inevitably follows in the wake of over-indulgence in alcoholic drinks and rich and highly seasoned foods by those of sedentary habits we realize that it is possible, yes, probable, that the joint symptoms are metastatic in origin and that the primary focus of infection might be found somewhere in the gastro-intestinal canal.

That uric acid deposits in the joints and an excess of uric acid in the blood are found in all gouty patients must be admitted, but what causes the fever, the chills, and the temperature which accompany all typical attacks? What causes the pain, tenderness, redness and swelling of the joints? What

causes the early cardio-vascular and renal changes? Are all these due to the presence of uric acid? If so, what is it that so disturbs the normal chemical processes as to bring about these various phenomena? These are questions which we hope future investigators will help to answer by throwing new light on the etiology and pathology of this disease.

In the diagnosis of joint infections the most important distinction to be made is between the so-called rheumatic infections due to bacteria of low virulence and those due to virulent pyogenic organisms which, by their destructive actions upon the synovial membranes and other joint structures, soon end in a fibrous or bony ankylosis of the joints involved.

The failure to distinguish between these forms of joint infections has caused many errors in treatment in the past and will continue to do so in the future so long as we try to cover a multitude of diagnostic sins by a diagnosis of rheumatism and a salicylic acid prescription.

In the diagnosis of mono or polyarthritis, either acute or chronic, it is most important that we locate the primary focus of infection so that it may be removed, if possible, by appropriate treatment and thus save the patient from the dangers and suffering attendant on succeeding attacks.

When endeavoring to arrive at a diagnosis of a joint infection we should keep in mind as causative factors tuberculosis, gonorrhoea, syphilis, typhoid fever, pneumonia, scarlet fever, mumps, erysipelas, puerperal infection, smallpox, chickenpox, dysentery and influenza. Joint inflammations occurring in the course of these diseases or after convalescence has been well established are, generally speaking, metastatic in origin and usually due to the micro-organism causing the primary disease, and may cause death from septicopyemia or destroy the joint structures if appropriate treatment is not instituted early and persistently carried out. A history of the primary trouble should aid us in diagnosing these secondary joint lesions. We should not fail to recognize the fact that many micro-organisms are capable of producing pus under favorable conditions. It is true that the streptococcus and staphylococcus are the most common pus producers, but other forms which may invade the system and cause suppuration are the bacillus typhosis, bacillus coli, pneumo-

coccus, bacillus influenza, bacillus pyocyaneus and others.

We should always look with suspicion on a case in which only one or two joints are involved. We may be dealing with a tuberculous, gonorrhoeal, syphilitic or a virulent pyogenic infection. It is in this class of cases that a diagnosis of rheumatism is productive of most harm, and if treated as such the patient will probably lose the use of the joint or joints, to say the least.

These virulent metastatic joint infections should be recognized early and treated surgically. Murphy says that "a metastatic infection will always lead to the destruction of the joint when initiated by a chill, and it means that virulent micro-organisms are passing through the blood," and he teaches that we may get an idea of the type of joint infection from a history of the primary lesion; that grip and pneumococcus metastases take place with as great regularity as the eruptions in eruptive fevers; in streptococcus infections metastases appear in the joints in from twenty to forty-eight hours; grip and pneumococcus metastases take place in from eleven to fifteen days; Neisserian metastases can be expected in from eighteen to twenty-two days; furuncular infections metastasize into the joints in from nine to eleven days, and mixed infections on the surface of the body in about ten days.

While the case history often points to the atrium of infection and in many instances gives us an idea of the kind of micro-organisms which is causing the trouble, we should go further and make careful physical examinations in each case in an effort to locate the real focus of infection.

If a patient comes to us suffering from an arthritis of obscure origin we should begin a strict search for the cause. We may find a pair of diseased tonsils or a chronic pharyngitis; the patient may have suffered for weeks from an old pyorrhea alveolaris, associated, of course, with a diseased condition of the teeth; adenoids and a chronic catarrhal condition of the nasal mucous membrane, associated with a diseased condition of the accessory sinuses and middle ear and mastoid disease may be found.

The larynx, lungs and pleurae should be carefully examined for physical signs of acute or chronic inflammatory diseases, and the stomach, duodenum, ileum, appendix, sigmoid, rectum, gall bladder, pancreas,

urethra, urinary bladder, prostate, kidney and genital tract of the female should be examined in an effort to find some infective focus from which infection could metastasize into the joints.

Intestinal stasis, believed by Hunter and Lane to be an important factor in the causation of arthritis, is worthy of consideration, and if present should be carefully weighed. Suppurating lymph nodes and all inflammatory conditions of the skin and subcutaneous tissues, including furuncles, carbuncles, infected cuts and abrasions, pustular acne, etc., should be considered as causative factors, especially in obscure cases.

We are most likely to find the focus from which infectious material may metastasize into the joints either on a mucous or cutaneous surface. In either case we are confronted by inflammation and ulceration; these pathological lesions are continuously bathed in a purulent or macro-purulent discharge, and the mouths of the blood vessels and lymphatics are kept open by the inflammatory process and constantly suck in, so to speak, the various micro-organisms and their products.

An understanding of the pathology of arthritis is essential to successful treatment. Find the focus of infection and remove it if possible. Salicylic acid and the salicylates are not specific as claimed by some authorities. They cannot be considered infallible even in rheumatic fever. Their administration, however, does much good, but does not remove the cause or prevent relapse.

To continue to treat even rheumatic fever with these remedies through successive attacks, without exhausting our diagnostic skill in an effort to find the primary cause, would unnecessarily expose our patients to the dangers of grave cardio-vascular or joint changes.

Granting that the streptococcus rheumaticus is the principal micro-organism causing rheumatic fever and that the administration of salicylic acid or the salicylates kills or prevents the growth of this particular organism in the blood, it does not remove the focus of infection and exerts little or no influence against other micro-organisms which may be active at the focus.

In all cases where the arthritis is due to streptococci or other micro-organisms of low virulence, first eliminate, if possible, the source of infection and give a course of autogenous vaccines made from the particu-

lar organism or organisms which are active at the source of infection. If an autogenous vaccine cannot be obtained, stock vaccines give good results in many cases.

Rheumatism Phylacogen, said to be an aqueous solution of metabolic substances generated by bacteria grown in artificial media and made in accordance with Dr. A. F. Schafer's theory of multiple infections, has been extensively used both in this country and abroad, and many flattering reports have been published from time to time recording a high percentage of cures from its administration. The writer's experience with this bacterial derivative has been limited to a few cases, and while the cases treated showed improvement under the administration of the rheumatism Phylacogen, the number treated was small, comparatively speaking, not enough upon which to base a personal opinion as to the general efficiency of this treatment in rheumatic infections.

In acute metastatic infection of joints due to virulent pyogenic organism, if we save the joint structures and prevent bony or fibrous ankylosis, we must act promptly. Murphy teaches to aspirate infected joints and inject a two per cent. solution of formalin in glycerin into the joint cavity, together with the application of a Buck's extension and the use of an autogenous vaccine. This treatment will save the joint if instituted early, but if we let these cases go on we may be forced to drain the joint, and if the patient survives we will most likely at a later date be confronted by a strong fibrous or bony ankylosis which can only be relieved by some open surgical procedure.

SKIAGRAPHY AND THE INTERPRETATION OF THE NEGATIVE.

R. H. Pepper, M.D., Huntington, W. Va.

(Read at annual meeting of West Virginia State Medical Association, May, 1914.)

Skiagraphy is the art of writing the shadow of the density of the component parts of an opaque body on a sensitive plate by means of transmitted light. The most popular light used to attain this result is known as the Roentgen ray. It is impossible in a paper of this character to go into a detailed description of the apparatus to produce the ray. Text books innumerable have

been written upon this subject, but the object of this paper is to give in a concise and brief manner a few salient points necessary to the proper writing of a shadow picture and its interpretation, of interest only to the beginner or the inexperienced operator.

The sensitive plates are made by numerous manufacturers, and each will claim some superiority for his special make, but after selecting one it will be well to continue its use, that you may become accustomed to the amount of exposure necessary to get the best result, for the proper length of exposure for one plate will be an over or under-exposure for another. You will perfect your technique thereby.

The plate, after being placed in double envelopes of black and yellow paper, with the film side next to the plain side of the envelopes, must be brought in as close contact to the part to be skiagraphed as is possible, and to prevent fogging of the plate by secondary rays it is well to place a sheet of lead beneath the plate.

The part to be examined should, when possible, be taken in two positions, antero-posteriorly and laterally, or one at right angle to the other. This is not only important in showing location of foreign bodies, but shows the extent of pathological conditions as well. It is well to follow this rule even in skiagraphing the hand, which is not always done by expert operators.

The next important step is to centralize the tube so that the rays striking the target of the anode will be deflected to the center of the diaphragm of the tube holder, or that the point of emission of the rays may strike the center of the plate. This will insure a fine, clear negative devoid of any blurring. In some cases it is necessary to use a compression diaphragm in taking a pelvis, a spine or a hip or when looking for calculi in hepatic, renal or vesical regions. In other words, it is of vital importance that we focus the ray of normal incidence and cut out the secondary rays as far as possible; in this manner we secure a sharp negative, permitting of easy interpretation.

To insure an even illumination of the sensitive plate the tube must not only be centered as above described, but it must be placed at the proper distance from the plate. A good rule to follow is to have the distance of the tube twice the length of the longest measurement of the plate. For instance, if you are using a 10 by 12 plate

make the distance of the anode 24 inches from the plate. If a 11x14, then make the distance 28 inches and so on. Do not forget that the measurement must be from the anode and not from the glass wall of the tube, for if the diameter of the tube were 7 inches it would be half the diameter, or three and a half inches too far from the plate.

The next step is the time of exposure. This will give the beginner more trouble than any other part of the technique, for upon this depends four factors, as follows:

1. The distance of the anode from the plate.
2. The thickness of the object to be skiagraphed.
3. The penetration of the tube.
4. The milliamperes of current passing through the tube.

It is at once apparent that if these factors are continually changing, then it becomes a matter of guess work on the part of the operator, but such is not the case. By the aid of a rule he may measure the anode distance and the thickness of the part. With a good penetrometer he may measure the exact penetration of the tube, and the milliamperemeter measures accurately the amount of current passing through the tube. Rather than to try to fix in one's mind a table of time exposures it is much better to use a Peabody-Winter exposure meter, which is a sliding scale taking in consideration the above four factors, and is sufficiently accurate for all practical purposes and gives the exposure time in seconds. It will save the beginner many over-exposures as well as under-exposures, and not only insure the continuity of his religion, but will save the additional expense of a swear room.

The improvement in apparatus and operating technique has so enlarged the field of X-ray usefulness since its discovery in 1895 that it is now not only used to detect the presence of foreign objects in the body, but has become an indispensable aid in diagnosis. So that if the physician or surgeon does not possess an apparatus it becomes vitally necessary that he refer his cases to the radiographer for verification of his diagnosis and to make his position sure when in doubt. The latest advance in its use is the practical and almost infallible means of diagnosing diseases of the bones and joints, enabling the diagnostician to make a prog-

nosis and to select the proper treatment of the case in hand.

To become trained in the reading of the negative it is necessary that we possess a diagnostic box, containing a window of ground glass behind which is a number of electric lights controlled by a rheostat, that the light strength may be changed from a very dim to a strong brilliancy. The control of the light is very important.

One must know the appearance of the skiagrams of the normal tissues, not the usual anatomy of the body, *but an X-ray picture of this anatomy* as it is in normal conditions. To do this, if you haven't the time or the material necessary to make pictures of the different parts of the body, then it would be well to purchase an atlas of skiagrams of the natural anatomy. One of the best is that of Amedee Granger of New Orleans. From the study of these pictures one may so familiarize himself with the X-ray appearance of the tissues, bones and joints that he will quickly recognize anything out of the natural and will be able to diagnose pathological conditions.

The following is quoted from the above mentioned work:

"Before one is competent to correctly interpret an X-ray plate he must know and thoroughly appreciate:

1. That an X-ray negative is a shadow-graph.
2. The necessity of being familiar with the appearance of radiographs of the normal anatomy.
3. To be familiar with the pathology of bones and joints the abnormal X-ray shadows are always easily accounted for by definite pathological changes in the bone or joint.
4. The importance of the relative positions of the tube, the patient, and the plate to each other.

1. The X-ray picture is a shadowgraph.

The X-rays that reach the plate affect the film as do ordinary light rays. When we interpose between X-rays and the photographic plates objects of different atomic weight, the heavier substances prevent the passage of the rays more than the light ones, and the film being unequally acted upon, shows not an image, but shadows of various tones. Precisely the same thing occurs when we skiagraph any part of the human body, composed as it is of structures of varying densities. The bones appear

white on the plates, the other tissues vary in tone from a light to a dark gray. Therefore a good negative would show not only foreign bodies and gross pathological lesions of the skeleton, such as fractures and dislocations, but would also show changes in bone structure, the presence of callus, of effusions and exudates, tubercular involvements, etc.

2. A thorough and minute knowledge of the appearance of the human anatomy, seen with the X-rays, is of paramount importance.

Dr. E. W. Shenton in an admirable article in the *Physician and Surgeon* says: "The surgeon who relies on his anatomical knowledge to translate a radiographic appearance will find that he depends upon a broken reed."

Possibly the most striking instance of this is found in the normal appearance of a knee joint. We are immediately struck by the high position of the patella, accustomed to seeing it pictured in all the text books on anatomy as covering the joint. The epiphyseal line in children and young adults could be mistaken for fractures. The appearance of the pelvis of a young child, with the apparent separation between the pelvic bones and the absence of the femoral head, all due to unossified cartilage, is striking. Another source of error could be made in the acromio-clavicular articulation. Unless the normal appearance of joints and of bone textures of individuals, from children to adult life, is known the diagnosis of pathological conditions becomes impossible.

3. We must know what changes in the structure of bones and joints the different diseases produce. The general course of the affection, its predilection for certain bones or joints and for particular parts or structures of these.

For example, new bone formations, callous, cartilage before ossification, throw a shadow which is only slightly more dense than that of the surrounding soft parts, but becomes denser as ossification takes place. In such diseases as rickets, where proper calcification does not take place, tuberculosis, where we find absorption of the lime salts, and a rarifying osteitis, the bone shadow becomes paler than normal.

In syphilis, around bone abscesses, the walls of circumscribed osteomyelitis, we

find a dense bone shadow due to bone sclerosis.

Effusions and extravasations cause shadows, the density of which depend upon the nature of the effusion or extravasation.

Hemorrhages producing blood cysts or pigmented areas of extravasated blood, so commonly seen in sarcoma, show as irregular shadows, which are of considerable diagnostic importance.

4. The importance of the relative position of tube, patient and plate to each other.

The X-rays are given off as a cone of light from the target or anticathode of the tube, the most central ray, or ray of normal incidence, produces a perfect shadow—that is, one without distortion. The farther we get away from this ray the more oblique the ray employed becomes, the greater the distortion of the shadow produced by them. From the above it becomes obvious that the normal ray should be known and that it should be made to pass through the center of the plate or part examined. Besides, we must also know at what distance the tube was when the skiagraphs were taken, as the closer the tube to the plate the greater the shadow produced, and this enlarged shadow, free from distortion, may become the source of error. The part should always be as near to the plate as possible, because:

1. The farther away from the plate, the greater the shadow.
2. The greater the angle it forms with the plate, the more distorted the shadow.

For that reason the hip and shoulder present unusual difficulties.

To illustrate the importance of the above the following experience is related. One night, or rather morning at 1 o'clock, a lady patient was brought to my office in an ambulance by her family physician. She had sustained a fall upon her left hip, and it was suspected that she had fractured the neck or head of the femur.

The symptoms were as follows:

Pain, especially upon moving or touching the limb.

Foot everted.

The measurement of both limbs was the same; neither lengthening nor shortening could be discovered.

Crepitus absent.

A skiagram was taken under the following unusual conditions: The patient was left on the cot on which she was carried into the operating room, as moving her

not be placed directly under her in the usual way it had to be inclined at a slight angle with the joint. While the operator would know the distortion he would naturally get from this position, it would not prevent him from making a positive diagnosis of a fracture about the joint if any existed. From the distortion he would get an overlapping of the shadow of the great trochanter with the neck of the femur, yet a fracture would be plainly shown. The skiagram after development showed the expected distortion, but no evidence of a fracture. The torn ligaments and contusion about the joint were plainly evident. A diagnosis was made accordingly.

Later, during my absence from the city, a Baltimore physician lectured to our county society upon Pott's Disease, displaying some skiagrams to illustrate his lecture. The physician who had referred the above case took him to my office and displayed the above described skiagram. Without knowing the conditions under which the picture was made, without knowing the relation of the patient to the plate, without knowing the distance of the tube from the plate, this expert (?) radiographer diagnosed an impacted fracture of the femur. Not content with this, being an expert surgeon, (?) he proceeded to break up this impaction. At least it was so reported by the daily papers.

I later sent this skiagram to a number of radiographers in Chicago, and not one of them diagnosed a fracture.

This experience, while a very unpleasant one, serves the purpose of showing the importance of knowing the above mentioned factors in reading or interpreting the X-ray negative.

In conclusion I will quote Dr. John Hall Edwards in a highly interesting article in the September, 1906, number of the *Archives of the Roentgen Ray*, who says:

"As long as surgeons are content to accept the evidence of a radiograph taken under unknown conditions and by an unskilled operator, so long will mistakes be made and the way be kept open for fraud and quackery. The value of the interpretation of the radiograph depends entirely upon the knowledge and experience of the expert who is asked to give an opinion, and a good opinion cannot be formed from viewing a radiograph produced from a Crook's tube held in an unknown position.

A large amount of distortion is easily detected by any one used to the examination of X-ray pictures, but a small amount is frequently difficult to recognize even by an expert."

420 Eleventh Street.

Correspondence

EUROPEAN CORRESPONDENCE.

LONDON, August 3, 1914.

EDITOR W. VA. MEDICAL JOURNAL:

Since my letter to you from Berlin, written about the middle of July, Europe has gone mad, as all the world knows, and every interest, commercial, scientific, social and personal, in any way touching those ill-fated countries has suffered immeasurably.

The American surgeon abroad, on pleasure, rest or study bent, has been no exception. Of the many hundreds who attended the Clinical Congress of Surgeons in London, July 27th to August 1st, the great majority traveled independently and were not members of the touring party which was formed under the supervision of the officers of the Congress. The long journey was made by them, not for the Congress alone, but with the expectation of visiting the Continent and its leading clinical centers after London. The last day of the Congress was the day upon which Germany declared war against Russia, with the result that the wildest pandemonium prevailed throughout London. This was especially true among the tourists in the city, and particularly with those surgeons booked for the Continent. Not only were they in the unpleasant plight of suddenly discovering their summer plans frustrated and the trip just begun at an end, but they faced the greater embarrassment of not possessing return steamer reservations, or if so, upon dates weeks in the future.

Great confusion and anxiety prevailed, which were intensified by the further embarrassment resulting from a money stringency. War was declared on Saturday morning. The London banks close at 1 o'clock on Saturday. The next day being Sunday and Monday a "Bank Holiday," the opportunity for securing cash on travelers' checks became painfully small, or when, perchance, they were exchanged into British notes, even these were not readily nego-

tiable. Only those who had the foresight to secure gold in advance of these panicky days were in any measure comfortable.

It seems that all Britain takes a business holiday about three times a year, and this Monday was one of the appointed days. When Monday came the government decided, because of the feverish financial situation, to extend the holiday to Friday. Consequently the difficulties of securing money became increasingly great, and the tourists' dilemma correspondingly grave. Early in the week, however, the American Ambassador and Consul, together with influential business men from America then in London, came into conference and formed an organization to care for their stranded countrymen. As a result a measure of adjustment as to the financial problems was thereby accomplished. Steamship accommodations were arranged for with greater difficulty, and many continued on the waiting list at last accounts.

The real purpose of this letter, however, is to continue the story of the surgeon tourists who visited the Continental clinics prior to the London meeting. While we suffered the same annoyances and inconveniences in London just referred to, we treasured the memory of a thoroughly complete and satisfactory Continental tour.

The program, which began with Paris, June 20th, and ended with Amsterdam, July 24th, was carried out to the letter. All the well known university and hospital clinics of the Continent were visited. The hospitable and magnanimous spirit which was so manifest in Paris, Berne, Zurich, Munich, Vienna and Berlin continued unchanged in the other cities of Germany and of Belgium and Holland.

After Berlin we visited Leipzig. Here two of the most complete hospitals in all Europe are located—the St. Jacobs, an old institution with a history, and St. Georges, a new hospital with a promising future. The latter is seemingly perfect in all its appointments and the most completely equipped institution seen upon the tour, with the possible exception of the Schwabing Hospital in Munich, which is like unto it. This is especially true with respect to appliances for hydro, electro and mechano-therapy.

The St. Jacobs' Hospital has a proud history in the notable men who have devoted their lives to scientific work here and whose distinguished careers are inseparably asso-

ciated with this institution. On a long honor roll the best known in America are Struempel in medicine, Thiersch and Trendelenberg in surgery. Prof. Erwin Payr, full professor of surgery in the University of Leipzig, is the worthy successor of these honored surgeons. To him we owe a special debt of gratitude for a splendid clinic covering brain, joint and gastro-intestinal surgery. A case which called forth special applause was one in which a new oesophagus had been constructed in the stead of a hopelessly strictured one. The new oesophagus was formed out of the skin lying in front of the sternum. The first step in the operation had been so to roll in the integument as to make a long cylindrical tube. The second step, after the healing process was completed, consisted in connecting the upper end of the skin tube to the healthy oesophagus in the neck and attaching its lower extremity to the cardiac end of the stomach. At the time of our visit the patient was about ready to leave the hospital, and he demonstrated for us with evident pleasure his ability to swallow food through this new channel.

Our eyes were also opened in surprise by the demonstration of a new mechanical device. It was the adaptation of a powerful and specially adjusted magnet to the treatment of intestinal adhesions. A form of inert iron mixed with bismuth is swallowed by the patient with suspected adhesions and when this mixture has had time to reach the bowel this magnet is passed over the abdomen and attracts the iron within the intestine. Its power to raise the bowel was manifest to the eye in abdominal wall undulations as the magnet was carried over the surface. It is claimed by a repetition of this treatment that adhesions can be so stretched as to effect a mobility of intestines which have been strongly fixed and responsible for food stasis.

Decided improvement in this troublesome class of cases was reported as a result of this treatment, and no evil effect observed in any patient.

Where the intestine is free the response to the magnet is prompt and very apparent. When bound by adhesions the contrary is true. Taking advantage of this fact a diagnostic value attaches to the use of the magnet and consequently it serves as an aid in the localizing of adhesions.

Leipzig is the leading printing and publi-

cation center of Europe. An exposition was being held in the special interest of these industries at the time of our visit. On one of the evenings of our stay here the members of our party were the guests of the Leipzig surgeon at an entertainment given in the exposition grounds. It was greatly enjoyed and the attention and courtesy deeply appreciated.

Jena was the smallest city visited, but its entertainment, social and scientific, was of such a character as to insure its looming large in our memories for all time.

This ancient town with its narrow and winding streets, its quaint old gabled houses built to the pavement, with their windows and balconies radiant with flowering plants, makes a charming picture. In the center of the town is a small public square and here is the evening meeting place for the people. The town hall, five hundred years old, looks down upon this square and many cafes face upon it. In front of these students of the university are seen in great numbers sitting about tables indulging in the national refreshment and singing their college songs.

A part of this square was separated by improvised screens covered with the branches of trees, and within the enclosure a public reception was tendered the American party, Prof. Lexor and wife being chiefly responsible for the entertainment. A band played American and German national airs during the evening which, together with a punch of a peculiarly attractive brand, kept the spirits of the company running high until a late hour.

On the following day Prof. Lexor held a clinic, which was rated one of the best of the entire tour. In his gall bladder technique he excels as well as in plastic surgery of the face. His work in restoring absent noses and lips was a revelation.

In Heidelberg there is much to interest and entertain. The city is beautifully located in a narrow valley with wooded mountains towering above it, and has for its chief attractions the historic university and the wonderful old castle.

In the medical department of the university Prof. M. Wilnus occupies the chair of surgery. He gave two clinics, filling all of two mornings, and his work covered a large field—goitre, prostate, gall bladder, breast cancer, trifacial neuralgia, epilepsy. In the latter disease he performs an opera-

tion from which he receives results that are encouraging in young subjects. He claims 25 per cent of cures. It is of little benefit in old cases. It is a decompression operation. He approaches the brain by a low route, such as that followed in the gasserian ganglion operation. He lifts the temporal muscle and removes bone to the size of a silver dollar. He then incises a flap of the dura and carries it beneath the temporal muscle, in the hope of establishing permanent drainage. The low trephine gives less chance of involving the motor centers and causing an operative paralysis.

Of Frankfort, Wiesbaden, Cologne, Brussels, Dusseldorf and Amsterdam we have the pleasantest memories. Near Cologne is the town of Leverkusen, in which is located the great drug manufacturing establishment of Frederick Bager & Co. On invitation we devoted an afternoon to the inspection of this gigantic plant, whence comes so many of the familiar drugs—*aspirin*, *veronal*, *sulphonal*, *trional* and hundreds of others. The buildings cover many squares and the central administration buildings are palatial. Here, in the evening, was given a banquet to the American surgeons, which was fit for a Kaiser!

We left Amsterdam for London on the 24th of July, and were there for two days for rest and relaxation before the opening of the Congress on Monday, July 27th.

The London meeting was a brilliant success from every view point. Some five hundred clinics were spread before us, producing a state of "embarrassment of riches." It was not possible to visit all the hospitals or embrace these exceptional clinical opportunities in a single week, although both the mornings and afternoons were devoted to them.

Sir Rickman Godlee, president of the Royal College of Surgeons, acted as chairman of the London committee, and Mr. Herbert Patterson as secretary, and in every way possible they assisted the officers of the Congress.

The hospitals and their staffs responded to this unusual call upon them with fine spirit and gave their brethren in Canada and the States a clinical feast unparalleled in the history of the Congress.

Every evening in the grand hall of the Hotel Cecil three to five addresses were delivered by distinguished surgeons from every quarter of Europe and America, and

by the end of the week scarcely any surgical subject of general interest was left for discussion.

Space forbids entering into details concerning clinics or addresses, except a mere mention of the discussion of the closing evening.

The subject was the live one of intestinal stasis, and the names of many professional stars were upon the program. Interest centered chiefly upon Sir Berkeley Moynihan and Sir Arbuthnot Lane. The former is somewhat of a conservative and the latter a radical upon this subject. Sir Arbuthnot inclines to the contention that fecal stasis is largely responsible for all the ills that flesh is heir to; that goitre, rheumatoid arthritis and even tuberculosis are intimately related to this condition. Sir Berkeley remarked, to the amusement of the audience, that in his wanderings through the pasture fields of his native England he had been made painfully aware in some of his experiences that intestinal stasis was not a characteristic of the British cow, and yet bovine tuberculosis was decidedly prevalent. It was up to Sir Arbuthnot to reply to this serious thrust at his pet theory. After speaking at length upon the theme of the evening he said: "Now, as to that cow. Her difficulty is that she is not always in the pasture field, but is shut up in a barn for the winter. It is there that her intestinal stasis is encouraged, and as a result her tuberculosis develops." It was thus he cleverly extricated himself from what seemed a serious dilemma. So ended a profitable clinical experience in the hospitals of Europe.

And now poignant grief possesses the soul in thinking upon the sorrows and woes unspeakable that are overwhelming the countries just visited because of the horrors of war and the distress incalculable that is around and about the institutions, and which afflict the physicians and friends who so recently extended their hospitable arms to welcome their American visitors.

May the God of all nations soon bring reason and peace again to the troubled peoples of Europe.

ROBERT J. REED.

MEDICAL NOTES FROM THE FIRING LINE OF THE EUROPEAN WAR.

Thus far any medical notes from the European war have been unsatisfactory and unreliable. The readers of the Journal may be interested in this report, coming from one of the medical correspondents of the London Times. He writes:

"I have had an opportunity during the last few days of visiting several of the great Brussels hospitals and ambulances and of seeing some of the wounded who have been sent down from the front.

"Two facts have struck me very forcibly. First, a very large number of the Belgian soldiers are wounded only in the legs, and, secondly, many soldiers seem to have collapsed through sheer exhaustion.

"In peace times one sees and hears little or nothing of this extreme exhaustion because, of course, in peace time the almost superphysical is not demanded, but war brings new conditions. Some of these Belgian soldiers were at work and on march during the stupendous days of Wednesday and Thursday of last week, practically without a moment's respite. They went literally till they dropped. Only with actual loss of consciousness was duty relinquished. As a medical man this remarkable state of affairs interested me enormously. That force of will to fight and struggle until the last gasp of exhaustion one sees often, of course, and a heat stroke in hot climates is a commonplace, but this type of exhaustion is, by itself, the final triumph of brave spirits.

"The victims present a very alarming appearance when first met. They seem to be almost dead. They are limp and pale and cold. After a time, however, strength begins to return and recovery is usually not protracted. In every case the men who had been knocked out in this manner expressed the keenest desire to return at once to the ranks. They seemed even to hold themselves in some contempt. Many of them have already had their wish.

"The fact that so many of the Belgian wounded had been shot in the legs aroused considerable surprise at first in medical circles. It soon became clear that this was not merely a matter of chance. When the German prisoners began to come in and

were interrogated, the explanation was forthcoming. It transpired that orders had been given to fire low, no doubt in the belief that a man hit in the leg must be immediately placed hors de combat. While there may be something in this theory, it remains a fact that a flesh wound in the thigh or calf tends to heal quickly and that many of these wounded are already on the high road to recovery. The Germans wounded, on the other hand, have been hit for the most part about the body.

"The Belgian doctors are splendid and are working magnificently. Two schools have been converted into hospitals, and I saw an operating theatre, beautifully equipped and arranged, which had been made out of a classroom in twelve hours. Only the blackboard remained to indicate the original purpose of the room.

"Unhappily the surgical work at Liege was greatly hindered by lack of chloroform, which could not be obtained in sufficient quantity at the moment when it was most required, and this through no fault of the medical authorities."

Much more medical history of this accursed war will be written before the end comes; meantime the shocked consciousness of mankind stands appalled, resentful, despairing. Dynasties may crumble before all is done; and, as the New York Evening Post aptly puts it, Empires may change their form of government. But whatever happens, Europe—humanity—will not settle back again into a position enabling Emperors—one of them senile, another subject to melancholia, and the third often showing signs of disturbed mental balance—to give, on their individual choice or whim, the signal for destruction and massacre.

F. LeM. H.

WHY SODIUM CITRATE PREVENTS CURDLING OF MILK.

Bosworth and Van Slyke (Am. Jour. Dis. Children), after experiments to test the matter, conclude:

1. The addition of sodium citrate to milk in infant feeding is a frequent practice in cases in which the use of normal milk results in the formation of large lumps of tough indigestible curd in the stomach. The favorable results attending such use of sodium citrate have never been explained on the basis of actual investigation.

2. Work previously done by the authors suggested a chemical explanation of the observed

facts and led them to test the matter by an experimental study of the action of sodium citrate on milk.

3. The addition of sodium citrate to normal milk increases the amount of soluble calcium in the milk, this increase resulting from a reaction between the calcium caseinate of the milk and sodium nitrate, by which is formed sodium caseinate (or calcium-sodium caseinate) and calcium citrate. The reaction is reversible.

4. The curdling of milk by rennin is delayed by the presence of sodium citrate; when there is added 0.400 gm. of sodium citrate per 100 c.c. of milk (equal to 1.7 grains per ounce), no curdling takes place.

5. The curd produced by rennin in the presence of small amounts of sodium citrate (0.050 to 0.350 gm. per 100 c.c. or 0.20 to 1.5 grains per ounce) increases in softness of consistency as the amount of sodium citrate in the milk increases.

6. The results of our work indicate that at the point at which rennin fails to curdle milk we have in place of the calcium caseinate of normal milk a double salt of calcium-sodium caseinate; this double salt, when rennin is added, is changed to a calcium sodium paracaseinate which, owing to the presence of the sodium, is not curdled.

7. The practice of adding sodium citrate to milk at the rate of 1 to 2 grains of citrate per ounce of milk appears to have a satisfactory chemical basis in the reaction between the sodium citrate and the calcium caseinate of the milk. The amount added is governed by the object in view, viz., whether it is desired to prevent curdling or only modify the character of the curd in respect to softness.—S. L. J.

DANGER OF WHOOPING COUGH.

"American Medicine" says editorially: It kills more than typhoid, yet we dread it less. No doubt the older children mostly recover, but the case death rate is said to be 25 per cent in those less than a year old, and most of the mortality is of children less than five. These facts must be explained to the public, to stop the criminal habit of exposing babies to the disease "to have it over with." There is no longer any doubt that the cause is the bacillus found between the cilia of the tracheal and bronchial mucous cells, and called the Bordet-Gengon bacillus though Spengler described it in 1897—an instance, by-the-way of the old habit of professional neglect of the discoveries of our pioneers. This delicate organism perishes very promptly after expulsion from the host, so that infection is generally if not always spread by spray or droplets coughed out. That is, a carrier is necessary, and we must put an end to the universal carelessness with which mothers take their sick children into crowds to infect and kill others. In time we will consider this a crime warranting the confinement of mother and child in a municipal quarantine station.—S. L. J.

The West Virginia Medical Journal

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All articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over 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.

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Editorial

THE WORKMEN'S COMPENSATION LAW.

This new law has seemed to work hardship to the physician who does considerable surgical and especially accident work. As a consequence it has excited much discussion among the members of the State Association, which at the last meeting instructed its committee to investigate the existing conditions and try to bring about some relief to what seemed to be an intolerable state of things. This committee here presents its report, for which we ask a careful reading. The work has been well done, and the result is that conditions are found to be not as bad as had been supposed, and the Public Service Commission has been found to be composed of intelligent and broad-minded men who are disposed to do the fair thing toward the profession that is compelled to do for the public so much for which no pay is received or expected. We are quite sure that this

report will be read with greater interest than would any editorial which we might pen, and we therefore give to it editorial space.

S. L. J.

REPORT OF COMMITTEE ON PUBLIC POLICY AND LEGISLATION.

Fellow members of the West Virginia State Medical Association:

At our last annual meeting your Committee on Public Policy and Legislation was instructed to take up with the Public Service Commission certain grievances connected with the administration of the Workmen's Compensation Act. On the day following the meeting your President and Secretary met and outlined certain plans.

In June a meeting of the committee was held at Atlantic City. During the first of July, at a meeting of the Barbour-Randolph-Tucker County Medical Society, Dr. O. H. Hoffman was asked by this society to join our committee.

Dr. Hoffman met with us in Charleston and was of invaluable assistance to us by reason of his familiarity with the needs of the miner and the physician doing this form of practice. On account of his many years service as chairman of this committee, Dr. J. W. McDonald was asked to meet with us. This he very cheerfully did and was of much service to us. Your committee arrived in Charleston Wednesday, May 6th, and at once asked for an appointment with Governor Hatfield. Much to our regret we found that he was out of the city. From nine until midnight was spent with Dr. McCulloch, the very efficient Medical Director. If anyone thinks the office of Medical Director is a sinecure let us assure him he is mistaken.

Wednesday morning was spent in further conference with Dr. McCulloch. Wednesday afternoon we met, by appointment, the commission. The Public Service Commission consists of Messrs. Ott, chairman; Ogden, Bronson and Kilmer, all of whom were present. The Commission met us cordially, showed us every courtesy and spent the entire afternoon with us.

We stated our grievances to be three in number:

First—The impression had gone out that the Commission had attempted to fix our fees:

Second—The fees as fixed by the Commission were inadequate;

Third—The fact that we receive no compensation for reports sent to the Commission concerning the injured.

The attention of the Commission had not heretofore been called to the first objection; they could readily see that the heading on the fee bill as issued by themselves would be interpreted by many as an effort to fix our fees.

The Commission most emphatically repudiated any such intention. Let us repeat this—every member of this Commission is absolutely opposed to the idea of fixing our fees in any way. They do not want to fix them—neither do they want that impression to exist. Their

intention is to allow out of the funds on hand a certain amount towards paying the bills of the surgeon and hospital. If this settles the bill in full, as it will in the majority of cases, well and good, if not, then settlement for the amount in excess of what the Commission pays will have to be made between the interested parties.

The new blanks containing fee bills will be headed as follows:

"The Public Service Commission will pay out of the Workmen's Compensation Fund the following rates and fees for hospital and surgical attention to injured employees who are entitled to have such payment made out of this fund under the Workmen's Compensation Act, **the amount paid by the Commission in any case not to exceed \$150.00.**

NOTE:—Section 27 of the Act limits the disbursement by the Commission for medical, nurse and hospital services and medicines in any case to \$150.00. Where the charges for these services are in excess of the maximum allowance of the schedule of fees as herein set out, the payment of such excess should be arranged for between the interested parties."

No. 2—Inadequacy of present fees.

This was due in part to misunderstanding.

To illustrate,—many of us believed that the total allowance for a simple fracture of the femur would be \$15.00, this to include reduction and about three months' treatment. The intention was to allow not less than \$15.00 for reduction and first dressing; subsequent attention to be paid for according to amount of work done.

Your committee and the Commission spent the entire afternoon going over the fee bill item by item.

In the new bill you will find a substantial rise of many items. We were informed that about 39% of the money paid out so far has been paid to surgeons and hospitals. Of course it should be taken into consideration that the claims paid with the 39% are **finished**; those paid with the 61% are, in most instances, only started.

We believe it to be the intention of the Commission to allow adequate fees, **whenever their funds will permit.**

While there is plenty of money on hand to pay present bills, there is not enough to take care of the dependents in the future. The present assessment, like that of many old-time insurance companies, is inadequate and will have to be raised. Taking this into consideration we believe the Commission has allowed, towards the payment of our bills, all they can until the assessment is raised.

Dr. McCulloch showed us a great many bills he had allowed for surgical and hospital attention, and we could not but feel that many of them were entirely adequate. This because of Dr. McCulloch's action, **not** because of the printed fee bill. It is Dr. McCulloch's intention to take into consideration the actual work performed, and the circumstances under which it was done. Unless otherwise specified, the supposition is that the injury was of **average** severity and the attention given in the imme-

diately neighborhood of the doctor's office. If the doctor has had to travel several miles to attend the patient, if he has had to use more than an ordinary amount of skill, let him describe in detail the work done and the distance travelled. This is to be done on the back of the blank. By doing this he will very often prevent a deduction being made in his bill and save a great deal of unnecessary correspondence.

For the benefit of both the Commission and physicians we will state what reports are necessary before the Commission can pass upon a claim for compensation or for the payment of physician's or hospital bill.

CLASSES: 1st.—Where the claimant is disabled longer than one week and there is compensation, or compensation and medical or hospital bills to be paid.

2nd.—Where the claimant loses no time, or where period of disability does not exceed one week, but medical or hospital bills to be paid.

CLASS I.—Forms required:

Form No. 13—Certificates of Employer.

Form No. 6—Formal Application of Employee.

Form No. 7—Preliminary Report of Attending Physician.

Form No. 7a—Final Report of Attending Physician.

New Form No. 12—Formal Application for Payment of Medical or Hospital Services; if there is a bill for medical or hospital services, said form to be properly executed and sent to Commission with physician's final report.

CLASS II.—Forms required.

Form No. 13—Certificate of Employer.

New Form No. 12—Formal Application for Payment of Medical or Hospital Services.

In Class I, no bill will be paid unless forms No. 13, No. 7 and No. 7a have been received, and it will save the Commission a great deal of extra work if bill is sent in with the physician's final report.

In the future all bills must be itemized and presented on Commission's new Form No. 12, and the certificates on same properly executed. These forms have just been received from the press, and a supply will be sent to any physician or employer asking for same. It is the desire of the Commission that a supply of these forms be in the hands of the physicians at once and that all old forms No. 12 (white) and all forms No. 14 be destroyed.

NEW FORM NO. 12.

The New Form No. 12 is designated to take the place of both the old form No. 12 (white) and form No. 14—Physician's fee bill. It asks for certain facts from the employee concerning his injury and treatment received; allows a full page upon which to itemize bill and has the revised schedule of fees on back. **There are no affidavits required**, but it has to be certified to by the physician or hospital rendering bills, by the employee and the employer. All physicians and hospitals should ask for a supply of these forms at once, as it is much easier to get the employee's certificate to same at the time he is discharged than it is to hunt him up afterwards.

No. 3—No compensation for filling in the blanks:

We were informed that the Commission recognized the injustice of this and made preparation to pay for this service. Before doing so the Attorney General was consulted and he informed them that it would be unlawful to make any such payment out of the funds in the hands of the Commission. We then asked that we be made agents of the Commission and thereby relieved of liability for mal-practice suits arising from our connection with this work; we agreeing to take this as compensation in full for making our reports.

We were asked to confer with the Attorney General's office regarding this. Here we were informed that in all probability only a legislative act could give us this standing.

The Commission can only aid us by their report to the Governor. This they have promised to do; further action will have to be taken up with the Governor and the Legislature.

Allow us to call your attention to the vast amount of work being done by the Commission.

The average number of claims received per month is over 1500. In each case where apparently the disability will last longer than one week, the following forms must be received before the claim can be passed upon by the Medical Examiner; written up by Claim Clerks and presented to the Commission for their action; viz:—

Form No. 13—Report of the Employer.

Form No. 6—Formal Application of the Employee; and

Form No. 7—The Report of the Attending Physician; and before final payment is made

Report No. 7a—Final Report of Attending Physician.

A great many cases require in addition to the above forms, special examinations and reports by the Local Medical Examiner; Special Medical Examiner, or an Inspector, all of which requires an immense amount of correspondence.

In cases where the disability is longer than one month a partial payment is made monthly until case is closed. This necessitates claim passing through all departments at each payment, and so far as the office work is concerned is the same as handling a new claim.

Again a medical or hospital bill is very often received after compensation has been paid and case closed, and as bills are filed and only considered in conjunction with all evidence in the case, it is necessary for the payment of such bill that claim travel the same course that it did for compensation, i. e., to Medical Examiner, Claim Clerk, Commission and Auditor.

The Commission desires us to call the physicians' attention to this and ask them to present bill with their final report of the case.

In conclusion let us say that, in our judgment, the Commission has done all it could for us **under present conditions**.

We found them to be a body of men well worthy of the State and we believe especially well fitted to carry on this work. Let us aid them all we can.

There should be a feeling of mutual helpfulness and mutual dependence between us. We believe the Commission feels this way. As an evidence of this we quote from a speech of the Chairman of the Commission, Mr. Lee Ott, delivered a short time previous to our visit before a meeting of the Miners' Institute of our State.

Mr. Ott said in substance that there were three parties that the Compensation Act was dependent upon for its success, and he would name them in the order of their importance to the working of the act. They were, first, the doctors of the State; second, the employers, and third, the employees, meaning, as he explained, that from the doctor must come honest work, and the most accurate information, and upon his honor and integrity the Commission must rely most of all for true reports of disabilities and time to be allowed for same.

Many workmen have exaggerated views of what is due them. Let us familiarize ourselves with the provisions of the act, and do all we can to explain to the injured just what is due him.

Let us aid the Commission in paying every man what is justly due him and see that he gets no more.

Respectfully submitted,

G. A. McQUEEN, Chairman.

J. W. McDONALD,

— PETERS.

C. O. HENRY.

O. H. HOFFMAN.

R. E. VENNING.

A. P. BUTT.

Society Proceedings

Ohio County Society.

January 26th—President Thornton presiding, 25 members present. Dr. Best read a paper on the conduct of normal labor. He urged the importance of the doctors being engaged in advance; of making a proper physical examination of the patient and of her being provided with all the necessary conveniences for the expected confinement; frequent examinations of urine necessary in the latter weeks of pregnancy; emphasized the importance of the use of silver nitrate solution in the babies' eyes. Dr. Baird said that it was his practice to grasp the fundus immediately after the head was expelled and keep his hand on it until the expulsion of the placenta. He also administered ergot after the third stage. A number of others discussed the paper.

February 2d—Regular meeting, President Thornton presiding, 45 members present. An address was delivered on the "Newer Advances in Practical Therapeutics" by Dr. Alfred C. Crofton of Chicago. He first spoke of the use of hydrochloric acid in the treatment of pernicious anemia. The average case, he said, is ordinarily considered incurable; first one should be absolutely certain that he is dealing with a genuine case of this disease. The diagnosis from severe secondary anemia is rather difficult and can only be determined by the blood

picture. He spoke of achylia gastrica, hypochlorhydria, diarrhea and nutritional disturbances being generally present in cases of this kind. The efficiency of hydrochloric acid is marked and enough should be given to supply the normal amount in the gastric juice. He advised the use of from 10 to 15 drops of the undiluted acid, 15 minutes after meals, followed by the same amount a quarter hour later. It should be given in mucilage water in combination with a proteid diet, since no free hydrochloric acid is found in the stomach after a strong proteid diet. This treatment has shown excellent results in 30% of the cases so treated. Cancer of the stomach and Bright's disease are often mistaken for pernicious anemia. He said that the treatment was purely empirical, but is harmless and often very useful.

Dr. Crofton then discussed "The Use of Autogenous Vaccines in Hodgkin's Disease," and gave the technic of the preparation of this vaccine from an excised gland, blood serum agar being the best medium upon which to grow these bacteria. The vaccine was used according to ordinary methods.

"Egg Anaphylaxis in Asthma" was the next subject discussed. The food factor must be considered in every case of asthma where the etiology cannot be made out. The speaker advised the elimination of egg albumin from the diet in these cases, some patients having shown a hypersusceptibility to egg albumin, the precipitin method of determining this hypersusceptibility being the one way of making it out which he described in detail. In conclusion Dr. Crofton spoke of "Dietary Measures in the Treatment of Diabetes." Diabetics sometimes become neurotic by being told that they have sugar in their urine. The speaker emphasized the importance of determining whether you are dealing with a renal diabetes or otherwise, and finding out the tolerance in each individual case. Hyperglycemia precedes the presence of sugar in the urine. In renal diabetes you have a condition similar to phloridzin diabetes, the kidneys having a greater permeability for sugar. In true diabetes the determination of carbohydrate tolerance eliminates the possible danger of the appearance of diacetic acid and acetone in the urine, the appearance of these being an indication of acidosis, the result of a too rigid carbohydrate-free diet. Acetonuria can be produced in the normal person by a total withdrawal of carbohydrates from the diet. A sugar-free diet is not necessary and is not only dangerous but disgusting. The amount of carbohydrates allowed should correspond to the tolerance of the individual. Determine the patient's tolerance for different carbohydrates and proteids and then try a combination of the two. The oatmeal diet has been overdone. It has given excellent but not satisfying results. In juvenile diabetes it has been beneficial. It is bad practice to give oatmeal at the outset. In order to get the hyperglycemia down cut out proteids for 48 hours before giving the oatmeal. There are cases in which it is better to let the patient pass a little sugar than to be absolutely sugar free. The drugs recommended were opiates, salicylates

and urotropin. He was working on a sugar obtained from plants by photo-synthetic process which he hoped would prove satisfactory in the treatment of diabetes. The paper was discussed by Drs. Jepson, Ackermann, Drinkard and Gadosh.

Dr. Schwinn exhibited pathological specimens of two fibroids of the uterus and a dermoid cyst of the ovary. Adjourned.

J. E. BURNS, Secretary.

Mingo County Society.

Williamson, W. Va., Aug. 19, 1914.

A meeting of the Mingo Medical Society was held in Williamson, August 18th, at the office of Drs. Nunemaker and Slayden, the entire community being in gloom from the awful tragedy at Glen Alum on the 14th, when the society lost a most faithful member, ex-President Dr. W. D. Amick, at the hands of dastardly assassins. The following resolutions were adopted:

Whereas, the Great and Supreme Ruler of the universe has, in his infinite wisdom, removed from among us one of our worthy and esteemed practitioners, Dr. W. D. Amick; and,

Whereas, the long and intimate relation held with him in the faithful discharge of his duties in this society makes it eminently befitting that we record our appreciation of him; therefore, be it

Resolved, That the wisdom and ability which he has exercised in the aid of our organization by service, contribution and counsel, will be held in grateful remembrance;

Resolved, That the sudden removal of such a life from our midst leaves a vacancy and a shadow that will be deeply realized by all the members of this society, and will prove a serious loss to the community and public;

Resolved, That we extend to the family our heartfelt sympathy in their hour of bereavement, especially do we sympathize with the dear one who has been walking by his side, sharing his triumphs, and partaking of his sorrows;

Resolved, That a copy be sent to the family, a copy spread on the minutes of this society, and a copy sent to the West Virginia Medical Journal and the local newspaper for publication.

MINGO COUNTY MEDICAL SOCIETY.

G. B. IRVINE,

R. A. SOLTON,

G. T. CONLEY,

Committee.

W. H. TRIPLETT, Sec'y.

State News

As noted in our last issue, our good old friend and fellow member of the State Medical Association, Dr. W. H. Sharp, was, after several years of impaired health, compelled to yield the victory to the grim destroyer. Needless to say, he has long been recognized as one of the leaders as a physician and surgeon. Dr. Sharp was an honor to his profession, ever ready for the call of sickness, he devoted his life to the welfare of his fellow man. In rain

or shine, over rugged hills of the country, he was ever present and ministering at the bedside of the afflicted. Always a deep student, he was well posted in the advanced surgery and other work of the profession, and was considered an authority on various branches. Broadminded and scholarly, honest and conscientious in all things, he was a type of Christian manhood whose life is worthy of emulation. One of the prominent physicians today discussing the death of Dr. Sharp said that he was one of the most honored and respected men in the profession. All expressions on the life and character of Dr. Sharp are of a similar nature. For many years he practiced in Wood county and had an extensive acquaintance in Parkersburg.

Wesley Harris Sharp was in the seventy-second year of his age, having been born in Kent county, Md., on September 27, 1842. His early education was attained in private schools in Delaware, Maryland and Connecticut. He was a member of the class of 1864, at Princeton University, during the Civil War, but left there and went to Norfolk, where he enlisted as hospital steward under his father, Solomon S. Sharp, a naval surgeon. Directly after the war he came to West Virginia, locating in Grafton, and, some years afterward, during the oil excitement, located at Volcano, Wood county, which was then a flourishing town. He was in active practice there until 1889, when he came to Parkersburg and has since resided in that city.

Dr. Sharp was a charter member of the West Virginia State Medical Society, and was a member at the time of his death. He contributed valuable papers at the meetings of this association as well as at the local medical society of which he had been a member since its organization. He was a devout member of Trinity Episcopal Church, and had been active in church work all his life. He was the treasurer and senior warden of the church for a number of years.

Dr. Sharp is survived by his wife and the children are Misses Marion and Janet Sharp and Harris and Julian Sharp. A sister, Mrs. Edgar Staples, of Salina, Kansas, also survives.

* * *

Died.—Early in August occurred, at Arnoldsburg, the death of Dr. J. P. Swentzel, one of the pioneer physicians of that region. The doctor did not have the advantages of the modern practitioners, but was a very useful man in his day and greatly respected. He resided for years at Grantsville, removing later to Arnoldsville, where he practiced to the last, he being the only physician in that community. He labored as a physician for 53 years, dying at the age of 80. He is survived by a son, Homer, a resident of Huntington.

During the forty years of residence in Calhoun county, Dr. Swentzel had endeared himself to all he came in contact with. He was an honest, upright, conscientious Christian gentleman and his passing is mourned by hosts of friends in all parts of this and adjoining counties.

Married.—On Saturday, August 8th, at Fairmont, Ruth O'Donnell Henry, daughter of Dr. C. O. Henry, to William Edwin Brooks.

* * *

Married.—On Wednesday, August 12th, Dr. Ralph H. Boice, of Sistersville, Secretary of Tyler County Medical Society, to Miss Mabel Chatterton, of same city.

* * *

Removals.—Dr. H. W. Neel from Spruce to Cass, W. Va.; Dr. R. H. Eames from Keeferton to Widen, W. Va.; Dr. A. B. Barnett from Wheeling to Cleveland, Ohio; Dr. G. B. Wheeler from McKendree to Cressmint, Ky.

Book Reviews

Practical Therapeutics.—By D. M. Hoyt, M.D., formerly Instructor in Therapeutics, University of Pennsylvania; Fellow of the College of Physicians; Assistant Physician to the Philadelphia General Hospital. Illustrated, containing 426 pages. C. V. Mosby Company, St. Louis, Publishers. Price, \$5.00.

Prescription writing is briefly considered.

The most striking characteristic is the arrangement of drugs in groups according to their therapeutic action. At a glance the reader can get the drug best suited for the case in view or study them to advantage. T. G.

How to Collect a Doctor Bill.—By Frank P. Lewis, M.D., Physicians Drug News Co., Newark, N. J.

Most physicians have at some time in their career felt the need of such information. More often, perhaps, it is a feeling of want of tact in the work of collecting rather than want of knowledge. Some physicians, like some business men, are naturally, it would seem, better collectors than others and have given the subject but little study.

The author thinks that the man who does not try to collect will injure his practice and this is true. Cutting down prices is a bad practice. The book will prove a valuable one, especially to the young physician. It has valuable information for all classes of doctors in the form of exemption laws and other legal information in all the states of the Union. G. D. L.

Progressive Medicine

INTERNAL MEDICINE.

Dr. John N. Simpson.

Diabetes Mellitus: Treated With the Bulgarian Bacillus.

(Abstract of paper by Philip Horowitz, M.D., New York City, in N. Y. Medical Journal, Aug. 8th.)

Horowitz used the bacilli three years ago on a member of his family who was suffering with an auto-intoxication and also had diabetes. He found, as the auto-intoxication improved, the diabetes cleared up, and in ten weeks the pa-

tient was apparently well. In this case there was a high sugar index, acidosis, loss of weight, marked drowsiness, polydipsia, polyphagia, and polyuria. In March, 1911, he reported three other cases. Since then he has had a series of 102 cases. Fifty-two have had the sugar entirely eradicated. In four it has been reduced to a trace, and in 39 there was improvement. One did not improve, two died of nephritis, two of pneumonia, one of cancer, one with tuberculosis. Forty-seven were complicated with acidosis and eight had nephritis. In 70 cases there was an auto-intoxication shown by the presence of indican. His treatment varied from a period of two weeks to fifteen months. The average was three months.

The treatment consists of two parts. First, the use of cultures of bacillus bulgaricus. Secondly, proper and well regulated diet. The bacillus acts to correct auto-intoxication, which he thinks always present. It corrects and aids carbohydrate metabolism. The bacilli by their power of forming lactic acid interfere with and slow down the carbohydrate metabolism. He thinks the condition is caused by a protein toxin or by toxins formed in the intestinal tract, which interfere with the function of the liver and the pancreas and possibly with all the organs which have an internal secretion. The dose of the cultures depends upon the degree of auto-intoxication and upon the severity of the diabetic condition. In an uncomplicated case, with not more than sixteen grams of sugar daily, the dose is 5 to 6 C.C. of culture, half an hour before meals and at bed-time. Each C.C. of the culture contains three hundred millions of bacteria. If the sugar excreted is between 16 and 25 gms. he uses 8 to 10 C.C. If over 25 gms. 16 C.C. If the output of sugar is low, but complicated by acidosis, he gives large doses of the culture. The lactic acid produced prevents the formation of acetone. He finds in marked auto-intoxication with large quantities of indican, the results are greatly improved by combining with the bacillus bulgaricus, the glycobacter peptoliticus of Metchnikoff. In some obstinate cases, he finds that colonic inoculation helps. He washes out the colon with saline solution, then introduces from 32 to 64 C.C. of the culture, warmed to 100° F, followed by a few ounces of luke-warm water. Full doses must continue for some time after the sugar disappears, usually from four to six weeks.

Strict carbohydrate food diet is no longer advocated, causing acidosis and hastening coma. He finds he must vary his diet somewhat for each patient. Care must be taken that the diet does not aggravate a nephritis if present. This is the general diet. In all cases should receive some form of carbohydrate, he prefers rice, oatmeal or wheatina. Each must be well cooked, and be given in quantities from 40 to 90 grams, preferably at breakfast. Sixty to 90 grams of toasted white bread, about four slices, 3x3½-inch, is allowed daily. As the sugar begins to decrease the bread may be increased. He permits 4 to 6 eggs a day. If the urine shows little or no indican and no complicating acidosis, the eggs can be prepared either soft

boiled, poached, scrambled or hard boiled. If indican is present have them boiled 20 minutes. If there is acidosis, he allows no butter or fat. Milk is permitted in only sufficient quantities to whiten the coffee or to loosen the cereal. Never more than four ounces daily. In mild cases a little sweet cream may be allowed. He does not permit butter or fat in any form in cases complicated with acidosis. The fat is broken up in the body to form betaoxybutyric acid and acetone. He permits lean meat in some form unless complicated with a diffuse nephritis. He begins with 250 grams of either broiled steak, lamb, mutton chops, chicken, turkey or squab, or stewed chicken, lamb or beef, without any vegetables or seasoning. He allowed no roast or fried meats or rich gravies. He prefers the meat given at noon. He finds the following vegetables good. Spinach, string beans, celery (raw or cooked), lettuce without dressing, and asparagus. He allows no vinegar or acids. As the patient improves he adds a small amount of green peas. When the urine has been free for some time from sugar, he allows a half of a small baked potato, later a whole one. At first grape fruit only is allowed; as the sugar clears up, sour oranges cautiously. Apples only when the urine is free from sugar for a long time. He does not allow fish on account of the ease with which it putrefies. Alcohol is not permitted in the beginning, but when the case clears up, a little Scotch whisky, dry sherry or claret may be given. Any good mineral water may be used.

Drugs.—In case of acidosis full doses of sodium bicarbonate are given, from one to two drachms four to six times a day. The acetone and diacetic acid disappear under it. In case of impending coma, he irrigates the colon with soda solution, and uses one quart of a sterile 4% solution of sodium bicarbonate, intravenously. When coma has developed there is little show. He finds that keeping the bowels open is a great help, and prefers those drugs that have a cholagogue action. Sodium sulphate, calcined magnesia, and Carlsbad salts. In case the colon has caked fecal matter, he uses an enema of 8 oz. of olive oil or Russian oil given at bedtime and allowed to remain over night.

(To be continued.)

Myalgia or Muscular Rheumatism.

A painful affection of the voluntary muscles of the fascia and the periosteal attachments.

It has been called by different names according to the region affected, as torticollis, pleurodynia or lumbago.

Etiology.—It usually follows exposure to cold, such as sitting in a draft, getting wet or sudden cooling after exertion, conditions which favor rheumatism. Lumbago often comes on suddenly, as when one stoops over to lift something. This is spoken of as a stitch in the back.

Its pathology is not well defined. Some have thought it due to a neuralgia of the sensory nerves. It is now known that each motor nerve has in its trunk fibres which have their origin from the posterior roots of the spinal

nerves. These give rise to sensations of pain and pressure which are not very accurately localized. Whatever may be the explanation, these affections are among the most painful for the patient and may tax our skill to the utmost to relieve them. Men are more frequently attacked than women and one attack predisposes to another.

The symptoms are usually entirely local. The pain may be constant but usually only when the part is moved. It may be dull, or when caused by movement severe and cramp-like. Duration is usually not long but may persist for weeks.

Lumbago is the most frequent form. It affects the muscles of the loins and their attachments. The pain may be so excruciating as to prevent the patient from raising his body or turning in bed.

The treatment is both internal and local. Gower recommends blue mass 1 grain twice daily. Sodium salicylate 15 to 20 grains t.i.d. with potassium iodide 10 grains t.i.d. are often found of service. While morphine $\frac{1}{8}$ to $\frac{1}{4}$ hypodermically may be necessary, but should only be given by the doctor. The greatest reliance should be placed upon local treatment. Massage when properly performed will be found the best form. Now massage does not mean rubbing the patient's back. This may do some good, but the massage which I mean takes all its forms. I find that the massage is greatly helped by a lubricant made after the following prescription.

R.

Camphor.
Menthol.
Oil of wintergreen, each oz. $\frac{1}{2}$.
Lanolin and lard, each oz. 1.
M.

Sig. Use locally.

I begin by a gentle stroking of the skin over the affected part. Then increase the pressure so that it becomes a kneading of the muscles, first using the fingers, the palms, and finally the closed fist. Then the part should be struck with the tips of the fingers as one strikes the piano. This should be done briskly and rapidly. The process is not very painful and the patient, after it is over, finds that he can move with greater ease. The ointment has a most comfortable after effect. In some severe cases I have found it necessary to strap the patient with adhesive strips from the middle of the back down over the hips, overlapping the strips so as to form a sort of jacket. I wish our physicians were better acquainted with massage. I think this lack of acquaintanceship and the fact that it is laborious have deterred them from using it. The Paquelin cautery used to quickly stroke the skin over the affected area is one of the best forms of counter-irritation.

I have found this same method of massage of great relief in the treatment of sciatica. Following the nerve from its exit from the greater sciatic foramen along its course down the leg as far as there is any pain, massaging the muscle and nerve as much as it can be done. I have seen a patient after such treatment

stand with comfort where before he had walked with his leg flexed at the knee and his body bent away from the affected side. Three or four such daily applications relieved him.

SURGERY.

Dr. F. L. Hupp.

Exophthalmic Goiter.

Dr. William Fuller (abstracted, in the *Old Dominion Journal of Med. and Surg.*, April, 1914) presents a report on exophthalmic goiter based on the experience of the members of the Chicago Surgical Society.

The subject is interestingly handled under five important headings, and embraces the personal observations of Chicago surgeons, covering a period of from three to five years.

1. What has been your experience with exophthalmic goiter, (a) as to the extent of work done in this line, (b) methods of treatment employed, and (c) percentage of cures obtained as regards thyrotoxicosis and secondary changes?

2. What particular operations have you employed; what methods do you suggest in various types and conditions now; what preliminary treatment, if any, do you use?

3. What have been your results as to mortality, (a) immediate, (b) remote?

4. What constitutes, in your judgment, a cure in exophthalmic goiter?

5. In what class of cases of thyroid enlargement do you advise operation; in what type of hyperthyroidism would you advise operation, and in what type would you advise no operation or conservatism?

Experience, Treatment and Cure.—Of the six hundred cases reported on by members of the surgical society more than 80 per cent of the cases were subjected to medical treatment before surgical measures were instituted. A few of the members of the society are enthusiastic as to the efficiency of appropriate and properly conducted medical treatment of exophthalmic goiter. Two of the reports contained short accounts of the benefits that were obtained by medical treatment in the severest types of Graves' disease with which the authors had ever met. The cures were apparently complete and permanent.

Of all therapeutic aids short of surgery none appears to have such decided benefits as complete rest enforced for long periods of time. Proper hygienic surroundings, carefully selected diet, the administration of sodium cacodylate, quinine hydrobromate, etc., are also regarded by many of the surgeons as valuable adjuvants in the preoperative or medical management of Graves' disease.

Fully 85 per cent or more of the cases of exophthalmic goiter are cured by operative treatment as regards both thyrotoxicosis and secondary changes in other organs. A few of the cases are not improved by operations, either in the toxicity of the disease or in the complications.

The improvement that follows an operation is usually prompt, but a few reports mentioned

the fact that the benefits of surgery in Graves' disease are sometimes delayed.

Methods of Operating.—The operative procedures used by the various members of the society for the hypertrophied thyroid gland as well as in exophthalmic goiter, are practically one and the same as regards method of technique. A Kocher operation, with or without division of the muscles overlying the goiter, is used by the majority; a few expose the goiter by incisions parallel with the sternomastoid muscle.

Considerable difference of opinion is expressed regarding the extent of surgery necessary in the several degrees or types of Graves' disease. The variation as to this necessity is seen by equally as complete cures in exophthalmic goiter, the result of simple pole ligation, as in operations which ablate more than half the gland. Drainage is important and is recommended in all operations. "Excision of one lobe and the isthmus in the largest number of cases; one lobe, the isthmus and the lower portion of the other lobe in the next greatest number of cases; excision of one lobe and ligation of either the superior or inferior thyroid vessels in the next largest number of cases; and preliminary ligation of the superior thyroid vessels in the smallest number of cases."

Mortality.—The immediate mortality in the six hundred operated cases of Graves' disease was not estimated to be higher than about 5 per cent. As to remote mortality nothing tangible or definite could be obtained. A very notable feature in some of the reports was a decrease in death rate with increase of experience in the operative work.

Indications for Surgery in Affections of the Thyroid Gland.—Surgical treatment is indicated in thyroid enlargement as voiced by a majority of the reports in: (1) goiter of undue size, producing by its own weight embarrassment to the act of respiration. In this class would fall cases with (a) irritating cough, produced by the goiter, (b) difficult swallowing, due to pressure of the goiter, (c) deformity; and (2) all cases of hyperactivity of the thyroid gland which are not at the same time suffering with acute exacerbations of the disease and in which other less radical measures have shown their inefficiency.

Conservatism is urged in the radical therapy of Graves' disease, occurring in young girls at the beginning of puberty; the rest treatment with other means of palliation should be persisted in longer than in older patients or until proof is positive that the case is amenable to no other treatment than surgery.

A short summary of the several reports here embodied, and showing the consensus of opinion of the society on the subject of exophthalmic goiter pertaining to the points designated by the questions propounded, shows the thyroid gland in its various degrees of altered function to be successfully managed by the following measures:

1. Rest, hygiene, and suitable medication, persistently employed for a reasonable length of time,

2. Limiting the blood supply to the gland by ligation of one or more of its arteries.

3. Ligation of one or more of the thyroid arteries, with removal of a greater or lesser portion of the thyroid gland.

4. A combination of two or more, or all of these therapeutic aids.

The full advantage of surgery in the treatment of exophthalmic goiter is realized only when this treatment is employed early; before complications and marked changes in other organs become the conspicuous features of the affection. On the other hand attention is drawn to the fact that there is a prevailing tendency among some surgeons to unhesitatingly operate on all forms of thyroid enlargement without evidence of thyroid intoxication, on the assumption that such cases are in reality cases of early Graves' disease.

Some credence must be accorded this hypothesis when the fact is recalled that the histologic pictures of many of the so-called colloid goiters are identical in every detail with many cases that are classified in the category of diseased thyroids now designated as exophthalmic goiters.

Finally it is advised that some effort be exerted in the treatment of all cases of Graves' disease to determine the extent of surgery necessary for a cure, and that any procedure too far reaching in its ultimate or remote effects, or likely to exceed this need, be strictly avoided.

The Operative Treatment of Hemorrhoids.

H. Graeme Anderson, M.B., Ch.B., F.R.C.S., London, England, in this article considers the ligature, clamp and cautery, and the Whitehead methods.

With regard to the choice of method the author believes that this should not be decided on until the sphincters are stretched and the hemorrhoidal condition reviewed. The ligature method is most generally applicable, and is very easily and quickly performed. It is especially suited for cases of three, four, or five piles, especially the mixed variety, when the external and internal piles can be removed at the one time. Very little blood is lost during the operation, and the after-pain can be controlled by morphine, whilst tag formation usually subsides later; or, if they are large, they can be removed under local anesthesia later. This method is the one to employ if any complication, such as fissure or fistula, be present. A patient can usually return to work six or eight weeks after operation.

The clamp and cautery operation is certainly the least painful; there is never any fear of stenosis afterwards, and if properly performed there should be no danger of recurrent hemorrhage. It is not suitable when external piles are present as well, or when a fissure or fistula complicates the case. It is especially suitable for cases of not more than three piles of the internal variety, and when there is no redundant anal skin or tags present. It is a bloodless method, and suitable for very anemic cases, and as it is the least painful method, it should be chosen for patients of a very nervous tem-

perament. If time is an important question, this method should be used, as the period of convalescence is considerably shortened. If the surgeon should be unable to see his patient again, he need have no fear of subsequent stenosis after the clamp and cautery method.

The Whitehead method should be reserved for the following cases:

(a) Where there is a general hemorrhoidal condition involving the whole circumference of the ano-rectum, and especially if there is extensive thrombosis or a considerable extent of prolapse.

(b) In cases where, though the piles may not be large, there is a pathological condition present which may be described as a pre-fissure or pre-fistula state. In this condition the anal valves are enlarged, and little blind submucous pockets may be found running upwards or downwards from the line of anal valves. These may have their mouths occluded and act like little incubating chambers, and are undoubtedly in many cases the starting point of fistula; whilst, if Ball's theory be accepted, enlarged anal valves lend themselves to the formation of fissure.

Whitehead's method removes this danger zone as well as the hemorrhoids.

This method should not be employed in all cases of hemorrhoids, but is well suited for the conditions mentioned above. If the after-treatment is properly carried out, stenosis should not occur.—The British Medical Journal, London, December 6, 1913.

Results of Treatment of Rectal Cancer.

H. Hartmann states that the records from eighteen surgical clinics, including his own, show with the low operative technic an immediate mortality of 15.8 per cent in 1,665 operative cases of rectal cancer; 68 per cent of the survivors succumbed to recurrence in a few years. This shows that 84 per cent of the patients with rectal cancer operated on by the direct technic are destined to die within a comparatively short period. The outcome is decidedly better when the low technic was supplemented by a laparotomy, the immediate mortality in 260 cases being only 37 per cent and the later mortality only 18 per cent. The aim should be, therefore, to perfect the technic for the combined operation, and Hartmann gives a number of suggestions, advising the laparotomy as the first step and closing with colostomy, excluding from the operation patients over 60, the obese, and those with defective kidneys, and removing with the cancer all the linked lymphatics.—Journal de Chirurgie, Paris, December, 1913.

Cancer of the Rectum.

D. F. Jones, Boston.

The operation of choice in cancer of the rectum in Jones' opinion is an abdomino-sacral, rather than an abdominoperineal operation. He has determined on a two-stage operation in a few of the cases. This consists in:

First Stage.—The inferior mesenteric is tied just below its junction with the aorta. The mesentery of the sigmoid is separated from the

posterior wall, the ureters identified, and the rectum, with all the pelvic fat, is separated in one mass down to the tip of the coccyx posteriorly, while anteriorly it is separated from the bladder, or vagina. After separating the bowel in this manner, it is held forward and the peritoneal flaps brought together behind it. Instead of dropping the sigmoid back into the abdominal cavity, the upper portion is brought out through a rectus incision, and a Lilienthal colostomy done, great care being used not to injure the vascular arches in the mesentery. After twenty-four hours, the colostomy is opened and the distal portion cleansed by frequent washing, both from below and above.

Second Stage.—After five to seven days, the sacral portion of the operation is carried out as in the single stage operation. The sigmoid is cut off as high as possible in the pelvis, and the proximal end inverted and left as an appendage to the colostomy. Jones has carried out this two-stage operation with excellent immediate results in two cases. If the carcinoma is sufficiently high to make a resection and suture desirable, or if it is desired to bring the end of the sigmoid down through the sphincter, the inferior mesenteric should be tied in the usual way, and the whole sigmoid and rectum freed from the posterior wall and pelvis, as in a single stage operation.

The peritoneal flaps, which have been turned back, are then sutured together close about the freed rectum, and the abdomen closed. In from four to seven days, the posterior operation is carried out, the growth and a sufficient length of rectum above and below the growth is excised with the whole inferior mesenteric artery, and the fat surrounding it. An end-to-end suture is then done or the end of the sigmoid is brought through the sphincter. Jones is convinced that spinal anesthesia is essential in the combined abdominosacral operation, if the mortality is to be kept down.—Boston Medical and Surgical Journal, November 13, 1913.

The Actual Cautery in Erysipelas as an Abortive Measure.

Kumaris, J. (Berlin Klin. Wochen.), May 18, 1914. Reviewed in Boston M. & S. Journ., August 6:

The author suggests, at the beginning of an erysipelas, punctate cauterization (with actual heat) of the whole involved area. The skin is lightly touched in many spots, one-half to one cm. apart, and he thinks that the resultant hyperemia and increased phagocytosis is of benefit, making the procedure at least worth trying.

PEDIATRICS.

Treatment of Impetigo Contagiosa.

Dr. Triboulet of Paris employs Ziehl's solution, which is ordinarily used as a stain for the tubercle bacillus.

In applying the treatments, the crusts of impetigo are first removed as thoroughly as possible by means of compresses soaked in a solution of sulphate of zinc (1-1200). Afterwards, by means of cotton-wool tampons, Ziehl's carbol-fuchsin solution is applied, with pressure,

to each pustule or scab. The fuchsin solution dries on the eruption of impetigo, forming a reddish varnish, which effectually isolates the impetiginous element from contact with the air. Applied in this manner, each day, it is not uncommon to notice the impetiginous crusts shrivelling up and becoming punctiform in the space of eight, six or even three days, according to the size of the crusts at the time the treatment is begun. When the last vestige of a crust has disappeared from the patient's skin, the fuchsin solution, if applied over the subjacent cups, beneath the crusts, speedily heals these lesions.

Dr. Triboulet remarks that, in an hospital service, so exacting that the attendants cannot give individual attention to the dressing of the crusts of each case of impetigo, or in families, where it is not possible to spend the necessary time in curing the crusts and applying suitable dressings, he has found that the daily application of the carbol-fuchsin solution, without any other formality, causes the impetiginous crusts to shrivel up and disappear.

This method of treatment is not suitable in recent eczema impetiginoides; it should be restricted to the individual pustules or scabs of impetigo contagiosa, the intervening healthy skin not being interfered with. The little patients should not be put back to bed, until the crusts touched with the fuchsin solution have become dry and present a varnished surface.

Ziehl's solution may also be applied with advantage to the pustules and scabs of ecthyma, to the eruption of confluent varicella, to the bulle of pemphigus and to other forms of pyodermitis, such as those associated with suppurations of the nose, or ear, etc.

Owing to the considerable proportion of phenol in Ziehl's solution (5 per cent), some practitioners might fear to use this preparation in large eruptions of impetigo. After prescribing it in hundreds of cases of impetigo in nurslings and in children convalescing from measles, diphtheria, scarlatina, etc., Dr. Triboulet says, that in none of these cases was any sign of phenol poisoning observed. Furthermore, even in cases in which a slight albuminuria had been found to exist, prior to the institution of this treatment, no evil influence resulted from the treatment itself.

For the reasons given, therefore; but, more especially, because it does away with large moist dressings in the treatment of the crusts of impetigo, Dr. Triboulet considers the carbol-fuchsin solution an ideal therapeutic agent in the treatment of that disease.—Canadian Jour. of Med. & Surg. S. L. J.

Pasteurized Milk.

Prof. R. B. Smith discusses this question in "The Medical Council" for August. We quote:

The only objections to pasteurization that are generally accepted as well founded are:

1. The partial destruction of the lactic acid bacteria which serve to restrain the action of the germs of putrefaction. The pasteurized product will not sour unless it is inoculated with the lactic acid germs but putrefies instead if kept too long. The process, as we have

seen, develops highly toxic substances, so it is very essential that milk once pasteurized should be protected against bacterial contamination.

2. Pasteurizing dirty milk, while it reduces the number of bacteria, does not destroy the toxic substances which have been formed as a result of their growth.

3. Pasteurization may be used simply to cover up dirty methods of production.

4. Bacteria increase faster in pasteurized than in raw milk.

Rickards concluded that bacteria will grow four times as rapidly in pasteurized milk as in the raw and based his conclusions on the counts which follow:

	Unpasteurized. Aver. count.	Pasteurized. Aver. count.
First day.....	1,087,000	44,000
After 24 hours in an ice box.....	22,617,000	3,691,000
Percentage increase	2,100	8,400
Ratio	1.	4.

This table illustrates the danger of allowing pasteurized milk to become contaminated. But in spite of the disadvantages, the advantages so far outweigh them that the method is the best we know for protecting ourselves against the dangers of impure milk, provided that we use care in handling the milk after pasteurization.

The digestibility of pasteurized milk is evidenced by a series of experiments carried out in Washington, D. C., by Mr. G. M. Oyster, co-operating with about 20 physicians and several graduate nurses during the years 1911-13. Some 1,100 babies were fed with raw and pasteurized milk and the rate of gain on the different diets carefully determined. The conclusions were:

1. The rate of gain of the babies was slightly greater on pasteurized milk than on raw.

2. The increased rate of gain seems to prove that the process of pasteurization did not impair the digestibility of the milk or cause any possible injury to its nutritive properties as an infant food.

Many eminent physicians and chemists hold that pasteurization of milk is highly desirable
S. L. J.

Treatment of Asthma in Children.

McClanahan in Am. Jour. Med. Sci. states that in the treatment of the asthmatic paroxysm care should be taken to have the room warm and to exclude draughts. If the child's bowels are distended with gas, a warm enema should be given. If the paroxysm comes on soon after a hearty meal, an emetic will give relief. Epinephrine solution (one to 1,000) hypodermically in doses of three to five minims proved quickly beneficial in two of the author's little patients, but in others was without effect. Other cases were relieved, respectively, by 1/30 grain of morphine sulphate, three grain doses of chloral hydrate, and inhalations of nascent oxygen. Where cough, wheezing, and dyspnea on exertion persist after the paroxysm proper has been subdued, the use of heroin in a syrup of hypophosphites will often benefit.

Antipyrine given at bedtime will sometimes allay cough that tends to disturb the child's sleep. For dry, teasing cough, one teaspoonful each of creosote and oil of eucalyptus may be added to a pint of water and the mixture inhaled, with the use of an improvised croup tent, for one half hour at a time two or three times daily.

As for the treatment of asthma during the intervals, McClanahan points out the necessity for proper protection of the child's chest, neck and lower extremities against cold, and advises that a diet poor in meats, but rich in vegetable proteids be generally ordered. In asthmas induced by bowel trouble, green vegetables and fruit juices should be included in the dietary. Since acute bronchitis frequently precedes an asthmatic paroxysm, appearance of the former should be the signal for prompt confinement to bed, restriction to liquid foods, and administration of an active cathartic and hot drinks.

In cases which fail to respond, a change of climate, or sometimes merely a change in location of a few miles, is necessary. Anemia or a history of rheumatism should suggest appropriate treatment. Pulmonary gymnastics in the form of daily exercises in deep breathing, with emphasis upon complete expiration, or the wearing of an elastic binder around the chest, light enough to exert constant light pressure, are strongly recommended by the author in asthma of children.

Where catarrhal bronchitis persists after the paroxysms have been subdued, sodium iodide, in doses of two to four grains, three times daily, after meals, is of decided benefit. It should be given for several weeks.—American Medicine. S. L. J.

Acid Intoxication in Infants.

Concerning this subject an instructive article appeared by Isaac A. Abt, (*Am. Journal Medical Sciences*, 1914, 1), which should be of particular interest to Southern physicians. He reports a number of cases which closely resemble the clinical type usually referred to as intestinal infections. Acid intoxication of the kind referred to by Dr. Abt is usually found about the end of the lactation period and among infants previously healthy. The symptom complex being vomiting, a certain amount of diarrhoea, prostration, rapid and labored respiration and usually death within from two to four days of the onset. There is always marked enlargement of the liver. The author believes the disease to be due to a metabolic disturbance rather than to bacterial infection. This faulty metabolism results in misdirected chemical processes with the consequent production of toxic products.

These toxic products, which are of chemical rather than bacterial origin, produce extensive granular and fatty degeneration of liver and kidney cells. Probably these destructive changes have insidiously proceeded before marked symptoms of illness appear. If the cellular degeneration is sufficiently extensive, and it usually is, death seems inevitable. The cause of this faulty metabolism is not given;

while acetone usually appears in the urine he regards acidosis as being an inconsequent result of the causative chemical processes.

S. L. J.

Staphylococcus Spray in Diphtheria.

After noticing previous reports on the method of overriding the throats of chronic diphtheria carriers with suspensions of staphylococcus aureus, W. F. Lorenz, Mendota, Wis., and Mazyck P. Ravenel, Madison, Wis. (*Journal A. M. A.*), report their experience with this method in a troublesome outbreak of diphtheria. During this epidemic carriers were found and various strains of the staphylococcus were tried, other methods having failed. The personal equation was carefully eliminated and Dr. Ravenel and his assistants were not made acquainted as to the patients from whom the cultures were derived. In all seventeen patients were treated. Three were simply carriers, never having shown clinical symptoms, local or constitutional. These are referred to as Class 1. Six patients showed clinical symptoms and had all received the routine local antiseptics, but persisted as carriers long after convalescence was under way. These are referred to as Class 2. In eight cases the staphylococcus spray was used early in the course of the diphtheria and, except in one case, without other local treatment. The results in Class 1 were uniformly good. In two cases negative reports were received after six applications of the spray. Three months later one of these again became a carrier, but the reinfection was similarly cured. The third case did not clear up until other local methods were employed. All three cases were attendants on the isolation ward and constantly exposed. The six patients of the second class received antitoxin treatment during the disease, together with local applications, and in spite of these their throats showed bacilli long after they were well. The local antiseptic treatment was discarded and staphylococcus spray used. Four of the cases cleared up within a week. In two the results were not so good. These two are reported more fully and in each case there was supposed to be a hidden focus, in one of them in the tonsil. The use of staphylococcus spray early in the course of diphtheria, together with antitoxin, was tried in eight cases. In four of them negative cultures were obtained within one week; in three the results were fair, but after one negative finding a positive one was obtained, and the duration of suspicious or positive reports in these three cases was twenty, twenty-one and twenty-six days respectively. One case was mild, without any membrane and with only slight constitutional symptoms, but it was thirty-nine days before the case cleared up. The very mild symptoms that could be attributed to the spray itself indicate that it is a safe method. The authors conclude that pure cultures of staphylococcus aureus sprayed into the throat and nasal cavity are effective in causing disappearance of diphtheria bacillus at least in cases of Class 1. S. L. J.

Diphtheria of the Skin.

Two cases of diphtheria of the skin in children, sisters, occurring at the same time and one of them with a fatal termination, are reported by F. C. Knowles and L. D. Frescoln, Philadelphia (Journal A. M. A., Aug. 1, 1914), who also give a general review of the subject which they summarize, in substance, as follows: Diphtheria of the skin may occur in several forms besides the false membrane type, ulcerative, gangrenous, eczematous, impetiginous eczema-like, pustular, impetiginous, ecthymatous, vesicular (varicella-like), bullous, dermatitis herpetiformis-like, tumors and abscesses. The cases reported were of the the bullous impetigo type. Inoculation of the skin may occur by auto-inoculation, by infected articles, and from one person to another. It may be primary on the skin or extend from it to mucous membranes, but is generally secondary to nose and throat infection. The true diphtheria bacillus must be distinguished in these cases from the pseudodiphtheria bacillus (Hoffmann's bacillus). They differ morphologically, culturally and in animal inoculation. The diphtheria bacillus is particularly distinguished by the metachromatic granules (polar bodies) shown best by the Neisser stain, by the acid-producing qualities and the fatal results in animal inoculation. The bacilli have been further grouped by authors into distinct varieties of the true diphtheria bacillus. Skin diphtheria is especially contagious and the more dangerous because it is frequently unrecognized for a considerable period of time. Great care is therefore necessary to prevent its spreading and an early diagnosis is important. S. L. J.

Effects of Boiled Milk on Infants.

Lane Claypon, after investigating the effects of heated and superheated milk on the infant's nutrition, concludes:—

1. Additional proof is given that animals and infants develop better on milk of their own species.
2. Development of animals and infants on milk of their own species shows no difference whether the milk is raw or boiled.
3. On milk of a foreign species animals and infants develop slightly better if the milk is boiled.
4. It has by no means been proved that infants develop scurvy from boiled milk alone.—Am. Jour. Dis. of Children. S. L. J.

A Typical Pharyngeal Diphtheria.

Brief reports of three cases of very mild diphtheria, bacteriologically diagnosed are reported by S. C. Lind, Cleveland, Ohio (Journal A. M. A., May 10). All three patients suffered from mild pharyngeal congestion and two had slight elevation of temperature. Only one had anything like a small typical exudate. The constitutional symptoms were almost nil, only one of the patients complained of feeling out of sorts one day. Quarantine was established in all three cases, but no antitoxin was administered and the patients were not put to bed and felt well generally. He considers it hardly fit to call these patients diphtheria carriers. There

was a slight local reaction in each case. All three would have escaped recognition but for the laboratory findings and they emphasize the necessity of making cultures from every case of sore throat. Such cases are not uncommon and their detection is of the utmost importance in preventing the spread of diphtheria.—S. L. J.

EYE, EAR, NOSE AND THROAT.

Drs. H. R. Johnson and P. A. Haley.

The Epipharynx in Children.

Under this title, Dr. Edgar M. Holmes, of Boston, read a very interesting and instructive paper before the New York Academy of Medicine Nov. 14th, 1913, which is published in the March number of "The Annals of Otolaryngology, Rhinology and Laryngology."

The writer calls attention to the fact that the great importance of this region is due to its etiological relations to diseases of the Eustachian tube and middle ear.

The objects to be aimed at are not only the diagnosis of the pathological conditions within the epipharynx, but to be able to overcome and correct them before they extend to and damage the middle ear. This opens up a broad field for future investigation and research. The writer says, "That by improved methods and more definite knowledge we shall be able to preserve the functions of the ear and thus eradicate a great loss of efficiency not only to the individual but to society in general."

Our knowledge of acute and chronic infections of the naso-pharynx are far from positive, demanding additional observations and accumulation of facts in order to draw correct conclusions.

As for etiology, diagnosis and treatment, heretofore too much has been taken for granted, and for that reason the treatment has been largely based on incomplete conceptions of the conditions actually existing. There are many who will say, "If there are adenoids or other obstructive conditions of this space, just remove them, and that will be the end of the trouble." If this were true, the proposition would be reduced to a very simple equation, but we know that while many of our cases of middle ear diseases in childhood are caused and perpetuated by adenoid hypertrophy, the removal of which is followed by restoration of the middle ear structures to normal condition, nevertheless we do observe a certain percentage of these cases not benefitted by this procedure, but are evidently made worse. We also find eustachian and middle ear disturbances with apparently normal nose and naso-pharynx anatomically.

Why these differences in results with apparently the same conditions present? The answer must be sought for in the various influences of the same amount of hypertrophy, determined by the size and shape of the naso-pharynx, the position and patency of the eustachian tube, and the formation of cicatricial tissue following the removal of adenoids.

Were it not for cicatricial tissue, and its influence on the eustachian tube, the subject of

adenoids would be of small importance. During the past few years adenoid operations have become very popular, and the family physician is advising or performing the operation upon every child showing symptoms of ill health without careful study and examination of this region, the result being that many cases are subjected to operation needlessly, and other operations are very poorly done, with little good accomplished, and often much harm done. In this manner one of the greatest medical offenses of this generation is being committed.

There can be no question as to the advisability of removal of large central adenoid masses that obstruct nasal respiration or press upon the cushion of the eustachian tube or overly its pharyngeal orifice; but great care should be exercised in operating to avoid injuring the cushion or committing other technical errors that may make the last condition worse than the first.

The writer claims the strong point that our duty is not ended when the operation is completed, but that these cases should be kept under observation for from three to six months afterward to learn if there has been healing without cicatricial distortion or adhesions.

This is an important point. If the profession and people alike can be made to appreciate it, much will be gained in the prevention of unsatisfactory results.

The writer claims that it is possible in the majority of children over four years of age to pass his naso-pharyngoscope and examine the naso-pharynx, while at rest and during deglutition. This, when possible, affords the most accurate information, and has proven of great assistance in clearing up the cause of many persistent tubal and tympanic affections after adenoid operations.

This space in children is small, and digital examination is often misleading, while satisfactory examination of this space in young children with the post nasal mirror is the rare exception.

The writer has devised a tubular speculum, with a palate retractor attached, to be used through the mouth, with the naso-pharyngoscope passed through it to illuminate the post-nasal space. This gives a view of the entire space, but is not as satisfactory as the endoscope passed through the nose.

The writer points to the importance of proper hygienic environment and management in these cases. Often we are tempted to operate for adenoids for the relief of low-grade inflammation of the middle ear with obstructed nasal respiration, and observe truly wonderful improvement follow change of environment, habits, etc.

Attention is called to the rapidity with which nasal and naso-pharyngeal disturbances arise in those subjected to the overheated dry air of modern heated and badly ventilated rooms, and how often these conditions surprisingly disappear as soon as more moisture is added and fresh air put in circulation.

The writer, in conclusion, says: "What we most need at present is more proficiency in ex-

amining the epipharynx, especially in children, and more conservatism in treating the pathological conditions found."

"In order to fulfil these demands it is imperative that we take a broad and comprehensive view of every case before deciding upon what is the best course to pursue, keeping in mind that the important object is to prevent aural disease, and to relieve, as far as possible, any pathological conditions within the ear."

H. R. J.

Vacuum Disease of the Maxillary Sinus.

R. C. Lynch, New Orleans (Annals of Otolaryngology, Rhinology and Laryngology, March, 1914.)

The author presents six cases of vacuum of the maxillary sinus, claiming priority in reporting this condition. He calls attention to the production of a vacuum within the antrum not due to a previous inflammation of that cavity, or to any marked pathological condition of the nasal cavities. That such a vacuum may exist is substantiated by the observations of Sludor, Andrews, Brawley and others, in their study of the frontal and ethmoid sinuses.

In the event of the complete closure of the antral hiatus we have the absorption of the air, and the formation of a vacuum, just as we observe a similar condition in the tympanic cavity following complete obstruction of the eustachian tube.

The cases forming the basis of his report were all of the long-standing chronic type. In the cases observed, gross nasal lesions were not found, suggesting antral involvement. These patients gave history of previous attacks of rhinitis.

Case 1. The predominant symptom was intense and persistent orbital neuralgia.

Case 2. Applied for treatment for persistent cough and facial neuralgia.

Case 3. Was suffering from a supposed attack of hay fever.

Case 4. Had all the subjective symptoms of antral empyema.

Case 5. Developed orbital and dental neuralgia while under treatment for atrophic fetid rhinitis.

Case 6. Was referred for treatment for an attack of asthma. In all of these cases there was little found in the nasal cavity to lead one to suspect the maxillary sinus as the cause of the trouble.

Transillumination and X-ray were negative, while puncture and irrigation showing a return of the fluid perfectly clear, was, nevertheless, followed by almost instant and permanent relief. The author urges that in all obscure cases of this type with negative nasal findings, with pain either orbital, facial or dental, often manifesting nasal reflex neuroses, especially when unilateral, and not relieved by the usual methods of treatment, should lead one to be suspicious of negative pressure in the antrum as the causal factor.

H. R. J.

GENITO-URINARY AND DERMATOLOGY.

Dr. A. P. Butt.

The Therapeutics of Chronic Renal Disease.

Namnock says of renal therapeutics that we know of no drug which will influence a chronic nephritis. Remedies are used to prevent constipation, to secure as much intestinal antiseptis as is possible, to influence the heart action and the arterial pressure, and to relieve dropsy and internal edemas. Drugs should be used sparingly in any case of chronic nephritis, and reserved for emergencies that require energetic treatment. Hydrotherapeutic means are much safer and more efficient for influencing the heart's action and the blood pressure. High blood pressure depends upon three elements—the amount of the blood, the force of contraction of the heart, and the degree of peripheral resistance. Changes in the peripheral resistance can be brought about both by cold and by hot applications, but heat should be the method of choice in these cases, as the fall of pressure following heat is much more permanent and its production less dangerous than that produced by cold. The simplest way of applying heat is by lying still for ten minutes twice a day in a bath tub of water at 100° F. The addition of salt or carbonic acid assists in relaxing the peripheral capillaries. During the bath, cold may be applied to the head to diminish the danger of collateral hyperemia of the brain. Dry heat, by the electric light or hot air bath, produces a decrease in the total volume of blood through sweating, and this concentration of the toxic bodies in the circulating fluid may be dangerous. Sweating by moist heat is therefore preferred and has been proven to be without danger of blood concentration. Hydratic measures also allay the nervous irritability which so often accompanies cardiorenal disease. Hot water also exercises a profound influence on the general metabolism.

The surgical treatment of Bright's disease, warmly advocated by the lamented Edebohls, has not gained the confidence of American surgeons. Bright's disease is a systemic disorder, and the kidney lesion but one of its manifestations. Splitting of the kidney capsule can no more be expected to cure Bright's disease than could washing out the intestines be expected to cure typhoid fever. The modern methods of study of kidney disorders, by functional testing, have resolved chronic nephritis into three well-marked types, vascular, tubular, and uremic. From 40 to 50 per cent of cases, however, will show mixed forms of these types. Yet in every instance an attempt should be made at their differentiation, as the treatment of each is different from that of the others, the mixed forms requiring treatment according to the dominant type. An excellent schematic classification, adapted and enlarged from a schema given at von Noorden's Clinic, has recently been put forward by Herbert Edwin Barigut. It shows clearly that some things be-

yond the recognition of albumin and casts are necessary for exact diagnosis and rational therapy. In fact, more or less extensive destruction of renal tissue may exist without albuminuria or casts being detected and be recognizable only by functional tests, as has recently been emphasized by McCaskey. McCaskey points out the necessity for recognizing the precise type of renal impermeability present in a given case, i. e., whether for urea, chlorides or water. He gives some interesting tables of elimination of urea after ingestion of performed urea. The phenolsulpho-naphthalein test for kidney efficiency is of value for prognosis rather than for diagnosis.—Abstract from Med. Record in Urolog. & Cutan. Review.

Bryan, R. C.: The Early Diagnosis of Renal Tuberculosis. N. Y. M. J., 1913, xcvi, 20. International Abstract of Surgery.

Bryan emphasizes the cardinal features of the diagnosis, the pitfalls, errors and elusive symptoms of the incipient stage of miliary tuberculosis of the kidney, and selects from his series the histories of three cases for deductions.

He finds that urinalysis is inconstant in the character of its results, and gives evidence of a more or less severe nephritis; the urine is of low specific gravity; the reaction is regular and constant; pus, the characteristic index of invasion, is intermittent; the few cells, in the regularly acid urine, are a clue for diagnosis which is especially valuable if stone can be positively excluded; albuminuria is unilateral; pollakiuria is noted peculiarly during the night but not marked during the day.

All voided urine should be collected, preferably in a Steinbeck's sedimentator, and preserved with boric acid, one grain to the ounce of urine. Repeated examinations of the sediment are advised.

From a most excellent address by Dr. Hugh H. Young, entitled "Progress in Genito-Urinary Surgery," delivered before the New York and New England Association of Railway Surgeons, we take the following excerpts:

Cancer of Penis.—My recent studies have shown that the most important thing is to remove the tissues in one piece—penis, prepubic fat, and ligaments and tissues of both groins, including fat and glands. Begin at outer end of each groin, free these structures first, working towards the penis, amputation of which occurs last.

An interesting fact is that amputation, even as extensive as I have indicated, does not interfere with copulation. Patients in whom the penis had been cut off short at the base have reported that not only was it possible to have erections of the remaining portion and go through with that act, but also to have fairly satisfactory ejaculations. Out of thirty cases were apparently thirteen cured cases. Cancer of the penis is more likely to occur in persons with long foreskins. We should be suspicious of ulcers which do not clear up quickly, of suppurations underneath long foreskins.

Cancer of Prostate.—In Young's Clinic one in

five cases that come for hypertrophied prostates have carcinoma. Best aid in diagnosis is rectal palpation. Induration is stony hard, has often an irregular edge and does not often occupy the whole prostate at first, although it may do so later.

In **stricture of the urethra** much advance has been made. With a French filiform bougie and dilating follower, it is possible to get through almost any stricture and generally to cure them without any operation except progressive dilatation. It is essential that the kit of every surgeon contain these delicate instruments. Many a man who has stricture with complete retention of urine can be easily relieved without operation if you have a fine filiform and a soft catheter which can be attached to it.

In cases of **severe impermeable stricture** where it is not easy to get in after having made median incision, continue this incision back on each side (thus making it an inverted Y). Incise the urethra longitudinally, pass a sound towards the bulbous urethra and divide the stricture upon the end of the sound.

Bladder Tumors.—Perhaps the most interesting part of Young's address refers to electrical treatment of benign tumors of the bladder. He declares that under operation these tumors recur and often become malignant while under electric treatment with the currents of Oudin and d'Arsonval, whereby a high frequency current is delivered by an electrode through a cystoscope or gutta percha sound, these tumors will entirely disappear. This is one of the most brilliant advances in surgery, and has brought a hopeless group of cases into the domain of successful surgery.

Tumors of the Kidney are usually associated with hematuria, often with no other symptom. Tuberculin tests will eliminate or establish tuberculosis.

Of the phenolsulphonaphthalin test he says that it is especially valuable and should replace many of the present methods. It is one of the best methods of determining when a patient can be given an anesthetic with safety.

This address can be found in the "American Journal of Surgery," Aug., 1914. My only criticism is what I believe to be an unwarranted optimism. For instance, the statement in regard to tuberculin.

The Intelligent Use of Urinary Antiseptics.

The most important of the various urinary antiseptics is used in the majority of instances without a full knowledge of the very conditions that help or defeat its single purpose. Of course this reference is to hexamethylenamine (urotropin, formin).

Formin is inactive in alkaline urine. It is so commonly used in urinary stagnation with the urine markedly alkaline, that this fact should be iterated and reiterated. Until an alkaline urine is changed into an acid one, best brought about through the administration of acid sodium phosphate or ammonium benzoate, there is no splitting off of formaldehyde in the urinary stream and until this phenomenon does

present the administration of formin is useless.—Urologic and Cutaneous Review, Aug., 1914.

Pruritus Ani.

Cropper says (Bri. Med. Jour.) that in the treatment of pruritus ani the tincture of iodine (B.P.) is of sovereign value. Not irritating to mucous membrane, and the slight pain caused, if there are open cracks, is quickly over. Even better is co. tinc. benzoin. Effects are really marvelous; within two minutes' all desire to scratch is gone.—Abs. by "Cutaneous Review."

Worth trying, but sounds too good to be true.

Death Following Salvarsan.

An occasional death from (or following) this agent continues to be reported.—Dr. Lapowski, "Journal Cutaneous Diseases," July, 1914.

Child of 8, second injection, no bad effects from first. Apparatus sterilized in freshly distilled water. Dosage 11 of neosalvarsan, equivalent to 0.3 salvarsan, intravenously. The first part of the dose had been given to a woman who stood it badly. On this account it was discontinued and the remainder given to child.

(No notes as to whether needle was sterilized second time.)

After six hours child began to vomit, died in about 60 hours.

Smoking and Syphilis.

Professor Fournier, in a communication to the Paris Academy of Medicine on Syphilis among innocent women, said that one of the most usual sources of contagion in such cases, whether early or late, consisted in mucous patches of the mouth, and that these were in many cases due to the use of tobacco. This remark has a practical interest of the highest rank, which M. Fournier expresses in the following terms:

Every syphilitic who is contemplating marriage is under an overwhelming obligation, if he is a smoker, and particularly if a great smoker, to give up the use of tobacco.

He gives his reasons as follows:

Generally speaking, tobacco is par excellence an exciting cause of buccal manifestations in syphilis. It is a veritable malefactor in relation to the syphilitic mouth at all periods of the diathesis. Consequently it constitutes for secondary syphilides not only an exciting cause, but a source of maintenance, of recurrence, of incessant multiplication. Later it incontestably takes part in the etiology of ulcerating syphilides, of tertiary syphilides of the mouth, of scleroses gummata of the tongue and also of the formidable leukoplakia, the usual prelude of frightful cancer of the mouth, and particularly of the tongue.

As a result of 10,000 observations, M. Fournier states that secondary syphilides are five times more frequent on the mouth than on the genitals, so that in an advanced stage of syphilis the risks of contagion by the mouth are much greater than those of contagion by the genitals; the mouth is more dangerous than the penis.—St. Louis Med. Review.—S. L. J.

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Original Articles

THE TRUTH ABOUT ALCOHOL.

G. D. Lind, M.D., Greenwood, W. Va.

*(Read before West Virginia Medical Association,
May, 1914.)*

Six years ago A. S. Grimm, M.D., read a paper before this body, the title of which was "The Medical Profession Losing Faith in the Supposed Virtues of Alcohol." A resolution was unanimously adopted by our Association deploring the fact that our profession had been so long quoted as claiming for alcohol virtues it did not possess, and pledged themselves to discourage its use both in and out of the sick room.

That alcohol is a useful drug no one will deny. But as to what particular uses should be made of it for the best interests of mankind admits of discussion. I hope to make clear two points and sustain them by authority—(1) The so-called preparations or beverages containing alcohol (with the single exception of gin, which contains oil of juniper, a diuretic) have no virtues in themselves—that is, aside from the alcohol they contain. In other words, when you are prescribing whiskey, brandy, wine or beer, you are prescribing alcohol unmodified except so far as dilution with an inert substance is concerned. (2) Alcohol can serve no purpose as a medicine or food that cannot be better served by some other substance or substances.

I am aware that many good physicians as well as many intelligent and well meaning men have an idea that brandy, whiskey, beer and wine have medical properties of value aside from the alcoholic content and may be used to advantage where simple dilution of alcohol would not be indicated. Wood and all other writers on therapeutics which I have consulted discuss all alcoholic beverages, with the exception of gin, under the general heading of alcohol. If you look in the index for whiskey, brandy, for instance, they will say, "See alcohol." or refer to same page, where alcohol is discussed.

Bartley, high authority on medical chemistry, says (speaking of the great variation in the alcoholic contents of beverages): "It is, therefore, a very uncertain way of prescribing any of these beverages. A much more certain method is to prescribe alcohol of known strength flavored with ethereal essences and softened with glycerine or syrup."

Dr. Winfield Hall says: "Intoxicants are beverages, such as cider, beer, ale, wine, brandy, etc., the active principle of which is ethyl alcohol." Wilcox discusses all the beverages which contain alcohol under the general head of alcohol. Hobart Amory Hare does the same and says: "Alcohol is generally given in the form of whiskey or brandy, and when the word alcohol is used in the saying, 'Give the patient alcohol,' one of these two liquids is always meant unless it is otherwise stated."

Horatio C. Wood is acknowledged good authority on therapeutics. He classifies

alcohol among the cardiac stimulants. He says: "Our knowledge of the physiological properties of alcohol shows that its chief therapeutic value in acute disease is as a stimulant, a temporary impartor of power which will enable the system to stand some strain of short duration—to bridge over some period of weakness." If alcohol was the only cardiac stimulant, we must admit that it is necessary in medicine. But Wood discusses nine others, none of which are likely to ever be used for a beverage, and nearly all are better for the purpose of a cardiac stimulant than alcohol or any of its preparations.

Dr. Ewald of Berlin says: "The opinion has now been reached that alcohol no longer plays the role in therapeutics, especially of infectious diseases, that was formerly ascribed to it." He admits a judicious use of it with meals in chronic cases as an appetizer, claiming that its good effects outweigh the bad, but the danger of habit increasing is very great, and says it should be only occasionally permitted. He says it is absolutely useless in acute and chronic infectious diseases as a reducer of temperature, destroyer of germs or as an hypnotic. It does not increase resisting power of the blood, but rather reduces it. Habitual users are as ready to contract infectious disease and have it as severely as total abstainers and prove less resistant. He cites statistics to prove that pneumonia occurs ten times as often among hard drinkers and is attended with fatality in same proportion. Articular rheumatism and other infectious diseases occur nearly twice as often. Certain English statistics show that cancer is nearly twice as common among alcoholic users.

Dr. Albert Abrams of San Francisco, an authority on nervous diseases, says: "Alcohol is one of the greatest scourges of the nervous system. Consumed even in the smallest amounts by persons of a nervous temperament it will induce organic changes in the nerve tissues, like those of old age. The habitual use of alcohol stands foremost after heredity as a single independent cause of insanity."

Otto Juettner, while admitting the moderate use of highly diluted alcohol, as light wines and beer, says: "The digestive power of the pancreatic secretion is affected by small quantities of alcohol. One ounce

of brandy delays the digestion of a meal for a half hour to an hour."

Strumpel of Leipsic says: "The assertion that fever patients 'bear' alcohol better than healthy persons lacks proof." He thinks that in pneumonia where a stimulant is needed strychnine is much better.

Osler says: "It was formerly thought that alcohol was in some way antagonistic to tuberculosis disease, but observations of late years indicate clearly that the reverse is the case, and that chronic drinkers are much more liable to both acute and pulmonary tuberculosis."

Dr. Anders in his eleventh edition of his work on practice says some complimentary words for alcohol in diphtheria, but the statement is copied verbatim from the fifth edition issued several years ago. Dr. Hare, Dr. Osler and Dr. Dieulafoy in their respective large works on Practice do not mention alcohol in this connection.

Dr. Fischer, in Diseases of Infancy and Childhood, advises strychnine in diphtheria when stimulation is needed, but allows a little wine or champagne along with it.

Dr. Kerley, in Diseases of Children, says: "It is occasionally of great service in diseases of children," but does not specify in diphtheria.

Binz and his followers claim that alcohol at first stimulates and then depresses nerve cells.

Schmiedeberg, Bing and their followers claim that it depresses the central nervous system from the beginning.

Dr. Abel says: "There has been much discussion as to whether alcohol is in any sense a stimulant to the brain. We have seen that pharmacologists of high repute deny that it has this action, holding that alcohol is a sedative or narcotic substance which belongs to the same class as paraldehyd and chloroform; that its stimulating action is but fictitious."

Dr. Winfield Hall, in his work on Nutrition and Dietetics, says: "When we find that no function of the body is made more efficient or in any way improved by alcohol, but that all functions which are modified at all are distinctly decreased in efficiency by the ingestion of appreciable doses of alcohol, it must be evident that the old theory that this substance possesses a food value will have to give way to the more rational theory based upon

recent researches that this substance is a pseudo-food, as it has been proven to be a pseudo-stimulant."

Most authorities admit it as a food only so far as it is capable of being oxidized in the body and thus producing heat, in the same manner as sugar is oxidized and then possibly after it has produced its injurious effects in the way of paralyzing nerve matter. So if alcohol is a food, it is not a proper one and only under extreme circumstances, if ever, should it be used for this purpose. As the editor of *J. A. M. A.* says: "To say that alcohol may be a food is not to deny that it is a dangerous one."

Wood says: "There are many circulatory stimulants which are vastly superior to alcohol, and the old superstition that a man would invariably recover from a snake bite if it were possible to intoxicate him with alcohol is a foolish error which has been the cause of many deaths." In regard to its food value he says: "In a certain sense alcohol is a food, i. e., that it is capable of being used up for the purposes of the organism, but it does not follow from this that alcohol is capable of replacing fats and hydrocarbons in food."

Even Dr. Edward Smith, an old authority, who classifies the alcoholic beverages as foods, admits that the abuse of them by so many overbalances the good on so many more.

Arnold C. Klebs says: "In brief, alcohol may be said to be a dangerous food and a symptomatic drug of considerable potential danger."

Even those who use alcohol in certain diseases are now using less of it. Dr. Leyden of Berlin says: "At the present time we do not give such large doses of alcohol and it is thought that it has rather a weakening effect on the heart than vice versa." Furbinger of Berlin says: "In general, I must advise against the liberal administration of alcohol."

H. C. Wood, Jr., says: "For several years pharmacologists and clinicians held diametrically opposite views concerning the influence of this drug upon the heart, the former asserting that it had no stimulant action upon this organ, the latter classing it as one of the most valuable cardiac stimulants we possess. Gradually, however, the views of the scientists and

the practitioners are growing closer and closer; the clinicians of today hold alcohol in much less esteem as a circulatory stimulant, the majority of pharmacologists granting that it has some influence in increasing the heart's action.

All authorities agree that the following diseases may be caused by alcohol: Nephritis, neuritis, arteriosclerosis, acute yellow atrophy of the liver, pharyngitis, gastritis, dilation of stomach, enteritis, cirrhosis of the liver, acute pancreatitis, valvular heart disease, nervous palpitation, aneurysm, myxedema, gout, lithemia, obesity, spinal leptomeningitis, tabes dorsalis, apoplexy, dementia paralytica, hydrocephalus in children by parents using it, paralysis agitans, epilepsy, acute and chronic alcoholism, a total of 26 diseases, most of which are practically incurable.

Dr. J. W. Williams of Richmond, Va., has demonstrated in a masterful paper published in our *Medical Journal* for January, 1914, that alcoholism is undeniably hereditary. He quotes Prof. Domme's investigations of ten alcoholic families in which there were only 10 per cent normal individuals and ten non-alcoholic in which there was 88 per cent of normal individuals. He also quotes Dr. Phelps as saying that "as a criminal estimate, two-fifths of the paupers, one-fourth of seekers of charity outside of almshouses and nearly one-half of dependent children in America owe their deplorable condition to alcohol."

A. L. Benedict calls attention to the fact that alcohol is an aphrodisiac and has a mental inhibitory action. "We too often witness," says he, "in ordinary social life the transformation of a dignified, virtuous woman into a would-be libertine by what is commonly considered a moderate indulgence in alcoholics."

T. D. Crothers, M.D., president of New York Medico-Legal Society, says: "Next to heredity, alcohol is a most prominent exciting cause of the social evil. Research shows that the particular paralyzing action of alcohol on the higher brain functions lowers the consciousness of right and wrong and obscures the reason, lessening the power of control and making the victim susceptible to the very basest impulses of life. Dissolute men and women recognize this fact and use alcohol

to weaken the caution and reason of the individuals they wish to influence."

The Emperor of Germany, since an eminent professor in the University of Munich, the great beer center of the world, has demonstrated that alcohol even in small doses is an inevitable limiter of human capacity to endure fatigue, has convinced himself that this drug is nothing more nor less than a national enemy and destroyer of his people's capacity in war and trade. The great German professor's words are: "In every instance a definite measurable loss in muscular efficiency was demonstrated."

There was a time when alcohol was used so generally in medicine that it was thought by some doctors that the physician who did not use it in bad cases was guilty of a crime. The British Medical Journal of 1896 gives an instance where a certain doctor was accused and brought to court for causing a man's death by not giving him alcohol as a medicine. A jury of his peers, however, had sense enough to acquit him.

The non-professional man, if he be a lover of drink, will, nine times out of ten, argue in the following manner: Whiskey, brandy, beer and wine must be good for human beings or they would not be prescribed and used by the good physicians. Now, my brother good physicians, I make this argument to you. If your recommendation tends even in the smallest degree to increase the general use of these articles as beverages and you are convinced that you are not obliged to use them, being at all times and under all circumstances able to substitute something equally as good, if not very much better, are you not doing a criminal act to continue the practice?

Under the new law in our state the temptation to prescribe alcoholic beverages is very great. I am convinced that very few if, indeed, any of the members of our State Medical Association will break over, but there are many practitioners all over the state who will have no conscientious scruples and will take advantage of the fact that these liquors have been prescribed and recommended by some of the best men in the state and nation, and stretch their consciences to the extreme point of rupture, especially if the would-be patient is a particular friend and good

paymaster. Then, can we not say that the zeal of the best practitioners, though well intentioned, may do untold harm? A word to the wise is sufficient, and I sincerely hope no one will take my criticism to heart and have any feeling of antagonism for me.

But is alcohol, then, of no use? It certainly is one of the most useful substances known to man. The chemist could not get along without it, as it is the only practical solvent of resins and resinoids and some other elements, and is thus needed in separating and extracting the valuable medicinal parts of plants from which our best medicines come. It is also useful in the arts, as painting and decorating, and as a fuel. It is not essential in medicine even as an external application. The milder and diluted acids and glycerine may be used in making liniments, embrocations, etc. Where it is desirable or essential to exhibit medicine in a liquid form water with glycerine or syrup may be used in every case. It is much easier now than formerly to get along without alcohol, as we have so many medicines in form of powdered extracts which we can mix with water and glycerine, mild acids or syrups or give in form of pills and tablets.

There are temperance hospitals where not a drop of alcohol in any form is ever allowed to enter. Their statistics show that caffeine, strychnine, camphor and many other drugs answer the purpose much better and give on the whole better results in the end. Thousands of physicians are making a success in their practice and are using very little, if any, alcohol.

A bill has been introduced in the New York State Legislature which requires that labels bearing the skull and cross bones and the words Alcohol and Poison in bold face type be required on all bottles containing beer, whiskey or other drinks containing as much as 2% of alcohol. This bill will not pass, and it ought not to, for the simple reason that merely labeling a drug or beverage a poison does not make it so. The quantity must be taken into consideration. A beverage containing only 2% of alcohol will require a very large quantity to cause death, and cannot, therefore, be considered a poison in the true sense of the term. Alcohol it

is true, is a poison when pure or only slightly diluted. Strychnine is a poison and so is morphine and a score or more of drugs used daily by the physician are deadly poisons when used in much greater strength than that prescribed.

Alcoholic beverages are dangerous not because they contain a poison, but because they contain a drug which creates a craving for itself, because it is a habit former. The same is true of morphine, cocaine and perhaps two or three others. There should be restrictions on their sale.

The Saturday Evening Post had an article in February from Samuel G. Blythe, a man who had been a great drinker and associated with many intelligent men who were convivial in their habits. He had at this writing quit drinking for three years. He says: "One of the reasons I quit was because I noticed I was going to funerals oftener than usual—funerals of friends who had been living the same sort of lives for theirs as I had been living for mine. They began dropping off with Bright's disease and other affections superinduced by alcohol, and I took stock of that feature rather earnestly. The funerals have not stopped. They have been more frequent in the past three years preceding—all good fellows, happy convivial souls, but now dead. Some of them thought I was foolish to quit, too. And there were a few cases of hardened arteries I knew about and a considerable amount of gout and rheumatism and some other ills among the gav boys who joked at me for quitting."

TYPHOID FEVER.

W. W. Morton, M.D., Bluefield, W. Va.

Read before West Virginia Medical Association, May, 1914.

I wish to talk a few moments about one of the most important and widespread of all bacterial diseases, and one that has existed beyond the traditions of man, and yet it is not so old but that it will play us new tricks. It is a preventable disease and speaks very poorly for our advanced civilization. It is a loathsome and filthy disease that is permitted to thrive by our careless and filthy habits. It is supposed that we drink it in most cases, and while I think this is one of the many ways, I

think the majority of the infections are taken in our food. The water flowing over the discharges from a poor stricken creature will start the ball rolling, and we will keep it rolling by permitting the flies and bugs to bite, and proceed to boil our water and feel secure. You may kill a few of them thus, but the millions and hundreds of millions that will be contained in the urine and feces of a patient will be dashed out the window or into the branch to be distributed to vegetables and springs and to other innocent and unsuspecting persons. It is our mission, gentlemen, to practice and preach and fight against this.

The spread of this disease does not depend so much upon the soil and water as we have been led to believe, but upon the new foci of infection. We are the carriers, the hot beds and the source from which it spreads. Outside the human host the multiplication of the specific bacilli, if any, is insignificant and may be ignored so far as the spread of the disease is concerned. If we should destroy all the bacilli from our new cases we would not have from four to five hundred thousand cases and thirty-five to forty thousand deaths each year in the United States, and hundreds of other poor maimed creatures that were said to have recovered.

After leaving the human host the bacilli undergo a progressive diminution, the majority perishing in a few days under ordinary conditions. They may, however, live indefinitely in the human host, becoming endopathic, retaining their virulent power in contact with healthy tissue, the same as do tubercular bacilli, the opsonins failing to prepare them for digestion by the phagocytes. Ordinarily it is not a pyogenic process but a cheesy degeneration of lymph nodes caused by the toxicity of the typhoid bacilli.

Secondarily the process is very much the same as the tubercular process in the glands. The over compensation of receptors forming the nodes, excess being discharged into the blood stream, acts as free receptors or antibodies, if not bound.

Early in this disease you have a germ invasion out-weighting the lymphatic changes. It is now you have a general infection caused by the multiplication of the bacilli in the body. It is now the

fastigium begins and nature takes another tack in her defense, using the fever as a means to remove the very cause of the fever by its stimulating action, etc., upon the body cells. The destructive proteids are very active in febrile blood and we should not obstruct nature's effort by improper food and shot-gun medication.

We think we know a great deal about this disease, but the more I come in contact with it the more I am convinced that we have much to learn about it and its prodigal complications and mimic conditions. It is a typical toxemia that as a rule takes about twenty-one days for its detoxication.

This intoxication is caused by the entrance through the mouth and nares of the specific bacilli that were discovered by Eberth in 1880. After entering the system through these channels there is a predilection for the lymphatic channels and structures situated in the first nine feet of the ilium, which are so richly endowed with such structures. It is right here that the solitary glands are more numerous and larger. It is right here the trouble begins primarily. It is right here the destructive changes take place and are carried on. Later, after the general vitality has been lowered, you may have lesions in other and distant parts, but I wish you to remember the major focus of infection and keep your eye upon it throughout the disease.

There are reasons for all this that have not been worked out and might help us in our groping. We know it is the bottom of the intestinal well and we know the anatomy of the parts, but we do not know why there is just enough inflammation set up at this point to let the bacilli in. If we did, we might prevent it.

The books tell us we cannot cure our patients with drugs and that it is a self-limited disease. I was taught the same about gangrene and was told to wait for the line of demarcation. Also to expose my stumps to the air after amputation until they glazed before closing them up; and you gentlemen that worked in the field with me at that time can remember we found them glazed each day from that on, for a self-limited time, and I am sure that none of you wish to return to those glacial days. They say we cannot reach the bacilli that have passed into and be-

yond the mucosa with any known intestinal antiseptic. Neither could we reach them in the so-called surgical kidney, but you young surgeons know how. And that we cannot remove them from the alimentary tract. Neither can we scrape from the cord and meninges the cause of poliomyelitis, but we can chase them through these channels with hexamethylene and abridge if not prevent their destructive action, as we do in many other diseases.

In my humble opinion we can do something, and I wish to go upon record as a believer in this line of treatment, and it may be superfluous to say I have gone through quite a number of the older ones and can truthfully say it is the only one I have ever gotten any known results from. It is not the object of intestinal antiseptic treatment to destroy the bacilli that have passed into and beyond the mucosa, but to prevent saturation and maintain an equilibrium of the protective elements of the system. It is not the object of intestinal antiseptic treatment to chase the bacilli to the lenticular spots and strangle them there, but to maintain the vitality of the surrounding structures and tissues by limiting necrosis and germination. Nesting and clamping is one of the characteristics of the specific bacilli, and I think a great deal of the destructive and slowing process in the intestinal tract is brought about by such nesting and poaching upon the parts for their nutritional requirements. You that have had to deal with intestinal perforations, do you not think it worth while to try to prevent them? I do.

Turn to your pharmacopeia—and while you may not find it a dispensation, you will find in it many helpful drugs, the composition of which, the therapeutic and physiological action of which have long been known. All we have to do is to learn how and when to give them. In the selection of your antiseptic agents think what you wish them to do and where you wish them to reach and what they will do after reaching a certain tissue or organ.

Do not dust on the tongue any so-called antiseptic powder that the last detail man has so kindly left upon your table and then tell me that you have tried intestinal antiseptic treatment in this disease and have not received any results. If this has been the kind of treatment used, you

should expect none. If you surgeons will go back a few years with me, you will remember how you were taken in by the indiscriminate use of antiseptics. You have learned your lesson well, and why not we? You know it is a glandular structure mainly that is diseased and that the whole system is being diseased by the constant recruiting from these parts, and that the fatal changes are expected to take place in these parts. That I may have you to catch my drift, will ask you why not use iodine in some of its many and known forms. It is a powerful antiseptic, as you young surgeons can testify. It prevents decomposition and destroys germs. It is rapidly absorbed and slowly eliminated and has, as does this disease, a predilection for lymphoid or glandular structures. Have you tried it? Have you tried any of the old and well known drugs according to their known therapeutic limitations in a careful and systematic way?

What is an antiseptic substance and what does it do? It is an agent that restrains or checks the development of bacteria, but does not destroy them. Remember the production of infection and the termination of an infection depends upon the number of bacilli introduced into the body. Nature will take care of a few, but will be overpowered by large numbers. Many such cases you all have witnessed as well as those old trying cases that extend into the sixth and eighth week that we have often to stand by and see them do one of two things. For this chaotic condition and for those that do pass through it and are said to recover, I am free to confess I know not what to do, and my aim is to prevent this saturation by beginning early and continuing late with intestinal antiseptics, and by their use I have seen the whole clinical picture changed and the sequelae much abridged.

I am aware of the brilliant results of protective vaccination with the serum made from the specific bacilli after killing them by heat, and only regret that it goes no further. I believe that nature imitates this thermogenic process in her fight against this disease. At just what point she accomplishes this has not been determined, nor, so far as I know, attempted. I believe that it happens at about the height of this disease. So far as the primary infection is concerned, then, we

have to reckon with the toxins that are only liberated after cellular disintegration and death.

These toxins are of unknown structure, but are supposed to be colloidal. Fortunately they again are very sensitive to heat and have a characteristic quality that is very helpful, viz., their ability to evoke the formation of an antibody or antitoxin. How wonderful and beautiful the workings of nature, Mr. President, when we have learned something of internal secretion and its balance we can aspire to the mastery of this disease, and when we have we will be masters of internal medicine, but "knowledge is proud that he knows so much, wisdom is humble that he knows no more." It has been said that science is but a lucid madness occupied in tabulating its own hallucinations. If so, these are mine. Take them for what they are worth.

Tyndal said of Pasteur's work—we have been scourged by invisible thongs, attacked from impenetrable ambushes, and it is only today that the light of science begins to be let in upon the murderous dominations of our foe.

Eberth, Gaffky and Koch turned the searchlight upon this little demon, and must we, at this late date and scientific age, fold our hands and consider its ambushes still impenetrable? In God's name, no. Follow traditions no farther. The lights have been turned on for you, young men. Banish this demon of destruction and earn the gratitude of generations yet to be born. Write your names upon the scroll of fame beside Pasteur's, Jenner's, Behring's and Walter Reed's

DIPHThERIA.

J. Howard Anderson, M.D.,
Marytown, W. Va.

(Read before West Virginia Medical Association,
May, 1914.)

Infectious diseases may be classified in three great groups, according to the prime agent by which they are conveyed from the one affected to the individual exposed and whose armor of natural immunity has been shattered by the dart of lowered vitality.

We may have:

First. Diseases of the skin or eruptive fevers, as smallpox, scarlet fever, measles and erysipelas. In these the infective materials are believed to be given off principally through the desquamating epithelium.

Second. Diseases of the alimentary tract, as typhoid fever, dysentery and cholera. In these the infective agent is thrown off in the intestinal evacuations and the urine.

Third. Diseases of the respiratory tract, as influenza, pneumonia, tuberculosis, whooping cough and diphtheria. In these the sputum is responsible for the infective germ.

The eruptive fevers and some of the maladies of the respiratory tract boldly slap their chosen victim in the face. Typhoid fever and other intestinal infections, after sparring awhile, let drive sledge hammer blows at the abdomen, while diphtheria stealthily secures a jiu-jitsu strangle hold upon the throat, striking its victim with dismay and filling his heart with horror as its ghastly tentacles rapidly tighten.

Diphtheria is not of modern or recent origin. Recognized by Hippocrates and Galen, alluded to in ancient literature as "Egyptian ulcer of the throat." the scourge of the Pilgrim Fathers as "Black Sore Throat," named by a French physician, Bretonneau in '26, its causative germ discovered by Klebs in '83, and exploited by Loeffler in '84 through the ages it has been a veritable "Banquo's Ghost" which will not down nor decline in its severity from, as it were, an acquired racial malignancy.

As a disease it evinces its peculiarity in being selective rather than universal in its visitation, often picking out but one victim from a group exposed.

With the character of its attack and its progress you are all familiar. Suffice it to say its germ does not enter the blood stream, but implants itself upon the mucous membrane of the throat of its victim, where moisture, heat and rich soil furnish a veritable feeding ground for teeming millions of its species. To this battlefield the leukocyte cavalry of the body's reserves rush to the defense, followed by the infantry squads of fibrin-laden blood serum, and a deadly conflict ensues, in which millions of the invaders are coagu-

lated and killed, while thousands of the defenders are slain, leaving the carcasses of both to form, at first, a thin gray film over the surface of the scene of fray, which, in twenty-four to forty-eight hours, thickens to the well known and much dreaded false membrane, while the smoke of battle or toxin emitted by the death struggle, penetrates into the lymphatic and blood streams and is disseminated through the system. Further, we must take time to say that, owing to the location at which the enemy musters its main division of attacking forces, we may have two distinct types of the disease, each having a characteristic chain of symptoms and each threatening the life of its victim in a different way.

When the posterior nares, the superior pharynx, the uvula and the tonsils are the focus of attack, the victim tends to become profoundly toxemic and death from heart failure may speedily result, because these areas are underlaid with a most prolific network of lymphatics, which, by the process of coagulation necrosis, are propped wide open, permitting the rapid and extensive absorption of toxins generated, while respiration is but slightly impaired mechanically because of the wide lumen of the air passages in these parts.

On the other hand, when the larynx is the point of concentrated onslaught, little toxemia is experienced because of the scarcity of underlying lymphatics, while the breathing is markedly impaired on account of the narrowness of the lumen, typical respiratory tugging frequently ensues and death from asphyxia occurs.

Of yore the very mention of diphtheria drove the steel of terror to the mother's heart, the smile from her lips and the color from her face as she gazed upon her stricken first born. Today, owing to the discovery of antitoxin and the invention of intubation tubes by O'Dwyer, the name is robbed of much of its terror.

I believe few laymen and scarcely any physicians of this day and generation now dispute the efficiency of antitoxin. They cannot, for abundant statistics show that in pharyngeal cases, where formerly only 55 or 60% survived, now 90 to 95% per cent get well, while in laryngeal cases a mortality of 70 to 90% has been reduced to about 26%. That this reduction in

mortality is not due to an attenuation of the severity of the disease is ably demonstrated by Baginsky's statistics of a severe epidemic, in which the mortality immediately jumped from 15 to 48%, when the available supply of antitoxin became exhausted, and dropped to the first figure when the supply was replenished. The claim that since the introduction of antitoxin we find more cases of post-diphtheritic neuritis, paralysis and impaired heart action does not, in my mind, militate against serum therapy, but rather indicates that the lives of many of the most virulent cases, which otherwise would have ended, have been spared.

We therefore all freely admit that diphtheritic antitoxin is a perfect antidote for the poison elaborated by the organism causing the disease, but the point many laymen and some physicians are slow to grasp or fail to fully realize is that diphtheria toxins, in probably from six to eight hours, will enter into a definite chemical combination with the body cells—combinations with affinities so strong that the antitoxin injected today cannot break them up and neutralize the toxins poured into the blood stream yesterday. They do not appreciate, while they procrastinate, that they are dealing with a chemical process which leads to degenerative conditions or processes as certainly and as positively as if they delayed to antidote phosphorus or bichloride of mercury while in the stomach.

As soon as a patient has had enough toxin chemically combined with cellular elements to produce groggy gait of the heart or violent neuritis, just that soon has the time passed when antitoxin will prevent oncoming heart failure or paralysis. Six, eight or twenty-four hours earlier administration of antitoxin would have prevented either by antidoting the toxins when elaborated. For from the time serum treatment is begun until the end of the course of the disease all toxins absorbed can be antidoted, provided large enough dosage is used.

Therefore the earlier the disease is recognized and the sooner antitoxin is administered, just in that ratio may we expect to keep our mortality down and our percentage of recoveries up.

Mortality statistics, when compiled ac-

ording to the day of the disease upon which serum treatment was begun, prove this point more positively than any argument. We give a report from the Municipal Hospital of Philadelphia during 1904:

Number of Cases.	Day of Disease.	Died.	Per Cent Mortality.
43	1st	0	0
220	2d	9	4.09
153	3d	21	13.72
114	4th	20	17.54
121	6th	9	14.75
61	5th	18	14.87

McCombie, in London, in over 5,000 cases, spread over eight years, finds a like ratio.

Therefore give antitoxin in large dosage at once. Do not leave the house without giving it. Give it on suspicion, if you like—at least on clinical diagnosis; do not wait for pathological confirmation.

In what dosage? That depends upon location of disease and severity of case. Some authorities have suggested, as a guide: Single tonsil involvement, 2,500 units; both tonsils, 5,000 units; both tonsils with pillars or uvula, 5,000 to 7,500 units; both nares and pharynx or larynx, 7,500 to 10,000 units. Others advise even larger dosage. But one fact is pertinent—that anaphylaxis is more likely to occur after many successive doses than after one large dose.

But, I hear someone say, why this repetition of what we already know? Simply because, in spite of the fact that we know it, we frequently tend to procrastinate in the giving of antitoxin. We want to make sure of the diagnosis. We do not wish to shoulder needless expense upon our patients. Ah, there is the crux! 1,000 units of antitoxin retails at \$2; 3,000 units at \$5; 5,000 units at \$1.50.

McDowell County Medical Society, feeling this a heavy burden even for our patients in moderate circumstances, appointed a committee to see what could be done towards securing A-1 antitoxin at a more reasonable price. We found many states, cities and towns securing antitoxin at a much lower rate. We reasoned that we could do likewise. Upon investigating further we found by establishing a distributing center at Welch, our county seat, we could procure for distribution A-1 antitoxin at the rate of 1,000 units for 50c;

3,000 for \$1.30; 5,000 units for \$1.90, the County Society ordering in bulk and distributing to our society members when they needed it. Since the establishment of this system I have had one family whose antitoxin bill was but \$7.50, as against \$25 had the antitoxin been purchased at retail.

Is this not worth while? Should not every County Society throughout the state establish such a center? Or, better, should not our State Association or State Board of Health establish such centers? This is the question I wish to leave with you.

Discussion—Dr. J. W. McDonald said:

I want to congratulate Dr. Anderson on his pleasing presentation of a valuable paper, especially on two points which some recent cases of post-diphtheritic paralysis have emphasized to me—the early clinical diagnosis without waiting for a microscopical investigation and the early use of large doses of serum.

One case was one that had had only a "tonsillitis," the mother knew that it wasn't a diphtheria and she wouldn't let them use that serum anyhow.

We know that this neuritis is not nearly so often found after the use of serum; in fact, I do not now recall a case in which the serum was used early and of large enough dosage that the paralysis occurred, and I would like to more deeply impress, if possible, the value of the two points for this reason.

FAITH CURES AND HOW THEY ACT CONTRASTED WITH THE PRINCIPLES OF SCIENTIFIC MENTAL HEALING, WITH CASE REPORTS.

Tom A. Williams, M.B., C.M., Edin.,
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Medical men as a whole have been notoriously unsuccessful in dealing with the kind of neurotic disturbances which were formerly called neurasthenia, neuroticism, hysteria, hypochondriasis and nervous breakdown.

In the treatment of these cases it is often supposed that lay persons who profess to treat the mind are more successful. Regarding disorders of purely psychological causation this may have been the case at a time when their management by medical men was dependent upon the uncritical empiricism, such as one still finds in the text books.

All of the descriptions of functional nervous disorders overemphasized the physical as against the psychical factors in their production, failing entirely to analyze the syndromes, and even where the disease was of physical origin attributing too much importance to fatigue of the nervous system itself and far too little to the factors outside the nervous system of which the nervous disorder is a mere consequence. (See author's Syndrome of Adrenal Inadequacy, J. A. M. A., 1914.) Of course in these latter cases lay therapy met with no better success than that of physicians unless it took the form of physiological measures, such as were effected by modifications of diet, exercise, massage and bathing or stimulation of vital processes by electricity, the first four of which were grossly neglected by our profession except in Germany.

But where psychogenetic disorders were concerned many lay systems of mental healing met with much success because of their realization that it was the psyche and not the soma which should be attacked therapeutically. Over these the few medical men who attempted psychotherapy showed no superiority, because their method consisted merely of an attack upon the symptoms themselves by countervailing suggestions (see Errors in Neurological Practice, Mo. Cyclopaed., July, 1914), indirect, direct or hypnotic, as determined by the practitioners' theories or the patient's needs. Indeed, the layman's appeal was often superior because of its invocation of religion mysticism, or at least, the shiboleths of a cult, which, by allaying the criticisms of reason, might make its suggestions more effective.

Those who see no more in psychotherapy than the suggesting of the disappearance of symptoms must needs admit the inferiority of the medical man to many a charlatan in this respect; for the whole training of a medical man tends to breed intellectual honesty, whereas the whole process of suggestion hinges upon a sidetracking of a patient's attention while he is bamboozled into the acceptance of a new idea without opportunity for criticism or opposition. He is taken unawares by a subterfuge. And even although the end may seem to be for his good, at least

to a shallow reasoner, yet the whole procedure is out of tune with the habit of mind which has been trained by the observations and scientific induction upon which the true practice of medicine depends.

But real psychotherapy is not suggestion. The object of its practice is not merely to side-track an unpleasant thought or emotion, but to re-educate the patient's tendencies in a fruitful direction which will preclude reactions of disquieting or hurtful kind. The process can be most satisfactorily accomplished only when the practitioner has analyzed the psychic factors which enter into the disturbance. He does this in order to have an understanding of the mental processes with which he will have to deal in reconstructing the patient's reactions to the surroundings which have initiated or are maintaining his psychosis.

The procedure may be very complex, but in principle it does not differ from the very simple conditioning, reconditioning and deconditioning of autonomic reflexes practiced by Pawlow upon dogs in his experiments upon the functions of the digestive glands. For example, he changed the normal gastric flow reflex when a dog sees flesh into an inhibition of the flow even after eating. He did this by "conditioning" this reflex by the fear induced by showing a whip, of which the dog knew the use, each time he was fed. Again, he deconditioned this same reflex, thus restoring the flow of gastric juice to flesh in spite of the whip, by accustoming the dog to regard the whip as harmless.

The reverse process was accomplished by ringing a bell just before feeding time, by means of which the dogs began to secrete gastric juice at the ringing of the bell without any appearance of their meal. In ways like this the secretions of the digestive glands could be modified at pleasure. Again, Cannon by producing fear in cats so raised the output of the adrenals that blood from the vein of these organs would arrest completely peristalsis in a frog's intestine. Crile caused death in rabbits by means of fear aroused in them by dogs.

The principle is one of associating with useful activities, which very often means social relationships, the pleasurable feel-

ings for which the patient has substituted some distressing emotion. When this is accomplished there ensues the spontaneous disappearance of the disagreeable feelings which are often at the root of nervous breakdown, thanks to a power of storing up impressions in the human cortex in form of ideas, the constant activation of which may thus interfere with proper social adaptation through their "association" into a painful complex.

The theoretical superiority of this method is amply confirmed practically in my clinical experience and that of many fellow psychopathologists.

The following cases are appended as illustrations of the kind of situation which may be met by modern psychotherapy. The actual demonstration of the procedure would require longer than the compass of this paper, and the cases presented are mere summaries. However, observations in greater detail have been set down and many are already published. Those interested may refer to:

- Contrast in Psychoanalysis, *Jour. Abnor. Psy.*, June, 1914.
- New York Med. Jour., May, 1914.
- Studies of Writers Cramp, *J. f. Neur. und Psyoni.*, Leipsic, 1911.
- Multiple Cramps in a Psychasthenic, *New York Med. Jour.*
- Successful Psychotherapy in Traumatic Neurosis, *Int. Jour. Surg.*, 1909.
- Ten Cases of Hysteria, *Wash. Med. Annals*, Jan., 1912; *Post-Graduate*, June, 1912.
- The Management of Juvenile Psychasthenia, *Amer. Jour. Med. Sci.*, Dec., 1912.
- Medical Annals*, Dec. 13, 1912.
- Psychogenetic Disorders in Childhood, *Jour. Abnor. Psychol.*, 1909.
- Post-Graduate*, Sept., 1913.
- Psychoprophylaxis in Childhood, *Jour. Abnor. Psychol.*, 1909.

A medical man was placed for 4 years in a London asylum because supposed to be demented. Proper analysis showed me he was psychasthenic merely. He recovered in a few months.

A man metabolically disturbed against advice embraced Christian Science, resulting in undue optimism, rashness in business, failure and suicide.

A youth attempted suicide twice. In a sanitarium he tried twice more. Less than two hours' analysis revealed the mechanism of his disorder and initiated a cure.

A girl of 16 sent from Pittsburgh could not go to boarding school because of

night terrors. Analysis for two weeks led to a cure within a month.

A lawyer had for years struggled against an intense fear, the source of which he did not know. A short analysis revealed its source, a non-sexual one, in childhood. He was restored to health within two weeks.

A banker whose engagement to marry had been broken lost 40 pounds and could not concentrate at work. Re-education cured him after an arduous struggle.

THE NEGLECTED PART OF SURGERY.

G. A. MacQueen, M.D.,
Charleston, W. Va.

(Read before West Virginia Medical Association, May, 1914.)

To appear before the West Virginia Medical Association with the statement that any part of the field of surgery today is being neglected in its development or preservation is sufficient cause to provoke debate.

The neglected feature that I wish to call attention to is not a scientific one, but a moral one. It is conservatism and honesty on the part of the surgeon himself in his dealings with his patient, and for want of a better name I will call "The Neglected Part of Surgery" the surgeon's conscience.

The wonderful progress and development of surgery that have occurred within the last quarter of a century have made it possible for the unskillful to do quite considerable surgery with a fairly low mortality rate.

While this has been true the public has, like the story of "The Fox and the Bell," become non-sensitive to the horrors and imaginary dangers of surgery that formerly kept many cases out of the hands of both the fit and the unfit surgeon.

While we have made progress in educating the laity out of a false fear of legitimate and skillful surgery, we have made it easier for the unskillful and unscrupulous designer who poses as a surgeon to gain entrance to the field of the profession. The great majority of the people use much poorer judgment in their selection of a physician or surgeon than the same person would in most anything else.

In fact, he is often selected by chance and judgment is not consulted.

The desire to gratify ambition is one of the irresistible forces of human character. The ambition of the average young man, and many of the older ones in the medical profession today, is double in nature. There are two great seaports upon which they set compass, namely, wealth and professional fame. To attain these two things is their great and all absorbing object, and all else must be subservient to the paramount issue. Personal ambition is selfish, and selfishness nurtured and encouraged has no limitations.

The public has erred in its standardization of the term surgeon and some would-be surgeons have also erred on the subject. To the lay mind and to the minds of some men passing as surgeons the greatest surgeon is the man who can induce the greatest number of the human family to submit to some kind of an operation or some form of mutilation of their anatomy. To cut and sew the human anatomy is only mechanical, and to be clean is not a prehistoric Egyptian art. A man with clean hands and clean instruments may, if he is a fair mechanic, open as many bellies as Mayo or Murphy, with an equally low mortality, so far as the operation is concerned.

The true surgeon (who, by the way, I regard as one of the greatest benefactors of the human race) does his greatest and most valuable services outside of the operating room, or at least before he begins his operation. The surgeon who is able to make the most accurate diagnosis and whose judgment leads him most surely to the greatest remedial means or measures is the greatest among surgeons.

As surgeons we have no right morally or legally to advise or resort to operative procedures for the preservation of life or the relief of suffering unless we have some definite and logical reason for believing that such procedure promises more toward prolongation of life and restoration of health and comfort than anything else we could do in the case before us.

After the surgeon has exhausted all available resources of modern knowledge and helps and arrives at a conclusion to advise an operation, he should halt right here and apply the following test (being

honest with himself and his God): If the position of this patient and myself were transposed is the advice that I am about to give in harmony with that great law, "Do unto others as you would have them do unto you?"

The true surgeon is modest and honest and a true friend of the human family, and is informed as far as he allows his field of work to extend.

I mention the attribute modesty first because I have never seen a despoiler of the noble calling of the surgeon who was not an egotist, and Ego's twin brother Ignorance is an inseparable companion, and they have always been buried in the same grave. The spectacle of an egotist in the field of surgery is analogous to that of a loose bull in a well kept June garden. The unscrupulous, the unequipped or the unadapted man in the field of surgery is often found there in the personality of one man. Then again you find a man lacking in any one of the essential attributes of a surgeon making equally as poor a spectacle as the one lacking in all.

The man who would be a real surgeon, a surgeon worthy of the confidence of suffering humanity, must be a man of a high sense of honor with an ascetic sense of his duty to his fellow man, and more especially to the man, woman or child who trusts him with the greatest treasure that he possesses—life and health.

If surgery is to be kept on the high plane of respect and confidence of both the profession and the laity that it deserves we must keep its raiment unsullied.

One unqualified man in a locality doing surgery can do untold harm to a half score of good competent men in the same field, and the worst of it is, he at the same time is doing a greater amount of harm to a populace who should be able to trust their physicians and surgeons if they are to receive the greatest good from them.

To do an operation and have your patient live to tell his hospital experience is not always successful surgery. But to do an operation and have your patient leave the hospital a cured or improved or a more comfortable patient because of what you did for him is evidence of successful surgery.

I had thought to report some anonymous cases and experiences that have

come under my observation as an effort to excuse my selection of my subject, but relying on the fact that my experience has not been very different from that of many of my colleagues present I will trust their memories to justify me.

In conclusion I want to assert that if surgeons are to enjoy the confidence of physicians who are not surgeons, and of the laity to a degree that will enable them to be of most service to humanity and themselves, they must insist upon a higher development of the conscience in many men who would be surgeons.

Therefore I say cultivate a surgical conscience, and you will be a contributor to "The Most Neglected Part of Surgery."

EUROPEAN CORRESPONDENCE.

(The following letter written to Dr. J. H. Anderson of Marytown by Dr. F. W. Barger of Hiawatha is printed by the courtesy of Dr. Anderson.—Editor.)

Dear Doctor:—In compliance with your request that I write you concerning the 1914 session of the Clinical Congress of Surgeons, just closed in London, as well as a brief review of my surgical observations abroad, I take advantage of leisure moments on my return voyage in writing you.

Hotel Cecil, centrally located on the Strand, was selected as congressional headquarters; evening sessions for general surgical discussions were held there in the Grand Hall. Evening sessions were also conducted in the ball room of Hotel Savoy for those interested in surgical specialties. Addresses of welcome were delivered by Sir Rickman Godlee, retiring president of the British Royal College of Surgeons, and our ambassador, the Hon. W. H. Page. Interesting programs pertaining to various surgical subjects were read and discussed by prominent men, from home as well as abroad. Some of the papers were especially interesting and stereoscopic views were instituted to supplement papers in many instances. Dr. Murphy's master mind seemed at its best when speaking on his chosen subject, Orthoplasty and Bone Transplantation—Its Limitations and Technique.

Mr. Robert Jones of Liverpool, subject, "Certain Derangements of the Knee Joint and Their Treatment." This paper was

thorough and specific, pathologically and symptomatologically, bringing to attention many points that most of us are prone to overlook. Prof. Tuffier of Paris read an interesting paper on the transplantation of ovaries. Prof. Kronig of Freiburg was to have given a complete report on the non-operative treatment of carcinoma, but at the last moment was called away to the German army.

Dr. Percy of Galesburg, Ill., read an interesting paper, "The Application of Electrical Heat at a Non-Cauterizing Temperature Inside the Uterus for Non-Operable Carcinoma." This principle evidently has had careful study and I expect that we shall hear from Dr. Percy in the future. Symposium: Intestinal Stasis. Discussion: Sir Berkely Moynihan, Leeds; Sir Bertrand Dawson, London; Dr. Joseph C. Bloodgood, Baltimore; Sir Arbuthnot Lane, London. Notwithstanding Dr. Moynihan's formidable attack upon this interesting subject, Dr. Lane's views on chronic intestinal stasis become more generally acceptable. I merely make mention of some of these papers, as no doubt you will have the opportunity of seeing the publications from time to time in "Surgery, Gynecology and Obstetrics." Quite a number of surgical exhibitions and demonstrations were held at various hospitals available to the visiting surgeons' attention. Regular clinics were held daily. However, it was considered advisable to issue special tickets for the clinics, thereby conserving adequate opportunity for observation to all. London has about 35 large hospitals, the London Hospital leading in the number of patients annually admitted and cared for. St. Bartholomew, St. Thomas, Westminster, Guy, Middlesex, St. George and the University Hospital are the larger of this number. King's College Hospital, not yet fully completed, is said to be the finest and most modernly equipped institution in England. The program as prepared by the British surgeons was much appreciated by the members of the Congress, and resolutions expressing the sentiment of those present were presented and a cordial invitation extended to all who could be present at the next session, designated for an American city. Dr. Charles Mayo of Rochester, Minn., was elected to succeed Dr. J. B. Murphy

of Chicago as president of the Clinical Congress of Surgeons.

Now, as to my conclusions from observations of surgical performances abroad. Hospital requisites and technique, as I observed, vary but little in these days of such free surgical communication of ideas. I may say only in non-essentials, and in that only as the idiosyncrasy of the surgeon might require. In some few clinics, as in an average American clinic, surgical measures appear to be too frequently resorted to as the means of relief. Biniodid of mercury, 1-3000, is freely used in connection with surgical preparations. Iodin is used freely by some, not at all by others. Heavy dressings are used in some instances, while others use only thin gauze pasted over the line of incision with collodion. This is, in fact, a very simple dressing and commonly used in laparotomies. Fine silk for ligature and stitching was observed to be most universally used. Occasionally silkworm gut was supplemented and even buried with impunity in hernias and abdominal fascias.

In view of the present horrible conflict in Europe we were fortunate to have visited the Continent first. Landing at Cherbourg we immediately proceeded to Paris. There we visited the Leneck Hospital, a very old and quaint Catholic institution, where we saw Prof. Hartman, one of the most prominent surgeons of the city, an immaculate old gentleman of medium stature and affable manner. While he does not speak English, we had little difficulty in understanding points to which he would call our attention in connection with the operation. His technique is very simple, thoroughly practical and his work fast and neat. Aluminum-bronze wire seems to be his favorite way of closing the abdomen. I noted the exclusive use of chloroform at this clinic.

Prof. Kocher at Berne has one of the largest and most interesting clinics in Europe, and one sees the greatest variety of surgery there. Ether is the general anaesthetic in use. However, Dr. Kocher uses novocaine and local anaesthesia in the greater number of his cases. It was noteworthy to see how easily and comfortably he was able to reduce a shoulder dislocation by deep injections of novocaine in the region of the joint. Prof.

Kocher prefers to meet personally those desiring attendance at his clinic. He speaks intelligible English, and I found him to be a charming old gentleman. His son Albert operates with him, and it is usual to see three and four cases undergoing different stages of an operation in the same large amphitheater. Prof. Kocher is professor of surgery to the Berne University.

A visit to Zurich, the New York of Switzerland, and then to Heidelberg, that old historic place and seat of learning within the borders of the German Empire. There we saw Prof. Willms at the University Hospital, an old time-worn institution. He was glad to inform us that they had the promise of the hospital being rebuilt in the near future. Prof. Willms had a nice program, giving us a fair opportunity to judge of his work, with which we were favorably impressed. His second case that morning was operation for congenital ankylosis of the jaw, and making comparison with Dr. Murphy's work of the kind it was interesting to note that Dr. Willms dissects the slip of fascia from the abdomen which he interposed between the fractured bony surfaces.

Prof. Willms has experimented with goiter in mice, and by heating water consumed by those animals he notes that goiter does not occur. This causes him to believe that there must be some substance in water which excites the development of goiter.

A day's relaxation at Wiesbaden and we next arrive at the large and thrifty city of Frankfurt, the home of the Rothschilds and many other wealthy Jews. It was there we saw Prof. Rhen, who showed us quite a number of interesting cases, also demonstrated the use of radium, showing cases undergoing treatment, as well as some late results. The City Hospital there, of which Prof. Rhen is surgical director, is the finest and one of the best equipped institutions in Germany. It is endowed by the wealthy population of the city.

We also visited Prof. Paul Erlich's laboratories. However, Prof. Erlich was away at the time. I must say, while my curiosity was satisfied, chemicals and physiological experimentations were so manifestly in evidence, representing to the un-

scientific visitor merely unintelligible quantities, I feel that I have nothing official to report from this source.

Rheinstein and down the Rhine, that magnificent scenic route through the heart of Germany, brings us to Bonn, a beautiful old university town. There we met Prof. Garry, director of the university surgical clinic, and had the privilege of seeing a general surgical routine, thoroughly applied, and with the strictest asepsis observed. Prof. Garry is an amiable and courteous old gentleman of the highest type, and he took the greatest pleasure in showing us in detail throughout the hospital. He expressed himself as being very fond of the Drs. Mayo of this country and has photographs of both decorating his office walls.

From Bonn we next visited Cologne, and from Cologne to the quaint old city of Amsterdam. We were disappointed in not seeing some special surgery we had anticipated there. The same in Edinburgh, the holiday season generally prevailing. Mr. Dalziel of Glasgow, however, had a large program, and in that enthusiastic Scotch way manifested quite a bit of originality. He performed a beautiful gastro-intestinal anastomosis without the aid of clamps. Uses no gloves, cap or change of gown and but few instruments. Keeps a close account of details and says a major operation only costs the hospital two dollars.

At Belfast we saw Mr. Kirk at the Royal Victoria Hospital. This is a modern and beautifully constructed institution with a magnificently arranged system of ventilation, forcible intake and exhaust, the air undergoing filtration, and is then brought to the proper humidity and temperature before being allowed to enter the wards. This institution is endowed by Irish-Americans and a seamen's fund. Mr. Kirk is an enthusiastic surgeon and generally follows the dictation of his own ideas.

It was Mr. Gunn we saw in Dublin; a middle-aged Irish gentleman. His technique was nice and swift, not unlike our good American surgery. In Ireland they generally prefer a specially-spun linen suture material.

In England again I find American surgical methods have been quite freely ac-

cepted. However, one is impressed with the individuality of England's greatest men. Dr. Lane of Guy's Hospital shows himself to be a wonderful master and in every way quite equal to our giants in the profession. Mr. Freyer and Mr. Edwards of the St. Peter's Hospital show themselves equal to the international reputation they have attained as genito-urinary surgeons. In fact, all the London surgeons show themselves to be thorough and well trained men for the positions they occupy.

A few specific points relative to the London work and I will close. The non-operative reduction for congenital dislocations, as employed by Mr. Robert Milne, orthopedist to the London Hospital, is worthy of mention. The three groups of thigh muscles are stretched by vigorous massage, the dislocation, then easily reduced, is maintained by a series of plaster casts over a variable period, six months to one year.

A-C-E mixture is the most generally used anaesthetic; nitrous oxide is also used a great deal for minor work, tonsillectomies, etc. Mr. Barker of the University Hospital makes use of stovain beautifully and successfully. He uses ampoules 2 c.c. capacity and 2, 4 or even 6 as indicated, injected between the third and fourth lumbar vertebrae into the spinal canal. Anaesthesia follows within ten minutes. Occasionally nausea occurs, but no other untoward after effects. Formula: Stovaine 5 gms.; glucose 5 gms.; distilled water 100 gms.

With the addition of glucose the specific gravity is raised (1.23), and by turning the patient on the side is capable of securing unilateral anaesthesia. Mr. Barker uses a peculiar method when preparing the field for operation. After washing and shaving, mastic 4% in benzol, a gummy mixture, is sprayed on the part; a stockinette or material of similar kind is then stretched over the field of operation and more mastic applied. The incision is then made directly through the interposed material.

The number of East Indians in English medical schools and hospital service is noticeable. Intelligent looking fellows they are.

Just another point that may be of inter-

est relative to the titles assumed by some and bestowed upon others of the English medical profession. I understand various titles are possessed by those progressing to the full degree of "Doctor of Medicine," of which I made no inquiry. However, those endowed with a medical degree and choosing the general practice of medicine retain the title "Doctor," while those practicing surgery assume the title "Mister." "Sir," of course, is a title bestowed upon those eminent members of the profession who have rendered eminent services or have contributed to the science in a way which would naturally presuppose distinction.

I hope to see you soon, and with kindest regards, I remain,

Cordially yours,
FRED W. BARGER.

REPORT OF THE TUBERCULOSIS CAMPAIGN.

September 15, 1913, to September 15, 1914.

This campaign was made possible by an appropriation of \$9,900 by the Legislature of 1912 and the generosity of the railroad companies, the Baltimore & Ohio donating the use of a car and free transportation on the Baltimore & Ohio, Norfolk & Western, Chesapeake & Ohio, the Virginian, Coal & Coke, Kanawha & Michigan and all their branches, besides private coal roads. The car was handled splendidly and the officers and employes of all companies were most courteous and obliging. It would have been impossible to reach as many places without such transportation, and we are greatly indebted to the railroad companies named.

The car was fitted up in August with the exhibit, lighting plant and literature. The car was painted white with red crosses and usually remained a day and a night in small places and two days in larger ones. It attracted much attention and the interest shown was gratifying, especially among the children. Dr. Thurman Gillespy of Wheeling accompanied the car as a lecturer and rendered most efficient service. The doctor was on duty day and night faithfully instructing the public as to the cause, prevention and cure of tuberculosis. At times he lectured

in churches and halls before the opening of the car. We believe that the future will show results of this valuable instruction. That the people were anxious for such instruction was shown by the large number of people who visited the car. Not less than 100,000 people saw the exhibit in six months.

Dr. Harriet B. Jones preceded the car and talked in every school that could be reached by train, walking or riding, and gave lectures at night to adults. More than 200,000 pieces of literature were distributed on the car, in schools, at lectures, on railroad trains and at stations, and this literature was read.

The towns visited numbered mostly from 200 to 700 inhabitants. The lectures were well attended in these towns and also by persons in the outlying districts. To show the interest I will give two or three instances. In one place the meeting was held in a dance hall. There were no seats except boards around the walls and planks resting on boxes. A few persons brought their own chairs. There must have been many there from the country or the whole population turned out. There were over two hundred people present, more than the population of the town. There never was a more attentive or interested audience.

After a ride of thirty miles in a mail hack to Summersville, Nicholas county, it was gratifying to find that the doctor who had the matter in charge had done his work so well that when a talk was given in the town school, country teachers and pupils were present, swelling the number to 200. At night every seat in the church was filled and many standing. The roads were very muddy and bad. The beautiful little town of Academy, population 181, is four miles from the railroad, with a fine high school in the midst of a thriving farming community. The afternoon talk here was attended by a number of teachers from surrounding schools and not less than 250 persons were present at the evening lecture.

In such a campaign it seemed fitting that physicians should take the initiative, and they were asked to do so and the majority responded, finding a place for the lecture, putting out advertising matter and arousing interest.

While much has been done among the older people, more has been done among the children. They showed the greatest interest in the talks given in the schools, and they went home and told their parents what they had learned and insisted on open windows and better sanitation. The superintendents, principals and teachers welcomed these talks heartily.

Conditions in many cases are appalling. School houses with closed windows from the time school begins until it closes in the spring, tin dippers and buckets, spitting on the floor, many persons with tuberculosis, houses not disinfected, no statistics, not a town or locality without one or more cases of tuberculosis, more deaths from tuberculosis than typhoid fever in some localities. There is sore need of teaching our people how to keep well and how to avoid infection. In one town the week before the lecture a patient had died with tuberculosis, and all his effects, even to the bedclothes, had been sold at auction and nothing disinfected. In spite of the state law forbidding the common drinking cup it is found in schools, hotels and even in the abode of law, the court house. While spitting is appreciably less than it used to be the law against this prolific source of disease should be rigidly enforced.

After the car had been carried free for six months we were informed of a resolution passed by the railroad companies that no more cars would be carried free in the future. We considered the advisability of paying transportation, which would have been considerable, and not more than one place in each remaining county could have been reached, and as the car had to be given up for the summer the plan of taking the exhibit to towns and setting it up in a room that might be provided was considered, but after due consideration and trial this plan has been abandoned for good and sufficient reasons. One, that it would be very difficult to find a suitable room in many towns, and another that when the exhibit was returned from Morgantown, where it had been taken to the State Educational Association, the pathological specimens were so damaged that they could no longer be used, and as they were the most interesting part of the exhibit it was thought best to abandon the

exhibit, but continue the work in the schools and the lectures to the public.

Work done from September 15, 1913, to September 15, 1914:

Forty-four counties visited; 33 counties visited by the exhibit car; 133 towns visited by the exhibit; 164 towns visited by Dr. Jones; 624 talks given in schools by Dr. Jones to 53,354 pupils, more than one-fourth average state attendance; 102 lectures to adults to 19,377 persons; 16 County Teachers' Institutes attended and lectures given to 71,820 pupils; 250,000 pieces of literature distributed.

By visiting the institutes it was possible to reach one-fourth of the teachers in the State and more than one-fourth of the pupils, as shown by the average attendance last year. In the next few months 24 counties will be visited and a number of places in each. By the first of February it is expected that every county in the State will have been visited.

HARRIET B. JONES, M.D.,

Director of the Tuberculosis Campaign,
West Va. Anti-Tuberculosis League.

Original Abstract.

MORE LIGHT ON INTESTINAL STASIS.

In the Journal American Medical Association for August 8th is a valuable paper by W. J. Mayo, entitled "Resection of the First Portion of the Large Intestine and the Resulting Effect on Its Function," of which Dr. Hupp sends us the following abstract and comments:

Human beings vary in their internal anatomy in about the same degree that they vary in their external form and configuration. Frequently in the past surgeons have attempted to correct the internal anatomy by operation because of variations from the average normal, especially the position of the abdominal viscera. Mayo places emphasis on the fact that it has been less than ten years since nephrorrhaphy, ventrofixation, gastrorrhaphy and kindred operations were resorted to on indications which would not be accepted today. Variations within limits today are not to be considered abnormal. The reason we see the right kidney more mobile than the left is because of the looseness

of attachment of the ascending colon and the hepatic flexure. Obstruction of the bowels produced experimentally shows the poisonous effect of the secretions of the upper jejunum and duodenum when actually blocked; clinical experience bears out this observation. For this reason Mayo claims that a high enterostomy in acute intestinal obstruction gives quickest and surest relief than one down closer to the point of obstruction.

Vaughan shows the specific character of the poisonous effects which are produced by failure properly to split up proteins and their relation to food idiosyncrasies and anaphylaxis.

Mayo thinks hyposecretion or hypersecretion of the thyroid and hypophysis and various other glands of internal secretion may have its counterpart in like condition of the glands of the intestinal mucosa. The hypothetical condition may be called an intoxication in the absence of a better scientific explanation. Certainly there is an absorption of some chemical substance, yet there is no infective lesion of the intestinal mucosa.

Mayo proceeds to discuss the removal of the cecocolon as a means of physiologically limiting absorption and also the effect of this radical surgical interference on the storage function of the bowel or constipation, or intestinal stasis. In his ileocolostomy Mayo thinks Lane has apparently demonstrated a physiological point mentioned in a paper from the Rochester Clinic in 1900, i. e., retention of food in the small intestine and in the cecocolon deprives the storage half or the part beyond the splenic flexure of that chemical stimulation necessary to activate the large intestine, hence the stasis and interference with body metabolism through absorption. Mayo makes a statement that Sir Arbuthnot Lane will hardly accept: "Ileocolostomy, in a certain percentage of cases, leads to an impaction of the disused colon through reversed peristalsis," with a continuance of absorption of poisonous products quite as though the operation had not been performed.

Twenty cases are reported by Mayo, which received operation for the relief of symptoms due to stasis and the consequent intoxication; he removed 10 inches of the terminal ileum, appendix, cecum,

ascending colon, hepatic flexure and a portion of the transverse colon, but not trespassing on that part of the transverse colon which contains the omentum. If this rule is not observed Mayo claims that serious adhesions occur with unfortunate sequelae. His cases were of the advanced type, with bands, kinks and adhesions, with obstructive symptoms of the "silent" type, with a soft abdomen. The end of the ileum was joined to the side of the transverse colon.

Marked improvement followed in all cases and in 87 per cent relief of constipation. He concludes with the reasonable assumption, that in physiologic disturbance of the terminal ileum and cecocolon lies the cause in some cases of the protean manifestations of intestinal toxemia and constipation, and that removal of the cecocolon will relieve many of these patients.

Mayo considers the operation serious, yet he had no mortality.

He wisely deplors the widespread adoption by the medical profession of surgical measures for this or allied conditions while it is in the experimental stage with little evidence to show that the supposed cures are permanent. When one looks back over the fads and fancies in medicine, especially as applied to the so-called neurasthenic group of patients, one may well pause and make haste slowly.

Selections.

THE RELATION OF TEMPERATURE TO INCIPIENT TUBERCULOSIS.

John N. Alley, M.D., Lapwai, Ida.
Superintendent Fort Lapwai Indian
Sanitarium.

The earliest monograph on tuberculosis laid great emphasis upon fever as one of the initial symptoms. Hippocrates, 450 B. C., in his writings mentions the disease, the "beginning of which were fever, cough and sweats." He also states the treatment as one of "rest, milk diet and fresh air." Galen, writing 150 A. D., speaks of tuberculosis as "a fever, produced by mucus dripping from the post-pharynx and running down into the lungs." Richard Morton, in his excellent

report of this disease, published in 1689, classified tuberculosis as continuous fever and divided the fever into the beginning or inflammatory fever and the later or hectic fever. Thus is seen that from the first history of medicine the temperature wave of tuberculosis occupied a foremost place in the diagnosis; and with all the advance of science during the last twenty-five hundred years its importance has scarcely changed, for a careful study of the patient's temperature constitutes one of the best aids in an early diagnosis, is a constant guide in treatment and one of the chief factors in giving a prognosis.

That the full importance of the temperature wave may be understood it must be studied accurately and regularly. Very little knowledge of the patient's real condition can be obtained by taking the temperature at irregular intervals. The temperature cycle in each case is generally quite uniform and a record made every two hours for the first few days will generally give a correct picture of the variations. After this it is well to take the temperature twice a day at least. I prefer 7 a. m. and 7 p. m.

A young man from Virginia was referred to me some time ago. His chart, on which a fourteen days' temperature was recorded, showed a temperature never below 98° or above 99°, apparently a normal temperature. Yet the patient was very ill and was immediately ordered to bed. On inquiry I ascertained that he had visited the physician's office about 10 a. m. daily. A careful record of his temperature ranged, to my surprise, from 95° at 7 a. m. to 105° at 7 p. m., the 10 a. m. register being between 98° and 99°. This young man died a few weeks later, a case of acute miliary tuberculosis, very different from that of incipient tuberculosis, the diagnosis reported to me, and to which his temperature record on his arrival corresponded.

The temperature should be taken not only daily for two weeks, but at least twice a day, morning and evening, and sometimes oftener. If the full value of the temperature wave is to be obtained and before a definite opinion can be given of any case showing symptoms of tuberculosis, the temperature must be taken, studied and compared while the patient is at

rest, when taking gentle exercise and when engaged in the duties of general occupation.

I have often had patients while at rest showing a normal temperature curve. Very slight exercise would produce fever. Certain patients under my observation, with a half hour's violent exercise such as sawing wood or unloading grain, would raise the temperature five or six degrees. Such patients require treatment for a long time and great caution is to be exercised in permitting them to return to accustomed occupations when the tuberculous process is once arrested. Many incipient cases will develop a slight fever after meals which can generally be avoided by an hour's rest immediately after eating.

While practicing medicine in the East some years ago my attention was directed to a class of patients (females usually) suffering with anemia and general debility about the age of puberty. Careful study of ten of these showed a subnormal temperature in each case, ranging from 96° in the morning to 98° in the evening. The temperature curve was easily disturbed and apparently without cause, occasionally rising to 99° or 99.5° . Frequent and thorough examinations of the chest failed to demonstrate any definite signs of tuberculosis. I kept these patients under observation for ten years. Six developed tuberculosis and died.

These cases created a desire to further investigate the temperature wave of incipient tuberculosis and I have had opportunity since then to study five hundred cases so diagnosed. These have come from all parts of the United States and Alaska, most of them having been Indian school children admitted for treatment to the sanatorium of which I have charge. All records were taken by competent nurses under strict orders. Of the five hundred, 90 per cent, or four hundred and fifty cases, carried a subnormal temperature when admitted. Five per cent had some degree of temperature upon entrance, but with treatment soon assumed a subnormal temperature and, with continued treatment, this generally came up to more normal lines.

Later, in those cases which terminated favorably, very little rise of temperature occurred, while in cases advancing, in spite of all that could be done for them,

the temperature gradually increased until, toward termination, the range often extended from 95° to 105° . Five per cent carried a temperature of 99° or over when admitted. I doubt whether this class of patients should be designated as belonging to that of incipient tuberculosis. In these I believe the process was beyond the incipient stage and that mixed infection had occurred with more or less destruction of living tissue.

Of the four hundred who had a subnormal temperature upon entrance 90 per cent, or three hundred and sixty, sometimes showed a fluctuating, irritable temperature, one occasionally rising to 99° or 99.5° . The remaining 10 per cent had a consistently subnormal temperature during the first six months of treatment, their average ranging from 96° in the morning to 98° in the evening.

Your attention has been called to this report for several reasons. First, that, in order to obtain a full knowledge of a patient's temperature, the latter must be taken and accurately recorded for at least fourteen days, no less than twice daily, preferably $\hat{\imath}$ a. m. and $\hat{\imath}$ p. m.; second, that many of the lessons to be learned from the temperature wave of tuberculosis are lost by carelessness in taking and recording; third, that the patient's temperature must be taken at rest, during gentle exercise, and when exercising more violently, in order to bring out all the points concerned; fourth, that the beginning of tuberculosis is usually marked by a subnormal temperature, irritable, and which, without discernible cause, will sometimes rise above the normal line.

How frequently will patients consult a physician when complaining of exhaustion, slight neuralgia and other symptoms of a physical condition below par? His history is taken, a physical examination made and the temperature recorded. There being no fever, the physician, giving a tonic, tells the patient that in a short time health will be restored. In a few months the doctor may be surprised to learn that his patient is being treated for tuberculosis.

The economic loss through tuberculosis is enormous. Thousands suffer with the disease of whom there is no record. Many have recovered from and many have died

of tuberculosis, not having had the ailment correctly diagnosed. The disease is widespread in almost every land and every physician dealing with sick people must give it his consideration. When tuberculosis is diagnosed early about 90 per cent will arrest the process; whereas, when diagnosed later, in not more than 10 per cent will the process be checked and most of these remain, in greater or less degree, invalids.

Many signs and symptoms of tuberculosis have been enumerated, some of them easy of recognition, others more obscure and only discernible to an expert of wide experience. It is the general practitioner who has the opportunity to see most of the incipient cases. These get into the hands of the family physician, usually consulting him for such complaints as headache, indigestion, rheumatism and many other symptoms. Before giving a definite opinion and diagnosis, all such symptoms should be most thoroughly gone over in conjunction with a temperature, taken regularly at least twice a day for two weeks, and under varying conditions of rest and different kinds of exercise.

The vague symptoms referred to, when combined with a careful study of the temperature wave and close observation of the patient's habits, are really only too frequently but initial symptoms of a tuberculous process. Acknowledging and giving full credit to the fine scientific tests for ascertaining a tuberculous condition in the human being, I still maintain that to sight incipient tuberculosis there is no greater aid than a detailed observation of the temperature wave, and that the majority of such cases carry a temperature often considerably below the normal line. Once fever is in progress the case is beyond the incipient stage.

Exactly to what extent the tubercle bacillus is responsible for fever in tuberculosis is a much debated question. Some claim there is but little fever produced by the toxins of the tubercle bacilli; others attribute most rise of temperature in this disease to mixed infections. However this may be, to return to the abnormal temperature of incipient pulmonary tuberculosis, when we consider that in its initial stage the disease is strictly local, involving as a rule a small portion of lung tissue, it would seem logical and natural to expect

little action on the thermic centers. In addition, the majority of victims of tuberculosis are, because of various other reasons, physically debilitated, in which the heart's action and other organic functions are below par, leading again to the reasonable conclusion of a subnormal temperature; and when such temperature continues for some time the physician should keep sharply on the alert for a probable condition of tuberculosis.

Not only is the temperature one of the greatest aids in sighting incipient tuberculosis and thereby enabling the physician to begin his treatment at the most favorable stage of the disease, but later it is also a guide to most intelligent treatment—the quantity and quality of food, amount of rest and exercise, the use of drugs, tuberculin, etc., the time for returning to the usual occupations and normal living; and the prognosis, to a very large extent, is made upon the patient's ability to re-establish a normal temperature.—Northwest Medicine, August, 1914.

Diagnosis Between Suppurative Mastoiditis and Furunculosis.

It is quite important that a differential diagnosis be made between acute suppurative mastoiditis and furunculosis, and to aid in this the following differential points are appended:

Furunculosis Causing Auricular Displacement.

1. Rare in children, but common in adults.
2. Pain severe and increased by movements of jaw.
3. Manipulation of auricle causes severe pain.
4. Furuncular swelling located in fibro-cartilaginous part of canal seen by speculum examination.
5. Drum membrane usually intact.
6. Discharge comes from furuncular perforations in membrano-cartilaginous canal.
7. Pressure on mastoid, not disturbing auricle, elicits no pain.

Acute Suppurative Mastoiditis Causing Auricular Displacement.

1. Rare in adults, but common in children.
2. Pain not severe, sometimes absent, and not increased by movements of jaw.
3. No pain caused by manipulation of auricle.
4. No inflammation in fibro-cartilaginous part of canal on examination of meatus.
5. Drum membrane usually perforated.
6. Discharge from tympanum through perforated drum membrane.
7. Mastoid pressure causes deep bone tenderness.—G. C. Kneeder in Pittsburgh Medical Journal

S. L. J.

The West Virginia Medical Journal

S. L. JEPSON, A.M., Sc.D., M.D., *Editor.*

L. D. WILSON, A.M., M.D., *Assistant Editor.*

Wheeling, W. Va., October, 1914.

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All articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over 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.

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Editorial

BOARD OF HEALTH INVESTIGATION.

There is perhaps no modern public health movement carried on in the mining sections of West Virginia that has met with such hearty support and good will on the part of both mine operators and miners themselves as the recent work of the State Hygienic Laboratory carried on through the West Virginia Sanitary Survey Commission. As is well known, the Hygienic Laboratory of the Public Health Department of West Virginia has been very active in collecting data and looking after the health conditions of various communities under the leadership of Secretary of State Board of Health Dr. S. L. Jepson and of Dr. John N. Simpson, Director of the laboratory.

The Commission sent out by the Public Health Department is composed of Professor W. H. Schultz, Mr. C. W. Bray, Mr. C. O. Gorby and Mr. Wilber Shirkev—all of the West Virginia Medical School. Since the 20th of June over 6,000 microscopic examinations for intestinal para-

sites have been made. Over 3,000 personal interviews, representing hundreds of families, have been made with a view of determining whether the home conditions were favorable or unfavorable to health. During the inspection of the premises numerous suggestions were offered and specific instructions given to hundreds of families as to how to avoid contracting typhoid and malarial fevers, dysentery and infection with intestinal parasites. In addition frequent stereopticon lectures were given by Professor Schultz.

The campaign of the Commission has been two-fold in character. On the one hand the educational side of matters pertaining to health and good living conditions has been emphasized; on the other hand, scientific data were collected with a view to throwing light upon the question why anemia is prevalent in certain sections. Special attention was given to the problem of hook-worm infection and the possibilities of its spread by imported cases.

Thus far the Commission's attitude toward certain unfavorable living conditions in some of the mining camps has been one characterized by constructive criticism and helpful suggestions. As a result all persons concerned are seeking advice and acting upon it. Where dangerous surface outhouses have existed plans are on foot with some of the companies to install sanitary, odorless vaults. Where the water is bad and favorable to typhoid epidemics, new systems of water supply are being installed. Where the living conditions by reason of garbage and uncleanness on the part of miners themselves are the chief source of trouble, methods are being devised to handle the situation by boards of inspection and the employment of police force if necessary.

It is needless to say that the influence of the Commission has in numerous cases strengthened weak resolves and stimulated unusual activity for bettering living conditions. In many cases where the advice of the local physician in sanitary matters was ignored, the presence and advice of state officials had a very salutary effect. In spite of the good already done, the work of the Commission is just started, and the work ought to be extended to every rural district and mining camp in the State. Indeed, the requests already at

hand are far beyond anything that can at present be complied with. Preventive medicine is here to stay, and if West Virginia is to keep abreast of the times she must encourage and strengthen this department of her public work. Without very liberal appropriations by the legislature, however, but little can be done for the betterment of health conditions. As an encouragement in this direction, and to show that preventive medicine is not a dream but a potent reality, we here quote some facts from an address of Dr. Vaughan, President of the American Medical Association and long President of the Michigan State Board of Health. Dr. Vaughan says that in the last ten years preventive medicine has saved an average of 20,000 lives a year. A battle in which 20,000 lives were lost would stir the world at the time and fill the pages of the future historian. The average human life has been increased nearly four years in the last ten years by the active efforts of sanitarians. The average of human life in the United States today is fifty years, and if we are to apply exactly what we know now and never learn anything more, this average of life, says Dr. Vaughan, would be increased by fifteen years. Hoffman, the distinguished statistician of the Prudential Life Insurance Company, calculates that in the past ten years 6,200,000 years of human life have been added to the people of this country from the campaign against tuberculosis alone. Is it not worth while, then, to manifest liberality in the use of money and effort against other preventable diseases, that life may be saved, the prosperity of the people enhanced and the total of human comfort and happiness increased? S. L. J.

THE SMOKE NUISANCE.

While those of us living in the Ohio Valley recognize that the presence of smoke issuing from the funnels of many factories means prosperity and bread and butter for the sons of toil, we cannot deny that from a health point of view smoke is a menace and should be reduced to a minimum, particularly by the railroads.

The Court of Special Sessions, County and Borough of the Bronx, has recently rendered a very important decision involving a violation of Section 181 of the Sanitary Code, commonly known as the

"smoke ordinance." The Department of Health instituted a criminal action against the New York, New Haven & Hartford Railroad Company, charging a violation of this ordinance, in that the company allowed dense smoke to be discharged from its locomotives in the borough of the Bronx, and the court found the defendant guilty and affixed the maximum penalty—a fine of \$500. This is the first conviction of the kind obtained against a railroad company since the Appellate Division of the Supreme Court reversed the decision in the New York Central case, and in the action which it took the court has determined that the evidence submitted by the Health Department met all the conditions imposed by the Appellate Division. In deciding as it did the court holds that the defendant was making an unreasonable use of its premises, a view which sustains the contention of the department in every respect; and the department is now in a position to take drastic action in like cases throughout the city. F. L. H.

THE TRUTH ABOUT THE DUM-DUM BULLET.

Dr. Hupp very kindly sends us a clipping from the Medical Record (for which we cannot find space in this issue), in which the editor explains that the terrible injuries recorded in the European war were not caused by the dum-dum, but by the so-called Spitz bullet, which cause a very similar wound. Both sides have been charged with using the dum-dum, which has been condemned by all nations. The Spitz bullet, it is explained, "is quite short, of conical shape, and tapers so gradually that the center of gravity is thrown back near the base; consequently, in spite of its great initial velocity and flat trajectory, it has a tendency to turn sideways upon meeting any obstacle, although it will go through the soft parts making a small, clean-cut channel, and do little or no injury unless it hits a vital organ.

"The least resistance upsets it, and in turning at great velocity the wounds it inflicts are very much lacerated and otherwise attended with destructive effects which are not unlike the wounds inflicted by dum-dum bullets."

NEW METHOD OF LIBERATING FORMALDEHYDE GAS.

The Health Department of Pennsylvania, through its chemist, Mr. Charles Lawall, presents a new method of liberating Formaldehyde Gas from the solution without the use of potassium permanganate, which is made in Germany and is, therefore, difficult or impossible to secure at present. These directions are given:

Sodium Bichromate, 10 oz. avoirdupois.
Saturated solution formaldehyde gas, one pint.

Commercial Sulphuric Acid, $1\frac{1}{2}$ fluid oz.

The acid can be added to the solution of formaldehyde and the mixture kept for use. Spread the crystals of sodium bichromate in a thin layer over the bottom of a vessel with ten times the capacity of the volume of the ingredients used.

Reaction is almost instantaneous, necessitating very prompt withdrawal from the room.

As the residue is corrosive a cord should be attached to the tin container by which it can be pulled from the room in a half hour. It should then be immediately scrubbed with soap and water.

Here is a funny "ad" that we extract from the *Weston Republican*:

DR. A. B. BLANK & SON.

Dr. C. D. Blank, who is making a special study of Chronic Diseases, will practice with his father, preparatory to entering college.

Will treat the following diseases: Stomach, Liver and Kidney troubles, Rheumatism, Gallstone, Catarrh, Female diseases, Nervous and Mental diseases, Chronic Ulcers, Syphilitic and Gonorrhoeal affections, Scrofula and Skin diseases.

Treatment generally follows preparation. This young man reverses the process. Why attend college at all?

The *American Journal of Surgery*, beginning with the October issue, will publish quarterly a supplement devoted exclusively to Anesthesia and Analgesia.

"The Travel Study Club of American Physicians, which made a successful Study Tour of Europe last year, has completed the plans for its 1915 Study Tour to the A. M. A. meeting in San Francisco, Honolulu, Japan, The Philippines, China, with optional return via Siberia and Europe, or via Canada. The Travel Study Club would like to make its enterprise as representa-

tive as possible, and asks all those interested to communicate with the Secretary, Dr. Richard Kovacs, 236 East 69th Street, New York."

AMERICAN ASSOCIATION FOR STUDY AND PREVENTION OF INFANT MORTALITY.

The Fifth Annual Meeting of the American Association for Study and Prevention of Infant Mortality to be held in Boston, November 12-14, 1914.

TUBERCULOSIS SANATORIUM NOT INJURIOUS TO HEALTH OR PROPERTY.

Convincing proof that tuberculosis sanatoria or hospitals are not a menace to the health nor a detriment to the property of those living near such institutions is given in a pamphlet issued by the National Association for the Study and Prevention of Tuberculosis. In an extended study of the subject the association has not been able to find a single instance where a tuberculosis sanatorium has had an injurious effect on the health of any one living near it, nor where it has had any lasting effect upon property values.

The pamphlet, entitled "The Effect of Tuberculosis Institutions on the Value and Desirability of Surrounding Property," reviews all the studies made on the subject, takes up court decisions bearing on the question and contributes besides some original investigations of typical hospitals, and the opinions of prominent men, life insurance companies and others. Nearly 150 different institutions are studied. In all these institutions not one case could be found where the assertions of opponents to their location that a tuberculosis sanatorium would spread disease and injure property could be substantiated. In fact, a number of instances were found where the presence of the sanatorium or hospital promoted outdoor living, tending to lower the death rate, and increased the market for produce and labor, thereby benefiting the community.

Among the most significant opinions expressed are those by five of the largest life insurance companies in the United States. These companies were asked if residence in a tuberculosis sanatorium by a healthy individual was considered an adverse factor in issuing insurance and also if residence in the neighborhood of a sanatorium constituted such an adverse factor. Two of the companies answered the first question in the affirmative and two in the negative, but everyone of them answered that residence near a tuberculosis sanatorium was not considered an adverse factor in issuing life insurance.

Dr. Edward L. Trudeau, who built the first tuberculosis sanatorium in the United States in 1885, says: "When I bought the first land on which the Adirondack Cottage Sanatorium is built I paid \$25 an acre for it, but the price was then thought absurdly high. My last purchase of five acres cost me \$5,000. To my knowledge there has never been an employe who came to

the sanatorium in sound health who developed tuberculosis while there; and a sanatorium can no more endanger the health of the neighborhood in which it is built, even if the residences are at its very gates, than it could if it were placed on top of a high mountain miles away from habitation."

MEDICAL EDUCATION IN THE UNITED STATES.

The total number of medical students in the United States for the year ending June 30, 1914, was 16,502, a decrease of 513 below last year, a decrease of 1,910 below 1912 and a decrease of 11,640 below 1904, when 28,142, the highest number of students, were enrolled. Of the total number of students, 15,438 were in attendance at the non-sectarian (regular) colleges, 794 at the homeopathic and 270 at the eclectic colleges. The attendance at the non-sectarian colleges shows a decrease of 481 below that of last year, a decrease of 1,839 below 1912 and a decrease of 9,492 (38 per cent) below 1903, when 24,930, the largest number of non-sectarian students, were enrolled. In the homeopathic colleges there was a decrease of 55 below the attendance of last year, a decrease of 31 below 1912 and a decrease of 1,105 (58 per cent) below 1900, when 1,909, the largest number of homeopathic students, were enrolled. The eclectic colleges show an increase of 14 over the registration of last year but a decrease of 38 below 1912 and a decrease of 744 (73 per cent) below 1904, when the largest number of eclectic students were enrolled.

The total number of graduates for the year ending June 30, 1914, was 3,594, a decrease of 387 below 1913, and a decrease of 889 below 1912. The total this year is 2,153 (37.5 per cent) less than in 1904, when 5,747, the largest number, were graduated. The number of graduates from the non-sectarian colleges was 3,365, or 314 less than last year, and 841 less than in 1912. It is a decrease of 1,825 (35 per cent) below 1904, when 5,190, the largest number, were graduated from non-sectarian colleges. From the homeopathic colleges there were 154 graduates, or 55 less than in 1913, and 31 less than in 1912. It is a decrease of 266 (63 per cent) below 1903, when 420, the largest number of homeopathic physicians, were graduated. The eclectic colleges graduated 70, or 23 less than last year, and 40 less than in 1911. It is a decrease of 151 (68.3 per cent) below 1890, when 221, the largest number of eclectic physicians, were graduated. These figures are from the annual report on Medical Education published by the Journal of the American Medical Association.

PUBLIC EDUCATION BY UNIVERSITIES.

A striking illustration of the changing conditions in educational ideas may be found in the growing appreciation on the part of leading universities of their responsibility to the public. In former generations a university was regarded as a thing apart, and a college professor was looked on, not only by the humor-

ous paragraphers of the newspapers, but also by the mass of people, as a man living in a world of ideas without any connection with practical affairs. Today our leading universities are recognizing not only the opportunity, but also the duty of making available their knowledge for the benefit of the masses. This tendency is highly commendable, especially in the field of public health and prevention of disease. The Harvard Medical School has a standing committee on public lectures which arranges each year for a course of Sunday afternoon talks by members of the faculty. These talks are open to the general public and are on topics of general interest. For instance, last year the course of twenty lectures included such topics as "Preventive Medicine in Relation to Industrial and International Concord," "The Care and Feeding of Young Children," "What the State Board of Health is Doing to Protect the Health of Its Citizens," "The Dangerous Effects of Patent Medicines" and "The Preservation of the Natural Teeth." This year's course includes talks on "Rational Baby Feeding," "Bodily Effects of Rage and Fear," "Spectacles and Eye-Glasses, Their Use and Abuse," and other subjects of practical interest. The lectures given in the past have proved of value and so popular that they are now being issued in little pocket-sized volumes at popular prices under the title of "Harvard Health Talks." In Minnesota the daily press is cooperating in the same kind of work. A series of articles on disease and its prevention by Dr. E. P. Lyon, dean of the University of Minnesota Medical School, recently appeared in the Minneapolis Journal. The University of Missouri is one of the few state universities that has recognized the growing tendency by the organization of a distinct department on public health. A series of bulletins for public reading and distribution is being issued. The five so far completed are on "Bacteria and Disease," "The Prevention of Typhoid Fever," "The Prevention of Contagious Diseases in School Children," "Resuscitation" and "The Relation of Sight and Hearing to Early School Life." Each of these universities has apparently worked out its plans in accordance with the needs of its own particular field. In Boston popular Sunday afternoon lectures; in Minnesota, newspaper articles, and in Missouri, pamphlets on specific subjects seem to meet existing conditions. The significant fact, in the opinion of the Journal of the American Medical Association, is that our universities are recognizing their responsibilities to the public and are making serious, intelligent and practical efforts to meet them.

State News

The newspapers announce that Dr. Michael F. Gardner, at one time a practitioner in this state and later in Cumberland, Md., was recently sentenced at Rochester, N. Y., to six months in the penitentiary and to pay a fine of \$500 on a charge of maintaining a place where criminal operations were performed. Dr.

Gardner, it is said, made a full confession.

* * *

Married—Mr. and Mrs. William R. Williams announce the marriage of their daughter Besie to Dr. Vaden Leach McCullers on Wednesday, September 16th, at Keswick, Va. The young couple will be at home after October 1st at Mucklow, W. Va.

* * *

Dr. H. C. Goings of Matewan was painfully injured on September 22d, when his automobile plunged over a steep embankment near that town.

* * *

Dr. Frank L. Hupp has just returned from his long summer vacation on Lake George, New York.

* * *

Dr. Charles F. Hicks of Welch is building a palatial home on Fifth avenue, Huntington. We congratulate the doctor on being able to build a palatial residence. Not many of us can do this.

* * *

Dr. L. F. Boland, late of Fitchburg, Mass., is located at Miners Hospital, Welch.

* * *

Removals—Dr. W. H. Triplett from Williamson to Matewan; Dr. E. R. Cooper from Curtin to Troy; Dr. W. J. Smith from Glen Alum to Stone, Ky.; Dr. M. H. Tabor from McDowell to Glen Alum; Dr. J. M. King from Buckhannon to Wellsville, Ohio.

Society Proceedings

Mingo County Society.

Williamson, W. Va., Sept. 24, 1914.

Editor West Virginia Medical Journal:

The Mingo County Medical Society met on the afternoon of September 15th at the offices of Drs. Nunemaker and Slayden, with ten members present. An interesting program was rendered, including an excellent paper on "Physicians' Bad Accounts," by Hubert Quesberry, Esq.

The Harrison bill was discussed at length, as was the recent action of the N. A. R. D. with reference to physicians dispensing their own drugs. A campaign was launched at this meeting to get every reputable physician in Mingo county into the society. A big meeting is scheduled for October.

Yours very truly,

W. H. TRIPLETT, Secretary.

Ohio County Society.

Wheeling, February 9, 1914.

Regular meeting called to order by Vice-President H. M. Hall. Dr. G. Ackerman read a paper on the "Surgical Treatment of Goitre." He gave the mortality statistics of Kocher and Mayo, showing a decided decrease in mortality after operation from former rate. Procrastination the chief cause of danger. He gave the embryology, histology and anatomy of the thyroid gland, spoke also of lingual and pharyngeal goitres. He took up the physiology of the

thyroid and parathyroid, saying these were ductless glands with internal secretions, the chief content of the thyroid secretion being iodine, and spoke of the effect of this secretion on thyroid activity and general metabolism. Congenital absence of thyroid causes cretinism, the removal of parathyroids caused tetany, and urged leaving part of posterior capsule in excision of the thyroid so as to be sure not to remove the parathyroid. He spoke of thyroiditis as a result of infection which sometimes goes on to suppuration, recommended rest and ice bags, spoke of carcinoma and sarcoma of the thyroid. Diffuse adenomata, he said, were influenced by iodine; he discussed the symptoms of hyperthyroidism and the simultaneous enlargement of the thymus often occurring in this condition. All cases belong to the physician first, but after pressure is caused, to the surgeon; spoke of drugs and X-ray treatment, and in surgery advised the removal of all but one-sixth of the gland. He said that struma is a water-borne disease, and if the water be boiled it will not cause struma. Advised the transverse incision with drainage in operating.

Dr. Schwinn opened the discussion by paying a tribute to Kocher. He said that strict antiseptics is necessary in operating and that the inner capsule should not be handled. Ligation of the thyroid arteries and leaving a part of the posterior capsules are the most important steps in the operation. He discussed local and general anesthesia; advised Crile's "stealing method" of operating, and concluded by reporting a case of removal of the thymus and half of the thyroid in a child. Dr. Caldwell advised operation during a remission of symptoms and reported a family all the members of which had goitre. After a number of others had spoken Dr. Ackerman said he had no results from the serum treatment. He advised a milk diet. He spoke of the connection of lime salts with tetany. If the recurrent laryngeal nerve be injured in the removal of the thyroid, its restoration is a slow process, and if it be divided there would be no restoration.

February 16, 1914.

Regular meeting; 25 present, Dr. Thornton presiding. Dr. L. D. Wilson read a paper on the treatment of "Diabetes Mellitus;" described the anatomy and physiology of the organs involved in producing true glycosuria. The percentage of sugar in blood is from .005% to .015%. In metabolism of carbohydrates sugar is stored in the liver as glycogen. When more sugar is taken in than the liver can take care of it produces alimentary glycosuria. In true diabetes the liver cells cannot store all carbohydrates as glycogen. Some proteins produce glycosuria. The amount of sugar used up varies with the amount of exercise and work. Advises sugar to supply deficient amount in fatigue. Carbohydrate metabolism is not much disturbed by diseases of the liver. The pancreas, by its internal secretion, has influence upon the glyco-genetic function of the liver. The adrenals act as stimulants, as also does the hypophysis. Diet is the chief factor

in treatment. First establish the patient's tolerance of carbo-hydrates and regulate the diet accordingly. After sugar has disappeared from the urine cautiously restore carbo-hydrates. Avoid a large intake of albumen; regulate exercise; try to avoid acetonuria; if coma occurs give intravenous injection of a 3 to 4% solution of sodium carbonate solution. The paper was freely discussed.

J. E. BURNS, Secretary.

Book Reviews

Guiding Principles in Surgical Practice—By Frederick Emil Neef, B.S., M.L., M.D., New York City. 180 pages, illustrated. Surgical Publishing Company, 1914, New York. Price, cloth, \$1.50.

This small book is intended for the student and practitioner who has not had basic training in surgery and hospital experience. It presents a clear and concise analysis of the principles that underlie the preparation of the patient, the preparation of the operating room and dressings of the instruments and surgeon's hands. It deals with general and local anesthesia and the post-operative care of the patient. Among the excellent chapters in the book those dealing with the treatment of unclean wounds and "The Interpretation of Post-Operative Fever in Aseptic Cases" can be read with advantage by any surgeon. The book is well written, embellished with marginal key-notes in red ink and will make pleasant and instructive reading.

Dr. E. F. Glass.

International Clinics—Quarterly of Illustrated Clinical Lectures, etc. Vol. 2, 24th series, 1914. Philadelphia: J. B. Lippencott Co.

This quarterly has papers on diagnosis and treatment, on general medicine, surgery and obstetrics, closing with a paper on "The Teaching of Sex Hygiene," by Maria M. Vinton, M.D., New York Medical School Inspector. She favors the teaching of sex hygiene; thinks parents should do this work if they are able, but that schools should teach the children of ignorant parents. "Health Before Birth" is treated by J. W. Ballantyne; G. E. Pfahler has a paper on the "Present Status of the Roentgen Rays;" Sir Dyce Duckworth writes on "Some Clinical Indications of Senility;" James J. Walsh on "Insomnia," etc.; Frank Martin advocates "The Open Operation for Proper Fixation and Repair of Fractures," and a number of other valuable papers are contained in the volume, which keep it fully up to the usual high standard of this series.

A Text-Book of Medical Diagnosis—By James M. Anders, M.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College of Philadelphia, and L. Napoleon Boston, M.D., Professor of Physical Diagnosis, Medico-Chirurgical College, Philadelphia. Second edition thoroughly revised. Octavo of 1248 pages, 500 illustrations, some in colors. Philadelphia and London; W. B. Saunders Com-

pany, 1914. Cloth, \$6 net; half Morocco, \$7.50 net.

This is the second edition of a work which has already commended itself to the medical profession. Many changes and additions appear which will be readily noted by those familiar with the first edition. We know of no book that enters with such detail into all diagnostic methods. All the modern resources of the art and science of medicine as related to medical diagnostics are here presented. The authors present what they call new features, brief pathologic definitions of special diseases with illustrative cases selected from their private and hospital experience, and numerous diagnostic tables. The book is designed to aid physicians in contrasting the distinguishing signs and symptoms of diseases which closely resemble each other. It is well illustrated with both photographs and colored plates. Having this book on diagnosis the physician will need no other.

Medical and Surgical Reports of the Episcopal Hospital, Philadelphia, vol. 2.

This report is a very valuable one, containing abstracts of case records, tables of operations, with papers on the past history of the institution and many valuable papers on special subjects by the members of the hospital staff. The work indicates not only great liberality on the part of the management, but also marked industry on the part of the hospital staff. Both are to be commended.

Progressive Medicine

INTERNAL MEDICINE.

Dr. John N. Simpson.

Autolacto Therapy—A New System of Treatment. Dr. Charles H. Duncan of New York City presents this in a paper in the New York Medical Journal, September 5th.

This is one of a series of papers in which he has advised the ingestion of pus from the patient's wounds to produce antitoxin within the patient's body. In the present paper he takes up a new method of combating infectious diseases with unmodified antitoxins or with substances antidotal to the action of all the toxins pathogenically active in the patient's body. He calls it autolacto-therapy, or unmodified antitoxin therapy.

Myriads of bacteria enter the body by the respiratory tract with the food and drink. They are destroyed by the protective agencies of the body. During their destruction their toxins go into solution by autolysis. In response to these toxins the body produces protective agents—antitoxins. The person takes antitoxins produced in the bodies of other animals when meats and milk are eaten. Duncan holds that the mouth is the natural avenue for the entrance of living micro-organisms, which thereby safely establish an immunity. The opsonic index is quickly raised when staphylococci, streptococci, etc., are taken by the mouth. MacClintock has shown that a guinea pig will

absorb on an empty stomach, in an hour, sufficient antitoxins to protect it against five times the lethal dose of the corresponding toxin.

Milk, the natural food, is the means by which the child acquires immunity to many organisms. The mother's body produces the antitoxins which she secretes through the milk and the child absorbs them through the stomach.

First Case. Ten months old baby, some bronchitis and rhinitis, with profuse mucous discharge. Condition had continued ten days. Mother was instructed to collect discharge on cotton, the pieces put in a one-ounce bottle which was filled with water allowed to stand 24 hours; the contents were filtered through a Barkefield filter; 2 c.c. of the bacteria free filtrate was injected under the skin of the mother and one drachm was taken by mouth. In 48 hours the child had improved through the mother's milk and recovered without any further treatment. This he has repeated several times.

The child has feeble resistance. Nature designs that the mother should acquire resistance to infection for it.

Lower animals lick all the discharge from the orifices of their young and prepare antitoxins which they get through the mother's milk. He advises the injection of the toxins from filtered cultures into goats and the use of the goat's milk by the affected patient.

Case 2. Nursing baby two weeks old. Extensive excoriation over gluteal region; no improvement after two weeks of the usual treatment. Two weeks later found the body covered with pustules. Next day mother had a boil, showing she had lowered resistance; boil opened, 1 dr. pus, streptococcus and pneumococcus. Mother given five drops pus in one ounce of water, and in three divided doses one hour apart. In 24 hours change in both mother and child. In 48 hours boil was well and baby's skin was normal. Bottle fed babies fail to get these immunizing substances in the cow's milk, and often get deleterious substances which come from the food of the cow.

Case 3. Adult with severe ivy poison. Patient so sensitive he could not go near the poison oak. Cow fed on the plant and the milk produced an immunity.

Case 4. Patient, female, 39; cough 5 years, 8 months; had tuberculosis; large lung involvement; night sweats severe; great loss of weight; filtered tuberculous material; lactating goat injected with filtered tuberculous sputum, patient using goat's milk. Four days later night sweats ceased. Cough improved.

Duncan thinks it practical to immunize cows against any of the bacteria and by using the milk for our patients to give them an immunity.

Pneumococcus Infection and Lobar Pneumonia—By Rufus Cole, M.D., New York. The Archives of Internal Medicine, Vol. 14, No. 1, July 15, 1914.

The author has used serum therapy in 23 cases treated at the Hospital of the Rockefeller Institute and draws the following conclusions: Much obscurity still exists concerning the

mode of natural infection in pneumonia, though by animal experimentation many facts in regard to it have been discovered.

The symptoms in pneumonia are probably due to toxic substances derived from the bacterial cells.

The outcome is dependent on the virulence of the organisms concerned and on the ability of the body, first, to limit the local infection, and, second, to prevent the invasion of the blood by the organisms, as on the latter the outcome of the disease mainly depends.

Leucocytes probably play a part in the resistance, certainly as regards the local spread and probably also to some extent as regards the general infection.

The most important part in prevention of the general infection is probably played by immune substances contained in the serum. Such substances are present in the serum of immunized animals.

Pneumococci differ in regard to their immunological reactions, and on these they may be divided into several groups.

In order to use immune serum effectively in treatment, as in prevention, it is necessary to employ the serum effective against the group of organisms to which the special organism causing the infection belongs.

Immune serum effective against two of the most important groups has been produced. This treatment has been carried out in a limited number of patients with promising results.

It is probable that the methods of application of such serums will be improved, and it is possible that the method may be combined with other measures directed toward other factors which are important for the outcome. In any case, facts regarding the nature of the disease are being disclosed, and the outlook, at least for lessening the ravages of this dreadful disease, is encouraging.

Diabetes Mellitus—Treatment with Bulgarian Bacillus—Continued from September issue.

It is important to take into account the quantity as well as the quality of the food given. While the patient may take care of the diet to the letter of the law, he may take such enormous quantities as to overbalance any good the diet may accomplish. The amount should be specific, according to the needs of each individual. Fresh air and exercise are very important to aid sugar combustion, especially in cases with small percentages. Exercise helps to burn up the sugar, and cases that drag on indefinitely are thereby cleared up readily. I urge my patients to walk at least three times a day. If this is not possible, they are ordered to go through certain calisthenic exercises daily.

SURGERY.

Dr. Frank L. Hupp.

Placental Blood for Transfusion. Rubin, New York Medical Journal, August 20, 1914, reports the case of a woman suffering with pernicious anaemia whose blood picture ma-

terially improved under the intravenous injection of defibrinated placental blood.

Technic—The technic is quite simple. The most important thing is asepsis. After having determined the normal condition of the woman in labor, or about to go into labor, have ready a sterile vessel and a defibrinator, the latter usually consisting of several rods of wire. Of course it is expected that the woman is properly prepared by the obstetrician. After the child is delivered and all amniotic fluid drained off, we are ready for the placenta. Allow the placental blood to drain off from its surface and the cut cord, and then, by squeezing the placenta gently, additional blood is obtained. Uterine blood is also collected. From three to six or even more ounces of blood can be obtained in each case. The blood should be immediately defibrinated, and, to insure against clots, should be strained through, say, about four layers of the ordinary surgical gauze. Then dilute it with an equal amount of normal salt solution, if to be used intravenously, as it is possible to inject the thinned blood through a medium sized needle suitable for the basilic or cephalic vein in the arm. It is best to inject it fresh—and this can be easily accomplished in the hospital. But, if necessary, the defibrinated blood may be kept sterile for twenty-four hours, or even longer, and then used after warming it up to body temperature.

The apparatus for injection consists of an ordinary large glass syringe, a needle, and a small piece of rubber tubing connecting the needle to the syringe, so as to avoid moving the needle while it is in the vein. The salvarsan, especially the neosalvarsan apparatus, is well adapted for this purpose.

Cancer of the Uterus. Charles Ryall, London Lancet, August 8, 1914. Reviewed New York Medical Journal, August 29.

Analysis of 760 cases of this disease confirms Leitch's observation that the greatest frequency of onset of this form of cancer is in the age period of forty to forty-five years, that is before the menopause and during the period of motherhood. The condition is far more frequent in parous women than in nulliparous, and the relative proportion of parous women with uterine cancer to nulliparous with the disease is far greater than the proportion of parous to nulliparous in the general population. This applies only to cancer of the cervix, that of the body being about equal in the two classes. The commonest cause of death is from involvement of the ureters, a condition found in seventy-five per cent of cases at autopsy. In the treatment of inoperable cases the author recommends the ligation of both internal iliac and both ovarian arteries, combined, if possible, with removal of the infected glands. This does not materially prolong life, but it gives great relief from the distressing symptoms and allows patients to live their remaining days in comparative comfort.

The Value of Hexamethylenamin as an Internal Antiseptic in Other Fluids of the Body Than Urine. F. Hinman, Baltimore. Archives

of Instructive Medicine, June 15, 1914. Reviewed in American Journal Surgery, September, 1914.

Hexamethylenamin is not converted into formaldehyde in any of the normal alkaline fluids of the body; therefore it can be of no prophylactic value in any of these fluids. After some infections of these fluids there may be under certain conditions a change in reaction sufficient to produce a slight liberation of formaldehyde, but it is not possible to show that there would be enough to give antiseptics. In localized infections of pronounced acidity hexamethylenamin is not taken into them from the circulation in amounts to furnish formaldehyde in antiseptic strength (the gall bladder possibly excepted). The therapeutic use of hexamethylenamin as an internal antiseptic is justified experimentally for urinary conditions alone, and then only when it is excreted into acid urine.

(This review is most interesting when we reflect the frequency with which this drug is used, notably coryza, cerebro-spinal meningitis and enteric fever.)

Pott's Fracture. S. Freeman in the Therapeutic Gazette for February, 1914, and reviewed in the New York Medical Journal, August 15, 1914.

In all Pott's fractures the astragalus is dislocated outward and also occasionally backward, and improper reduction of the astragalus is the chief cause of painful joint and impaired function following this fracture. Where the astragalus remains at too great a distance (over one-eighth inch) from the inner dependent portion of the tibia forming the inner malleolus, the body weight is transmitted to but one side of the astragalus, throwing an unaccustomed strain upon—and causing actual tearing of—the internal lateral, calcaneoastragoloid, and other ligaments, and causing pain and probably later flat-foot. The only positive proof of proper reduction of the astragalus is an anteroposterior X-ray examination.

The best dressing for Pott's fracture, according to the author's experience, is a correctly padded fracture box. The foot being held in the Dupuytren position by the surgeon, the assistant places a rectangular pillow in the fracture box. A large pad is placed under the pillow to support the heel and prevent posterior luxation. Two triangular lateral pads, about eight inches long, of the width of the fracture box, and with the largest end of the triangle four or more inches wide, are then placed on either side of the pillow, the internal one extending down to the inner malleolus (the large end of the triangle down), and the external one from the tip of the outer malleolus to below the foot. The foot is then lowered to the pillow, the heel resting upon the pad, and the sides of the fracture box are closed tightly, the footboard being left down until the foot has been fixed permanently by the lateral pressure. In closing the footboard a pad is placed between it and the foot to keep the latter flexed upon the leg. Finally, a band-

age is tied round the fracture box to increase the lateral pressure.

This dressing is easily applied, comfortable and holds the foot firmly in the Dupuytren position. Passive massage can be readily applied without disturbing the position of the foot. The pads in the box take care of the widened tibiofibular mortise when the ligaments are ruptured or when a fracture of the outer malleolus occurs. Excellent results were obtained in the cases in which the foregoing treatment was employed.

Shock and the Mind of the Patient Under the Knife.

Crile tells us that shock is the result of the excessive conversion of potential into kinetic energy in response to adequate stimuli.

He tells us again of a most interesting fact concerning the psychic state of the patient about to undergo a surgical ordeal.

If the patient is in grave doubt as to whether or not he can survive the operation; if he lacks confidence in the hospital or in the surgeon, the patient has what in psychology is known as a low threshold, and if he goes under the anesthetic in this state, the effect of any physical injury will be augmented, and throughout the entire anesthesia there is manifested the evidence of fear in the respiration and the pulse, and in the way in which he reacts to the anesthetic and the trauma of the operation. These patients take the operation poorly. It is as though the patient went under the operation with his motor set at high speed, so that the energy of the body is consumed more rapidly, and hence the exhaustion or shock is increased.

Malignant Tumors of Bone. A new method in conservative operative treatment. Prof. R. Wenglowski, Moscow. *Lancet*, May 16, 1914.

The present conservative method of treating malignant tumors of the bones is by resection in continuity and replacement by pieces of living or dead bone. Wenglowski modifies this principle by merely removing the tumor in the soft parts and killing the affected piece of bone by the aid of steam. This is done by attaching a perforated metal tube to an autoclave or an ordinary steam kettle and applying the steam directly to the bone for varying times. The author has found by experiment that to heat the tibia to a temperature of 75° to 80° C. long enough to kill all cellular elements, three minutes are sufficient; for the lower mandible, one and one-half minutes; the femur, eight minutes, etc. To protect the surrounding soft tissues the author covers them with gauze, a metal plate, and asbestos. To heat the posterior aspect of the bone the author has devised a special curved flat tube. The advantage of this method over that in use at present is that the continuity of the bone is preserved.

Chronic Intestinal Stasis—"Autointoxication" and Subinfection. J. G. Adami, Montreal. *The Proctologist*, June, 1914. *American Journal of Surgery*, September, 1914.

It is clearly shown by Adami that so little is

known of the nature of intestinal absorption of toxic material that the term "autointoxication" should be dropped by "any self-respecting member of our profession." He suggests the term "subinfection," for it has been demonstrated that the mesenteric lymph-nodes take up the bacteria, pathogenic and otherwise; that the bacteria are destroyed in the lymph-nodes or in the viscera drained by the lymph-nodes, and that suppurative foci do not develop, but that symptoms appear from the liberation of the toxins of the bacteria. Adami does not deny that the indol group plays a part in the picture of intestinal stasis. He makes most vigorous argument, however, against acceptance of the theories advanced by Lane in favor of side-tracking or removing the colon for one or all of many manifestations that may have no bearing upon intestinal stasis. By discovering the cause of the symptoms a more appropriate method of treatment will be instituted.

PEDIATRICS.

Pellagra in Infants—Dr. W. Weston has an interesting paper on this subject in *American Journal Diseases of Children*, from which we quote the treatment.

It has already been made sufficiently clear in this paper that nurslings, either with or without the suspicion of having pellagra should be weaned from pellagrous mothers. Not only should a change of diet be ordered for such infants, but in view of our uncertainty as to the real cause of the malady, a change of environment should be ordered, or if this is not possible, patients should be placed in the best hygienic surroundings.

Among hygienic measures for the treatment of pellagra, after careful nutrition, hydrotherapy has ranked high from the time of Frapolli. The influence of sunshine in developing the erythema, points to its avoidance as a preventive measure. Local measures, such as calamine lotions, are of advantage in alleviating the acute dermatosis. Internally, tonics such as arsenic and iron are of benefit. The frequent association of intestinal parasites should be kept in mind and, when discovered, eliminated. Other associated conditions—cretinism, malaria, tuberculosis and syphilis—should always be sought for, since pellagra seems often to select weaklings. S. L. J.

Babies and Consumption—A. E. Kepford, in *Iowa Medical Journal*, says:

There is just now an interesting discussion in medical circles concerning the incidence of tuberculosis infection of adult persons. There is a tendency among a certain group to eliminate the possibility of infection after adult life. This group contends that infections take place during infant childhood and remain latent for perhaps a period of years and develop only when there is a lowered bodily vitality. It is a highly important disclosure if established beyond peradventure that childhood is the period of infection and youth the period of superinfection as an extension of the primary infec-

tion. At the same time, the heavy mortality from tuberculosis develops at the most productive period of life and is the result of lowered vitality, trauma or shock. It is immaterial from the standpoint of mortality whether the infections take place in babyhood or in later life. It, however, gives the combat a new angle and appears to me as possessing more potential force than otherwise possible, for it involves the scientific medical care and treatment of human beings from the period of infancy to adult life. It is reasonable to assume that by guarding the defensive forces of the growing child by protecting it against infections like measles, whooping cough and such diseases while allergy is taking place and being reinforced, that there will be a still greater decrease in the mortality from tuberculosis in adult years. Meanwhile, it should be constantly borne in mind that other local preventive measures of a more superficial nature shall be maintained with the greatest vigilance.

S. L. J.

THE TOXICITY OF CAMPHOR.

D. J. Milton Miller, Atlantic City, N. J. (*Journal A. M. A.*, Aug. 15, 1914), reports a case in which a baby of 18 months was given a brimming teaspoonful of camphorated oil by mistake, containing from 14 to 15 grains of camphor, without causing any symptoms of note. He mentions it because more or less alarming symptoms are often produced by much smaller doses, though fatal poisonings are very few.—S. L. J.

TREATMENT OF WHOOPING COUGH.

The earliest phase of whooping cough presents, according to the author's observations, merely the appearance of a pharyngitis, which may or may not be accompanied by coryza. A 2 per cent solution of silver nitrate was applied by him to the throat in 95 cases for the purpose of preventing the spread of the infection downward, and in 84 instances most useful results were evident. Secretion of mucus was prevented through the caustic action of the silver and coughing spells due to irritation by the secretions therefore minimized. In addition, a beneficial effect was produced on the child by suggestion. At the end of a week the coughing paroxysms were about the same as before, but their severity was much diminished, and they gradually subsided into cough of the ordinary type. In infants the author applied the silver nitrate every day at first, later, and in older children throughout, on alternate days. Hydrogen dioxide was also employed. Ochsensius (*Therapie der Gegenwart*, November, 1913).—S. L. J.

DIPHTHERIA.

The "Therapeutic Gazette" calls attention to the need of large doses of diphtheria antitoxin. The experience of clinicians all over the world, involving many thousands of cases, reveals the fact that the doses of diphtheria antitoxin which were first administered, and which are often used at the present time, are quite inadequate to produce the effects which are desired.

It is becoming more and more evident that the initial dose should never be less than 10,000 units, even when the patient is seen in the early stage of the disease, and if there is any considerable amount of membrane, or the epidemic is known to be a virulent one, it is probably better to employ not less than 25,000 units within the first eight hours, repeating the antitoxin with doses of 5,000 units every eight hours until the patient is on the high road to recovery. Since it is to be borne in mind that antitoxin is not a drug but an antidote, and it is far better to give too much than too little. Doctor Hare has frequently discussed in leading articles the subject of antitoxin and anaphylaxis. There can be no doubt that in the guinea-pig anaphylaxis is readily induced, and guinea-pig experiments, fortified by a very few instances of fatal anaphylaxis in man has possibly made some physicians timid in the use of antitoxin, particularly when the patient has been sensitized by an earlier dose given more than ten days before. When it is considered, however, that in New York, 100,000 patients have received immunizing doses, and that there has only been one death following an injection of 1,000 units, and that this death occurred in a child suffering from status lymphaticus, it is evident that in human beings the danger of anaphylaxis is too remote to be considered, the more so as in 40,000 cases of diphtheria, which received more than 1,000,000 doses of antitoxin there was not a dangerous symptom attributable to the antidote. It is probably true that asthmatics, hay fever patients, and children suffering from status lymphaticus are more prone to suffer from ill effects than other individuals. In such cases it is worthy of note that some protection may be given the patient who needs antitoxin by a preliminary injection of atropin, or by mild ether anesthesia.—S. L. J.

EYE, EAR, NOSE AND THROAT.

Drs. H. R. Johnson and P. A. Haley.
The Surgical Anatomy of the Nasal Accessory Sinuses in Children. By Seymour Oppenheimer, *Transactions of American Academy of Ophthalmol. and Oto-Laryngol.*, 1913.

The maxillary sinus, though rudimentary, is well defined at birth and is found as early as the fourth month of foetal life. It undergoes but little change from birth to the second dentition.

In the new born it is situated on a level with and internal to the orbit, the nasal wall being the most important structure. Evidence of the ethmoid area is seen in foetal life about the fifth month and often as many as eight to ten distinct cells are found at the end of the first year.

At about the eighth to the tenth year the ethmoid cells open into the nasal meati, and surgically may be grouped into the anterior cells emptying into the middle meatus and a posterior group emptying into the superior meatus.

As the internal orbital wall forms the external wall of these cells the possibility of

orbital symptoms with ethmoid inflammation is apparent, and on account of the extreme thinness of this plate of bone unusual care must be taken in operating in order to avoid injury to the orbital contents.

The frontal sinus is not developed to any extent until the eighth or tenth year.

It must be remembered that this sinus is a sequence of the cellular expansion of the anterior ethmoidal group into the diploe between the inner and outer tables of the frontal bones.

The anatomical and surgical relations of this sinus differ in no way from the adult except that its relations to the cranial cavity are more intimate on account of its posterior wall.

The cavity of the sphenoid is variable and the age of the child gives but little information as to its size and shape. Its lateral walls are largely within the cranial cavity—a fact to be considered in relation to obscure cases of basilar meningitis.

Also its close proximity to the carotid artery and cavernous sinus must not be forgotten.

H. R. J.

The Non-Surgical Treatment of Affections of the Nasal Sinuses in Children—By Lewis A. Coffin in Transactions of American Laryngological Association.

The writer expresses surprise that many cases have been reported, yet text-books on pediatrics make no mention of it, and as a consequence of this seeming neglect many cases have advanced to the suppurative stage, which might have been prevented had diagnosis been made early and proper treatment instituted.

The author recommends that in all acute cases with a discharge the nasal cavity be freely irrigated and suction of the nasal sinuses by negative pressure be employed, and if more pus is found it must come from the sinuses. Post-nasal syringing is the safest method of douching.

The writer has obtained good results by the use of negative pressure and autogenous vaccines.

H. R. J.

The Surgical Treatment of the Nasal Accessory Sinuses in Children—By C. G. Coakley, Transactions American Laryngological Association.

The writer is convinced that inflammation of the nasal sinuses occurs as frequently in children as in adults. As the sinuses are undeveloped in childhood there is a greater tendency to spontaneous cure.

If the patient is under five years of age general anesthesia is required. Cases requiring surgical treatment usually have a swelling either over the antrum or around the orbit. The antral cases are almost without exception associated with osteomyelitis of the superior maxillary bone and should be operated through the canine fossa, carefully removing all necrotic bone, with a counter opening into the nasal cavity.

The orbital cases are kept in bed with cold compresses applied. The severe cases require

immediate operation. The operation here is the external frontal ethmo-sphenoid.

H. R. J.

Late Infection Following a Trephining for

Glaucoma—E. V. L. Brown, M.D., Chicago.

Patient age 56 with simple glaucoma of right eye was trephined with conjunctival flap and basal iridectomy, making an uneventful recovery. Twelve weeks later returned with the statement that he had taken cold the week before and that the eye had become red and painful four days later. The conjunctival flap-bleb was yellowish and a severe suppurative iridocyclitis was present. The hypopyon promptly disappeared under treatment and the cyclitis got well in seven weeks. A moderate amount of tension supervened and vision decreased from 8/10 to 3/10. The conjunctival flap flattened down to the scleral level.

P. A. H.

An Unusual Case of Ophthalmic Migraine—E. W. Alexander, B.S., M.D., San Francisco.

Young lady 22 years old. She has had typical attacks of migraine since childhood. Heredity negative. The premonitory signs of headache would disappear before the pain began and were of the visual type, being a homonymous quadrant hemianopsia to the right and occasionally white scintillating scotoma. No sensory or motor changes. Pain on the right side of the head. It is aggravated by noise and motion, lasts for two or three hours and terminates abruptly. Nausea is constant. Refraction revealed a moderate amount of hypermetropic astigmatism which was corrected. With the exception of one attack soon after beginning the use of her glasses the patient has had no attack of headaches in about five months. But she still has her migraine in an abortive type—that is to say, the premonitory symptoms are present, but no pain. Following the use of her glasses she had one typical attack. An interval intervened before the premonitory symptoms of a second attack occurred, but she experienced red scotoma this time instead of the usual white scintillating type, and a quadrant hemianopsia of the right upper field, which has persisted but is slowly clearing up. After an interval of eleven months, on re-examination of her eyes, it was found that the scotomas still exist with practically the same shape, but some smaller, and the patient has learned to ignore it.

P. A. H.

GENITO-URINARY AND DERMATOLOGY.

Dr. A. P. Butt.

The Value of Renal Functional Tests—Geraghty, New York Medical Journal, August 15, 1914.

Certain tests, such as lactose and the chlorides, prove of great value to the internist, but of little to the surgeon.

Urea estimations of the twenty-four hour output give information of little value.

Patients with very low renal function and advanced renal disease frequently excrete

larger quantities than those in good clinical condition and with comparatively good renal function.

When, however, there is persistently a low urea output it indicates a severe grade of renal disturbance. Patients are frequently the subject of hydronephrosis, pyonephrosis, pyelonephritis, pressure atrophy and the resulting changes in functional activity, the urine output, urea and total solids might be practically normal and yet the patients be on the verge of renal failure, which would surely be precipitated by any radical surgical interference.

The phthalein test was shown to be of value in all these cases, and to allow of differentiation between those with severe renal damage and those in which the renal involvement was slight.

We do not attempt to draw a definite functional line below which one should not operate. The tests simply indicate the renal function; it depends on the operator what risks he is willing to assume, the probability of fatality increasing as the renal function decreases.

In conclusion, functional tests are of the greatest value when used in conjunction with careful clinical studies; when employed with proper regard for their value and limitations they furnish valuable information in diagnosis, prognosis and selection of lines of treatment.

Pyuria in Infancy.

Using the term pyuria to indicate acute infections of the renal pelvis, Elterich (Pennsylvania Medical Journal) notes that in many instances the general practitioner does not pay close enough attention to the condition. In five of the author's cases the infection occurred in connection with gastro-intestinal disorders, six followed influenza, two were attributed to vaccination by the relatives, in the others no particular antecedent disease occurred.

It is generally believed that the bacillus coli communis is the causative agent in the production of this disease, and in four of the author's cases this organism was found, but in others the specific micro-organism could not be accurately determined.

Acute pyelitis occurring in very young children is remarkable for its lack of distinctive features. The clinical picture may be described in a few words. A baby girl is ill with a very high temperature, with nothing whatever to explain the fever until the urine is examined and pus is found. The temperature is usually high and irregular, but without much prostration to the patient. In one case the fever ranged from 103° to 106° for almost three weeks with little or no prostration and a loss of weight of only one pound.

In almost all cases of this series the temperature was of a remittent type. In some it was of a remittent-intermittent type. In others it was a continuously prolonged high temperature. The duration of the fever in all acute cases was from three to six weeks. Chills, convulsions and severe nervous symptoms did not occur in any of these cases.

The urine in this disease is very acid in reaction, light yellow in color with considerable

flocculent precipitate. The specific gravity is usually low.

Elterich offers the following urinalysis as typical:

Light yellow flocculent precipitate, strongly acid and specific gravity 1.002; faint trace of albumin; sugar absent; considerable acetone; diacetic acid absent; indican, trace; creatinin, considerable quantity.

Microscopical examination: Numerous pus cells, few round and transitional epithelial cells, uric acid crystals, albuminous debris.

The general health of all of these patients was as a rule not markedly impaired, with the exception perhaps in cases following serious gastro-enteric disorders. In one chronic case there was a considerable degree of anemia. The duration of the disease in these patients was from three to six weeks as far as the temperature was concerned, but pus was often present in the urine several weeks after the patient seemed fully recovered. There were no relapses and no deaths.

The treatment was uniformly the same, potassium citrate was given in five-grain doses every three hours until the temperature subsided and was then followed by urotropin in one-grain doses four times daily.—Abstract Urologic and Cutaneous Review.

Abstracts from Urologic and Cutaneous Review.

Following an external urethrotomy, if the perineal fistula is very sluggish in healing and urine persists in coming through, it is very likely that an obstruction to the stream in the urethra still exists. Of course as long as such is the case there will be no healing of the perineal wound.

Examine carefully into the renal function of patients who complain of more or less constant headache, dyspnea not dependent upon exertion, nausea and vomiting and insomnia, especially if the skin is dry and the patient complains of being always thirsty. Uremia may be imminent.—U. & C. R.

Do not take all hope from a patient with chronic interstitial nephritis. Under judicious management and careful treatment such a patient may easily live for years, but make it plain that a slight indiscretion may cause a break in his renal compensation.—U. & C. R.

With sudden cessation of renal pain and coincidentally a marked increase in the quantity of pus present in the urine think of the possibility of a renal collection of pus rupturing and being discharged through the ureter.—U. & C. R.

Remember in the treatment of sexual neurasthenics that they need encouragement; therefore do not hold their ailments trivial. Be patient and thorough with them. Such patients will scrutinize your efforts closely.—U. & C. R.

Owing to the much greater frequency of malignancy in the undescending testicle than in the one normally placed the need for bringing down the undescended organ is clearly apparent.—U. & C. R.

Probably some of your continuing cases of chronic gonorrhoea are being over-treated. That's why so many cases of gonorrhoea get well when we go on vacations.—U. & C. R.

Very short exposures to the solid carbon dioxide are useful in cases of lupus erythematosus.—U. & C. R.

Lotions are generally preferable to ointments in cases of eczema where there is much exudation.—U. & C. R.

In making topical applications to the posterior urethra the temptation to be rather zealous is marked.—U. & C. R.

Weak solutions of formaldehyde are excellent for sweating feet, especially if accompanied by bromidrosis.—U. & C. R.

Sufferers from all forms of eczema need to be warned against the use of strong soaps, especially those of a tarry nature.—U. & C. R.

CIRCUMCISION IN THE MASTURBATION OF FEMALE INFANTS.

Dr. R. G. Freeman, of New York (Am. Jour. Dis. of Children), reports this condition as not uncommon. Dr. Ratchford had reported 52 cases, all but 4 in girls. In seven cases on examination the clitoris is frequently found to be buried in these adhesions.

In a normal child these adhesions seem to cause little irritation; but in the nervous, sensitive child they may cause intense irritation and lead to the formation of a habit which, if untreated, may become permanent and exert a most injurious influence over the future development of the child.

The treatment of this condition is both general and local. The general health should be improved by such hygienic measures as are available, and all sources of nervous irritation and excitement should be, as far as possible, removed; but no cure can ordinarily be accomplished by such measures alone. The common use of an apparatus for separating the thighs is of little avail, and the only curative treatment is that applied to the removal of the active source of irritation, the adhesions of the clitoris. These may be separated without the use of an anesthetic. The operation is at times very painful, and such separation under those conditions is difficult and apt to be followed by the formation of other adhesions. The only satisfactory method of treating this condition is by circumcision, an operation which should be performed by one accustomed to do it, the foreskin being removed as completely as possible.

The result of this operation is most satisfactory. In many cases no recurrence of the habit is noticed after the operation, while in others

recurrences will occur; but they are found to be due to adhesions which have formed notwithstanding the circumcision.

The existence of so serious a complication in a young infant long before the development of the sexual activity leads one to wonder whether more attention should not be paid to the condition about the clitoris in all young girls with symptoms of nervous irritability. It has been said that the clitoris is an electric button which rings up the whole nervous system. It is my belief that more attention should be paid to the hygiene of this region.—S. L. J.

OBSTETRICS AND GYNECOLOGY.

Radium in Malignant Conditions in Women.

Dr. Aikins, in the Canadian Lancet, reviews a number of papers and in his summary says that "practically all writers on the subject are agreed that as regards gynecology radium has its chief field of usefulness in inoperable cases and as a prophylactic against recurrence after radical operation, and that in such cases its value as an adjunct to treatment is incalculable. The growth should be completely or partially removed in all cases in which such a procedure is possible, and radium treatment in such cases should replace operation only when the particular circumstances in a given case under the risks of operation are greater than those which would be incurred by the possibility of an operable case becoming inoperable whilst radium treatment was being tried. The advantages of radium as compared with the X-ray are that radium possesses greater power of penetration, the facility with which it is applied and the fact that in radium we are dealing with a substance the dosage of which can be easily controlled." S. L. J.

Thrombosis and Embolism in the Puerperal Period—Junge (Archiv. f. Gynakologie, 1912, Band. XCVI, Heft. 2) believes that alterations or injuries to the endothelium of the blood vessels, producing interruption of the circulation, is the most important factor in the causation of thrombosis. Such lesions are present in 26 per cent of all puerperal cases.

Multiparae at middle life are most apt to develop this lesion, and it occurs in them in 71 per cent of all cases. Puerperal thrombosis develops in 74 per cent of multiparae, and of these 72 per cent are cases of varices.

The saphenous vein is most often affected in the early puerperal period, the femoral in the latter portion of the period, and in the mid-portion the pelvic veins.

The process begins with a slight elevation of temperature, and the highest temperature occurs when the femoral vein is involved. Saphenous thrombosis affords the best prognosis while in the deeper veins the danger of pulmonary embolism is more likely, although this is comparatively rare, being about only .04 per cent in all cases so involved.

S. L. J.

Miscarriage—Potassium chlorate is efficacious in endometritis. It will also stop uterine

hemorrhage and reduce the size of a subinvolved uterus. In habitual miscarriage this drug, given in 5-grain doses three times daily and continued throughout pregnancy, will produce no untoward effects and be followed by normal labor.—American Medicine.

S. L. J.

Epinephrin Treatment of Pernicious Vomiting in Pregnancy—The various theories of the origin of pernicious vomiting in pregnancy can be placed in three groups: (1) Reflex theory; (2) nervous theory, and (3) toxic theory. The latter theory is considered valid by the author. Pregnancy leads to increased functional activity of the adrenals, which contributes to the processes of systemic defense. When this increase of adrenal function fails to occur vomiting appears. In such cases the administration of epinephrin is, therefore, indicated. This agent is noxious neither to the mother nor the child. It acts rapidly and arrests the vomiting. Pedro Valle (*Cronica medica; Revue de therapeutique medico-chirurgicale*, January 1, 1914).

S. L. J.

Pituitrin in Obstetrics—In *Journal of Michigan Medical Society* Dr. C.E. Boys draws these conclusions from a study of 100 cases in which pituitrin was used:

Conclusions—In conclusion we may say that:

(1) Pituitrin is best administered intramuscularly.

(2) The initial dose should not exceed one to one and one-half cubic centimeters. Large doses during labor are equivalent to ergot and should not be given.

(3) In induction of labor at term the results are not satisfactory.

(4) In the presence of an undilated cervix pituitrin should be given only in exceptional cases.

(5) The best results are obtained in the second stage of labor.

(6) In an occasional case the preparation is apparently inert.

(7) It should not be given in the presence of serious obstruction to labor.

(8) In moderately contracted pelvis, and especially in outlet contraction, the results are good.

(9) The forceps operation may often be averted or rendered easier by the proper use of pituitrin.

(10) In Cesarean section pituitrin should not be given before delivery of the child.

(11) The effects on pulse and blood pressure are not constant, but pituitrin should not be used in conditions associated with high blood pressure.

(12) Urination after delivery seems to be facilitated.

(13) The administration is sometimes followed by untoward symptoms.

(14) In postpartum hemorrhage the results are not better than those obtained by the use of ergot.

(15) Pituitrin has no place in normal obstetrics, and should be given only in the pres-

ence of sufficient indication, e. g. inertia, moderately contracted pelvis, etc.

S. L. J.

Ovarian Function in Basedow's Disease—Report based on an investigation of 40 cases. Deficient function of the ovary predisposes to the production of Basedow's disease. The physiologic climacteric may be considered to predispose to this affection. In five cases the menstruation before the manifestations of the affection, as well as in the first few months after its appearance, was regular. Entire cessation of the menses at the onset of the affection was noted in 10 cases. A connection between the severity of the cases and the cessation of the menses at the beginning of the disease cannot be established, but cases in which the menstrual flow has either ceased for a long time or in which the amenorrhea is interrupted by rare and scanty menstruations must invariably be classified among the grave ones. The treatment must be directed toward increase of the ovarian function.—O. Frankl (*Gynakologische Rundschau*, vol. vii, No. 17, 1913).

S. L. J.

Thyroid Treatment in the Vomiting of Pregnancy—The author administered 1½-grain tablets of thyroïdin in several cases of hyperemesis gravidarum, and observed a complete curative effect. In one case vomiting was observed to recur after cessation of the medication, but yielded again when the treatment was resumed. A noteworthy observation was that, contrary to the usual accelerating effect of thyroïdin, the pulse rate was decidedly slowed by it in these cases.—Koreck (*Deutsche medizinische Wochenschrift*, No. 43, 1912; *Kentralblatt für experimentellen Medizin*, June 15, 1913).

S. L. J.

PROCIDENTIA; OPERATION; BULLET FOUND.

Dr. C. A. L. Reed reported this case at a recent meeting of the Cincinnati Academy of Medicine.

The case is a very recent one, and, therefore, I have no regularly prepared report of it. A woman, thirty-five years of age, came into K Ward of the Cincinnati General Hospital afflicted with procidentia, for which I operated. In her history occurred the incident of having received a bullet-shot in the back three and a half years ago. A search was made for the bullet at that time, but to no avail. A radiograph also failed to reveal the presence of the missile. However, in this operation, I found a hard substance in the cul-de-sac of Douglas which proved to be the missing bullet. It had perhaps deflected into the pelvis, becoming first sacculated back of the peritoneum, then pedunculated, the pedicle being two and a half inches in length and very slender. You have here a dried shred of peritonium which comprises the pedicle, and at the end of it, the little sac in which the bullet is encysted.—S. L. J.

OBSTETRICS IN GENERAL PRACTICE.

G. J. Hagens, Chicago (Journal A. M. A., November 16), says that obstetrics to-day is one of the most arduous branches of medicine and one that demands sacrifice by the general practitioner; sometimes it demands more than ordinary patience, technical skill and nerve. This is not appreciated by the laity, and the comparatively small pay for obstetric services has its foundation in this fact. In emergencies the most trying situations have to be met sometimes single-handed and under most unfavorable conditions. The undesirable condition of obstetrics could probably be best remedied if every case with complications could be sent to a properly conducted maternity hospital, and this would greatly raise the standard of obstetric work, as well as reduce the mortality of mothers and infants. Much of the self-reproach which doctors feel for their ill success and accidents would be eliminated with better preliminary training and access to good hospital facilities. Hagens quotes Whitridge Williams as to the deficiencies of obstetric instruction, even in our best medical schools, and protests against the tendency to meddling midwifery. He says: "It is yet a question whether the midwife, with her dilatory and unscientific methods, is not better fitted to be trusted with the interests of the mother and child than a physician who is ever ready to apply forceps. If she would practice only cleanliness and watchful expectancy without meddling, I believe that the balance would be in her favor" He presents a statistical review, as accurate as he could make it, of the cases met with by him in his general practice, and gives also his methods before, during and after confinement. He has his patients make arrangements as early in pregnancy as possible, and keeps a careful watch of all their symptoms, in normal cases seeing the patient every three or four weeks and giving instructions. With primiparas and in doubtful cases, the observations are closer and more frequent. When home surroundings are inadequate the hospital is always urgently advised. A visit is always made within twenty-four hours after delivery; this is important; one daily visit is made afterward until the patient is up out of bed, and after the puerperium the patients are instructed to take the knee-chest position at least three times daily for at least three months. Whenever necessary, patients are requested to come for examination within three months after delivery. In the series of 1,116 cases between January, 1896, and December, 1911, there were 953 (85.4 per cent.) normal and 163 artificial deliveries; convalescence was normal in 99.82 per cent.; one mother died of puerperal sepsis; thirty-eight infants died—eleven antepartum, eighteen post partum and nine intrapartum. Four hundred and four cases were primiparæ; there was one cesarean section, mother and child both now well and strong. There were sixteen post-partum hemorrhages, seven of adherent placenta, two of placenta prævia, three of eclampsia and seven of phlegmasia alba dolens, four

mild, three severe. Perineal lacerations occurred in 45—fifty-six of the first degree, 388 of the second and ten of the third degree. Statistics are also given of the presentations, positions and details of infant abnormalities.—S. L. J.

RADIUM.

H. A. Kelly and C. F. Burnam, Baltimore (Journal A. M. A., Aug. 22, 1914), report their experience with radium in the treatment of uterine hemorrhage and fibroid tumors. Elaborate tables are given of their cases, and they feel sure that radium offers a marvelous means both for the control and for the doing away of uterine hemorrhages in the classes of cases where they have used it, and is also perfectly suited for the cure and disappearance of fibroid tumors. When it fails we still have the operation to fall back on if needed. It is simpler in application than the Roentgen ray and acts less on the ovaries. They insist that the fibroid itself should receive the major radiation in any case and claim that radium can bring about a complete amenorrhea with the absence of menopausal symptoms in half of the cases and with mild symptoms in all of them. They insist on the intra-uterine application in contradistinction to the vaginal or cervical, but think it quite possible that suitable abdominal radiation with radium or the Roentgen ray may add to the rapidity of the results. In their tables they give the amount of radium and the duration of the application, showing wide variation in both. The technic advised is filtration through glass, 0.5 mm. of platinum; 0.5 mm. of zinc foil and 0.3 mm. of rubber. This apparatus, suitably shaped, is carefully introduced directly into the uterine cavity. The time of duration of application seems to have ranged from five to twenty-four hours or a little more. This and the amount of radium used are all stated for each case in the tables.—S. L. J.

PERFORATION OF UTERUS.

E. Gard Edwards, La Junta, Colo. (Journal A. M. A., January 21), reports a case of perforation of the uterus with transfixion of the contiguous mesentery and peritoneum by a bone crochet needle. The patient, a married woman, thinking herself in need of monthly regulation, had introduced it herself and became anxious at its getting away from her. She suffered no pain but was much concerned in her mind. From lack of symptoms it was hard to convince her medical attendant of the conditions, especially since dilatation and exploration of the uterus failed to reveal any foreign body. She was brought to Dr. Edwards ninety miles by rail for an x-ray examination. There was then some tenderness on pressure and soreness in the left pelvic region. The examination revealed conditions as stated above and operation relieved the patient, who made a satisfactory recovery. The lack of pain, shock, hemorrhage or infection makes the case noteworthy in its way.—S. L. J.

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Original Articles

SPINA BIFIDA WITH REPORT OF CASES.

S. S. Gale, M.D., Roanoke, Va.

(Read before West Virginia Medical Association,
May, 1914.)

Spina bifida is a congenital defect of one or more clefts of the neural arches, with a hernia-like sac formed by some of the spinal membranes with or without a cord or roots. It is due to a faulty development of the mesoblast which forms the bones, meninges and muscles. It occurs about once in a thousand births.—(Woolsey.)

There are five varieties of this malformation:

1. Myelocele.
2. Myelomeningocele.
3. Syringomyelocele.
4. Meningocele.
5. Spina bifida occulta.

According to Moore the relative frequency in which different localities of the spine are affected is as follows: Twenty-three per cent sacral; twenty-four per cent lumbar; twenty-nine per cent lumbo-sacral; four and one-half per cent dorsal; and nine and one-half per cent cervical.

1. Myelocele is the most complete form of this malformation. It is incompatible with life for more than a few days. Here the medullary folds have failed to unite, and as a result the central canal and the cord open upon the surface of the body. This form usually is seen in the lumbar

region. Co-existing with this defect there will often be found protrusion of viscera and asymmetry of development. Death occurs from a constant leakage of cerebrospinal fluid.

2. Myelomeningocele is a deficiency of the vertebral arches, which is associated with a tumor varying in size from that of a hazelnut to that of an orange. It is rounded or oval in shape and may be lobulated. It is usually situated in the median line. Generally it is constricted at its base. At its summit where the cord is attached to the wall of the sac there may be a dimple. The presence or absence of this dimple or furrow depends upon the degree to which the sac is distended by fluid. The sac is composed of skin, dura mater and arachnoid membranes. The sac cavity is a continuation of the subarachnoid space and is filled with arachnoid fluid. The skin over this tumor is seldom normal, but normal skin extends up from the base to a variable distance. The rest of the tumor is covered with membranous tissues which may become ulcerated or even gangrenous.

According to a report of the Clinical Society of London this is the commonest form, constituting sixty-two and two-tenths per cent of all cases. This form is far more frequent in the lumbosacral region and may appear in any portion of the spine. The infant may be in good condition and may have its functions intact. On the other hand, there may be paralysis of sphincters and of the muscles of the lower limbs, evidenced by club feet and trophic

changes. The frequent and important complication is hydrocephalus.

3. Syringomelocele. In syringomelocele the bony wall and dura are cleft, but the arachnoid and pia are intact, while the central canal of the cord is distended with cerebro-spinal fluid. The results are hernia composed of skin, arachnoid, pia and nervous elements, while the center of the mass is occupied by cerebro-spinal fluid. The nervous elements are spread out thinly over the inside of the sac.

4. Meningocele is a tumor similar to myelomeningocele, the difference being that in meningocele the membranes surrounding the cord alone protrude, while the cord remains in its normal condition in the spinal canal. It occurs in about eight per cent of all cases of spina bifida. It is important to distinguish this condition from myelomeningocele, and the following points should be remembered: There is usually in myelomeningocele a deficiency of large size in the arches. Meningocele is never dimpled or furrowed. The presence of paralysis and congenital deformities elsewhere points toward myelomeningocele. Finally, myelomeningocele is most frequently seen in the lower spine.

5. Spina bifida occulta is very rare and may be considered here only as a curiosity. It is characterized by the presence of a hairy patch over the sacral lumbar region, which may be the only visible indication of an abnormality. The cleft can usually be felt, but in some cases in the lumbar region the X-ray may be of use to demonstrate.

Symptoms—Many meningoceles give no symptoms apart from the presence of the tumor. In other cases of spina bifida there is more or less paralysis and sensory disturbances of the lower extremities. Other abnormal conditions may also be present, especially hydrocephalus, club foot and other defects. Not infrequently the bony cleft cannot be felt owing to the size or tension of the tumor or the density of the surrounding fatty tissue, but in such cases it can be shown by X-ray, except perhaps in very young subjects.

Diagnosis—The congenital origin and position of the tumor filled with fluid, whose tension varies with posture and expiratory efforts (crying, coughing, etc.), render the diagnosis easy. The differen-

tial diagnosis between the several varieties is of great importance for the prognosis and treatment, and has been touched on in discussing the different varieties of spina bifida in this paper.

Prognosis—The prognosis in general is unfavorable. Most cases fortunately die early. Of six hundred and forty-nine children that died with spina bifida in England in 1882, six hundred and twelve of them died within the first year. In ninety cases not operated upon, the majority died within the first few weeks. Only twenty lived to be over five years of age.

Usually the tumor increases in size. The skin is ever liable to ulcerate, leading to perforation of the sac, infection of the meninges and death. Very rarely rupture is followed by spontaneous cure. When the sac connects with the ventricles of the brain, sudden evacuation may be quickly fatal.

If the first few weeks of life are survived paralysis of the bladder and the constant danger of urinary sepsis always threaten life. Most cases living five years or more are meningoceles.

The prognosis is most favorable in meningoceles and next in myelocystoceles. Many cases surviving radical treatment die of hydrocephalus or of the secondary effects of existing paralysis.

Treatment of spina bifida is of two kinds—operative and palliative or non-operative. Non-operative treatment consists of protecting the sac from injury and dressing its surface antiseptically if it is ulcerated or gangrenous and in painting the surface with iodoform or collodion in cases in which the wall of the sac is thin. Under operative treatment should be included tapping, injection and excision. Those cases in which operative treatment is not resorted to are apt to terminate fatally because of leakage of cerebro-spinal fluid or infection of the meninges.

Prognosis with operation depends upon the character of the tumor and age of the patient and the kind of operation employed. Where the tumor is large and its covering is thin, where the complication of hydrocephalus exists, in all cases of myelocele, and in most cases of myelomeningocele with paralytic complications, the result of operation is either death or failure to cure.

According to Carson, in "American Practice of Surgery," in children of very tender age the operation is accompanied by a high mortality rate and does not stop the advance of the disease. This does not agree with our experience in three cases.

In those who are five or more years old operation may be safely done because few cases that are inoperative reach the age of five years.

Operative Proceedings—The injection of iodine has for its aim the production of adhesive inflammation. It is an operation which should not be employed on children less than two months old or where there is hydrocephalus or marasmus. It is accompanied with great danger from shock, convulsions, meningitis, paralysis and the appearance of hydrocephalus.

Excision—According to various authorities the age of the patient has much to do with the decision to operate. Numerous statistics by Bayer, Hildebrand, Sachtleyben, Moore, Mayo-Robson and others show a fatal result in over thirty-five per cent of the cases operated within the first few months of life, while in children five or more years old the operation has resulted fatally in but four and seven-tenths per cent. This difference is due to the fact that children who live to be five years old are good subjects for operation, and the inference is that it is unwise to operate on these cases too early.

We are of the opinion that local anesthesia should be used in all cases, especially in very young infants. We have found one-half per cent of novocain in distilled water to meet every requirement and can apparently be used ad libitum without any ill effects.

The points in the operation which seem to be of the greatest importance are as follows: After the tumor has been excised, the nervous tissues should be returned as nearly as possible to their places and the defect in the bone should be well covered. The adoption of absorbable sutures and of modern aseptic methods has done much to produce good results in this operation. The implantation of bone from animals for filling in the defect in the canal has not been successful. Filling the gap with transplanted bone from various parts of the body, as has been recommended by Zeneko, has been successful, but Bayer be-

lieves that muscles and fascia are sufficient. Moore believes it is of advantage to have a simple technic. His method is the one which we adopted in our cases. The patient was placed in a prone position. The hips were elevated. The tumor and adjacent skin were cleansed with benzine and iodine. The base of the tumor was thoroughly infiltrated with one-half per cent of novocain. The skin flaps should be so redundant that they can be approximated without tension. The sac should be freely opened. When the tumor is a simple meningocele it should be dissected free down to the cleft and then cut away, only enough tissue being left to make ample meningeal flaps. Where nerve filaments are present they should be dissected free and should then be returned within the cleft. In cases where these filaments cannot be returned they may be removed without harm. It is probable that much time has been wasted to preserve functionless nerve filaments. Meningeal openings should be closed with fine iodized or chromicized catgut. Flaps of muscles or fascia should then be dissected from both sides of the cleft and brought together without tension. The skin flaps should be united with silkworm gut. The wound should be closed without drainage, sealed with collodion and a firm dressing applied.

As regards the after treatment it is important that the dressings of the wound should be watched very closely and that it should be done as infrequently as possible, although it is rarely safe to leave the dressings in place longer than two days at a time.

The nursing of these cases is of the utmost importance, especial skill on the part of the nurse in handling infants being very necessary.

Meningocele—Female.

Case 1. Baby C. This case was referred to me by Dr. Parker January 1st, 1914. The baby was forty-eight hours old. The mother was a multipara and this was a normal delivery. The child weighed six and a half or seven pounds and was normal in every respect except for a tumor over the lumbosacral region. It nursed well and slept well.

The tumor was about the size of a small orange, with a well formed pedicle. The dorsum of the tumor was covered with a thin membrane, which was translucent. It was macerated and showed beginning ulceration. I

was fearful it would rupture before morning. The following day the child was brought to the hospital, about seventy-two hours after its birth.

Operation—The child was placed in the prone position, lying on its abdomen, with its hips slightly elevated. The field of operation was thoroughly cleansed with benzine and iodine. The base of the tumor was infiltrated with one-half of one per cent novocain in distilled water. The normal skin extended up on the tumor for a distance of one-half an inch or more. A circular incision was made around the tumor just within the line of this true skin. An attempt was then made to pull the sac away from the skin all around the base without rupturing it, but this we failed to do. The sac was completely enucleated, ligated at its pedicle with catgut and then tucked into the opening in the spinal canal and fastened as a plug with one or two fine catgut sutures. There were no nerves in the sac. The erector spinae fascia and muscle were then split on either side of the spine and stitched over the opening in the spinal canal with interrupted catgut sutures to reinforce the opening in the spinal canal. The skin was closed with interrupted catgut sutures at right angles to the spinal column. The wound was sealed with collodion on cotton without drainage and reinforced with a gauze compress held in place with adhesive. The wound healed by primary union. The post-operative course was uneventful. The child left the hospital in two weeks entirely well and has remained so up to the present time.

Case 2. Baby H. Referred to me by Dr. Guerrant February 3d, 1914. This baby was twenty-four hours old when seen by me, and it entered the hospital and was operated on when it was forty-eight hours old. It was a well-formed baby weighing between seven and eight pounds. It had a tumor about the size of a large orange situated over the sacro-lumbar region. There was no maceration or ulceration of the skin. The tumor had a very broad base, possibly two inches across by three or three and one-half inches vertically. This baby had paralysis of the lower extremities.

The technic of the operation was the same as in the preceding case. On account of the broad base of the tumor there was considerable difficulty in closing the opening in the sac and getting enough healthy skin to close the wound. On account of the tension of the skin sutures there was a leakage of cerebro-spinal fluid, and when the baby left the hospital two weeks after the operation there was a spinal fistula. This later closed. The baby during its stay in the hospital was fed artificially. After returning home the mother nursed it. About ten days ago the child developed an acute hydrocephalus. It is still living. The paralysis has greatly improved.

Case 3. Baby H. This case was referred to me by Dr. J. Warren Knapp. Entered the hospital March 17th, 1914. This child was four months old. It had a large tumor in the median line about the tenth thoracic vertebra. It was suffering from marasmus and hydrocephalus.

The tumor was attached by a very broad base. The operation was done in the same way as the two preceding cases. The child stood the operation well, but died at the end of four days. This was also a case of myelomeningocele. This case was beyond hope and should not have been operated. However, the doctor who delivered the child and the mother stated that at the time of birth it had a very small tumor on its back which had grown very rapidly in size in the last three months.

Conclusions—We are of the opinion that these cases should all be operated—that is, the operative cases, within the first few days of life if possible. We believe that if this were done that the mortality would be considerably reduced.

Second. We believe that all these cases should be operated under local anaesthesia, preferably novocain.

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THE PREVENTION OF INSANITY.

C. A. Barlow, M.D., Spencer, W. Va.

(Read before West Virginia Medical Association, May, 1914.)

To aid me in the proper presentation of this subject I have secured the loan of the mental hygiene exhibit from the National Committee for Mental Hygiene. I hope each of you gentlemen will take the time to examine and study these charts, maps and models, as you will find many things of interest and much that will be a revelation to you.

It is a regrettable fact that preventive treatment of insanity has not been given more consideration in the past, when we know that it will yield such wonderful results. Most of the work done thus far has been supported by voluntary contributions and self-constituted bodies. It is true, however, that a few of the states have taken up the work, and we hope ere long that our law makers will see the great value of this work from an economic as well as social standpoint, and will lend their assistance in the matter. When you consider that there are over 250,000 insane in the United States, or one in every 350 people; that they are costing us over \$35,000,000 each year for their maintenance; that insanity is increasing far more

rapidly in proportion than the increase in population, and that at least 50% of the more severe forms of mental disease come from causes which are preventable, you will understand the necessity for some method of prevention.

While the death rate is not high in insanity, yet it has as surely destroyed the efficiency of its victims, worse than that, has made many thousands the subject of state charity for long periods of time, and many thousands of their immediate relatives and friends unhappy through observing them in a state that might be characterized as a living death.

Among the organized efforts looking to the prevention of insanity full credit should be given the National Committee for Mental Hygiene, the American Breeders' Association and the several state charities and associations for the work they are doing.

At all times from the dawn of history the highest function of the physician has been to guard those who entrust themselves to his care against the enemies of health, whether they come in the form of licentiousness, dissipation or disease. In no class of diseases has the physician a better opportunity of increasing his value to himself or his usefulness to others than in insanity. In the prevention of insanity the general practitioner can do more than any other single agency.

While it is true that our training in nervous and mental diseases has not been as thorough as it should have been owing to the neglect of our medical colleges, yet we have a general knowledge which can be greatly improved by a little study of the subject. It is pleasing to note, however, that the medical colleges are giving more attention to these subjects so that their future graduates may come out better equipped. For the general practitioner to do his part in this great field of preventive medicine it is not necessary that he be a psychiatrist, but he must be familiar with the causes and some of the early symptoms of mental disease, for it is through the removal of the causes and the early detection of the disease that you render such valuable assistance.

The family physician is generally the first one to detect mental disease, and as the confidant and adviser of the family he

can do much in the prevention, as we will show later. Of the 529 cases sent to the West Virginia State Hospitals for the fiscal year ending September 30, 1912, one-third of these were insane possibly one year before commitment. This, in conjunction with the fact that practically 90% of the cases which recover do so within one year from the incipency of the disease, goes to show what great value there is in the early treatment. While we cannot safely say that early treatment means more to the recoverable type, yet we do know that it depends as much upon this as any other factor. However, we do know that this is within our control and others are not.

Therefore, recognizing the value of early treatment, the physician should be on the alert for early manifestations of mental disorder and should urge early commitment. He can allay the public distrust of state hospitals far better than any physician directly connected with them, and he should avail himself of every opportunity to familiarize himself with the care and treatment given in these institutions.

Provision should be made for the incipient and emergency cases in psychopathic wards in the general hospitals in the larger cities. While the cities of our state are not so large as those in many of the sister states, yet a few are of sufficient size to justify the establishment of psychopathic wards. These could be so located as to be centers of practical work in the prevention as well as for the efficient treatment of the insane. Under our present arrangement few, if any, general hospitals in our state are equipped to care for these cases. This, in conjunction with the necessity of court commitment, causes many to be held at home until all chances for recovery are gone. Few people cherish the idea of having their relatives who are sick brought into court and then hustled off to a dingy cell in the county jail, there to await the arrival of the hospital authorities. The nearest general hospital to the northern panhandle having these facilities is the St. Francis of Pittsburgh. The physicians of that section can recall many patients who have been sent there in recent years. The establishment of a psychopathic ward in one of the Wheeling

hospitals would encourage earlier treatment of many cases occurring in that section of the state. The same might be said of Parkersburg, Huntington, Charleston, Bluefield and Martinsburg.

A moment ago we spoke of court commitment being a handicap, and would like to add that our laws should be so changed that our state hospitals could admit patients voluntarily committed. This is being worked out to good advantage in several states.

The fact that a fatal and very prevalent form of mental disorder (paresis) is due to syphilis should be disseminated as widely as the knowledge that smallpox is contracted by exposure to an infected person. In the great city of New York more people died during the year 1912 from paresis than from typhoid fever. The disease develops generally ten to twenty years after the original syphilitic infection, therefore many of the victims may have forgotten they ever had syphilis. This often causes the patient and his relatives to contribute the breakdown to some recent occurrence, such as overwork, business, worry, etc. It sometimes develops so slowly that the victim may have caused financial embarrassment and disgrace to his family before the actual cause of his peculiar actions are found out. As an illustration I will give you the history of a case or two described by Dr. Thomas W. Salmon:

"I know of a case where the cashier of a bank, whose business life had been irreproachable, wasted the funds in his custody during the early stages of general paresis. He was convicted of embezzlement and died in disgrace, the most charitable views expressed by his associates being that his death a short time after his conviction had partially atoned for his wrong doings. His family, recognizing that only mental diseases could have accounted for his actions, had the courage and good sense to demand a necropsy, and the necropsy showed conclusively the nature of his disease. I know of another instance in which an efficient officer was dismissed from one of the government services for all sorts of absurd misdemeanors, which were clearly the result of mental disease from which he died a few years later. Many such instances could be given

if time permitted. Their lesson is that, although such cases cannot be cured, it is of great importance that their existence should be recognized at the earliest time possible. It would be interesting to consider some of the early manifestations of mental diseases and their relation to social and family difficulties, but time will not permit."

Taking all the foregoing facts in regard to paresis into consideration, too much stress cannot be laid upon the necessity of warning your clientele against the dangers of syphilitic infection and the improper treatment of this disease after development.

We are proud to note that the State of West Virginia has entered its protest against the use of alcoholic liquors by the adoption of the prohibition amendment, and we sincerely hope it will not be long until prohibition will become national. Statistics show that 30% of the men and 10% of the women admitted to state hospitals are suffering from conditions due directly or indirectly to alcohol. The Kansas authorities say that the 10% reduction in insanity in that state is largely due to the more rigid enforcement of the prohibitory liquor laws during the past few years. Think what this would mean if they had a law prohibiting the shipment of liquors into that state.

For several years the popular mind has associated insanity with heredity. This belief has been confirmed by modern investigation so far, at least as to assure us that heredity is by far the most important factor in the causation of certain forms of mental diseases. We would be safe in saying that 70% of all cases of mental disorder are due to heredity. As a method of prevention of insanity in those with hereditary taint we would suggest that careful attention be given to the mental and physical habits of such individuals. With the proper environment, with good mental and physical habits, insanity may be avoided. Stricter laws in regard to marriage should be enacted prohibiting the marriage of feeble minded, epileptics, syphilitics and certain classes of insane. The result of investigations of heredity in mental diseases and defects down to the present time entirely justifies the statement that it is highly undesirable that the

feeble-minded, epileptics and those with certain types of insanity should have children.

As to the proper care and education of children with hereditary taint we would suggest the observance of the following rules:

Give more care to the development of the body by regularity in eating, sleeping and exercise.

Avoid the use of all forms of nerve stimulants, such as tea, coffee, wines, beer, tobacco, etc.

Pay particular attention to the mental as well as physical habits and see that they are proper and well regulated.

Let their training be manual in preference to book.

Do not start the children to school too young and then do not push them.

The physician should not only watch the members of his families through infancy and childhood, but should pay particular attention to the period of adolescence, for it is during this period that a very large number of individuals develop adolescent insanity, or what is properly called dementia praecox. This is particularly so in cases with a hereditary taint. Be on the lookout for certain peculiarities of character and certain defects of self-management, as these are danger signals.

Another class of cases to which I wish to direct your attention is your female patients during the menopause. Many mental breakdowns can be avoided by the proper medical attention during this period.

There are two forms of prevention which should be considered together; they are colonization and sterilization. We determine the fact of their effectiveness as early as possible and place them in institutions where they can be trained in regard to their habits or be educated and made happy. Today we have thousands of mentally defective men, women and children under no surveillance whatever. Take almost any neighborhood and you will find individuals, and at times whole families, who are mentally defective. are a great menace to society, both from

a humanitarian as well as economical standpoint. It is an established fact that this class is more prolific than any other, therefore they should be either confined in a colony or institution or sterilized. By the use of the very safe and simple method of sterilization many of these could be left in the community, as the danger of procreation would not exist. Several states have enacted laws calling for the sterilization of certain classes. This is not a form of punishment, but rather a humane method of saving future society an unnecessary burden. Our state should have such a law, and if it is presented at the next session of our legislature I hope each member of our society will investigate the subject thoroughly and advocate its adoption.

In conclusion I desire to call your attention to the following instructions which are sent out by the National Committee for Mental Hygiene:

What each person can do in the mental hygiene movement:

1. Inform yourself thoroughly regarding the causes of mental diseases.
2. Help to make the facts you now possess generally known.
3. Refrain from those acts and habits which are liable to result in mental disorder.
4. Speak and think of insanity as a disease and not as a crime.
5. If relative, friend or acquaintance seems to be suffering from bad physical or mental habits, take steps to see that he is given the information you possess and receives proper medical care without delay.

Inform yourself of the modern methods of caring for the insane and lend your voice and influence to all projects which make for better or earlier care of those suffering from mental diseases.

PROSTATECTOMY.

W. D. Hamilton, M.D., Columbus, Ohio.

Not much that is new on prostatectomy has been offered to the profession of late. The operation is becoming more strongly established, and the scope of application of the perineal and suprapubic procedures is being more and more clearly shown. As to results, much depends upon the choice of patients, and, too, upon the proper selection of the time at which it should be done. The technique of both the lower and upper operations has been

fairly well elaborated. It is remarkable that a practical cure has been obtained for so many of these aged patients in spite of the sad plight into which many of them had gotten before operative relief was offered.

With obstruction to the urinary outflow from either enlargement or peculiar distortion of the prostate, certain results are to be borne in mind. The back pressure becomes constant. It is hydrostatic. It is transmitted from the bladder backward through each ureter to the kidney and its pelvis on either side. The danger of suddenly emptying such a bladder by complete catheterization or cystotomy at once, where there is a large amount of residual urine, is well appreciated by most medical practitioners. Syncope or collapse or even death has at times occurred. Congestion of the kidneys is its immediate effect, so suddenly have those organs been deprived of this backward pressure to which they have become accustomed. Pyelonephritis is a common sequence of it. So far as the bladder is concerned hypertrophy, with or without contraction of the bladder, sacculation or atony of the organ, any of these conditions may in time result from chronic prostatic obstruction, particularly in those cases in which there is considerable residual urine. The ureters may become dilated. This probably occurs in half the cases. The kidneys are so damaged as to be unable to excrete urea at par. In fact, most of these patients are in this respect much below the normal.

The phthalein test is quite efficacious. The uraemic or functional inquiry should first be made in every such case. The patients are then treated here at the Mount Carmel Hospital for a period of time, the length of which depends upon the impairment of the eliminative power of the kidneys, and careful notes are made of the general physical condition as well. The time is well spent. The patient gets better. Measures are adopted for the gradual regulation and elimination of that backward pressure hitherto so detrimental to the kidneys. This requires experience and technical skill. The renal functional power can be estimated at suitable intervals and the percentage of the normal from time to time observed, indicating the patient's improvement or otherwise.

Meanwhile cystoscopy should be done. It may show cystitis or stone or their absence. A sacculus may be seen or a neoplasm observed, or any change from normal in the character or rate of the discharges from the ureteral orifices observed, or, what is more to the point, the anatomical peculiarities, if such there be, of the prostate itself may be scrutinized. A sound in the bladder and finger in the rectum may give, during examination by the touch, ideas of considerable surgical value. The general question of the mobility of the prostate or its fixity, the circumscribed or diffuse character of its enlargement are of interest. The question will arise, too, as to whether we probably have or have not to deal with malignant disease of the prostate.

Some of these patients enter the hospital with one or more false passages, where force has been used in the attempted introduction of metal instruments. These efforts have left evidence often of considerable haemorrhage. It would be well for every general practitioner, particularly if he be located in the country, to have in his armamentarium (in good repair) one or two each of silver prostatic and soft coude catheters, in order to be able at least to evacuate a part or all of the vesical contents in a case of prostatic retention as thought best, according to circumstances, in order to be able to tide such a patient over for a few days at least, pending surgical care. The possession of such an outfit implies a keen appreciation of manipulative gentleness and studied asepsis in the hands of the user.

After patients suffering from prostatic obstruction have received adequate preliminary treatment they become, most of them, much better subjects for operation. The writer cannot emphasize too strongly the importance of such treatment of the renal functional power before operation is done, and in most instances it is practicable.

In some cases where there is a rank cystitis and where palliative measures have reached their limit, though improvement may or may not have been attained in renal function, the suprapubic incision is made, and the peritoneal reflexion of the bladder having been freed without

opening the organ, the wound is packed with gauze so as to have in a week a granulating surface left. If this is done before the bladder is opened or before the prostate is enucleated, this acts as a cofferdam against sepsis in the pre-vesical and peri-vesical connective tissue. Or one may in certain cases, in order to minimize shock and sepsis, do cystotomy only on one occasion and the prostatectomy a week later. The perineal section is not being done so frequently by us, though in certain small firmly adherent prostates it has at times a peculiar adaptability to the needs of the case.

There have been all told one hundred and seven prostatectomies in the practice of Dr. Charles S. Hamilton and the writer with sixteen deaths, while there have been no fatalities in our last sixteen cases. This includes not only benign enlargements of the prostate, but also cases in which pathological examination of the specimen showed malignant disease to be present.

150 East Broad St., Corner Fourth St., Columbus, Ohio.

HEREDITARY MENTAL DEFICIENCY.

J. W. Williams, M.D., Richmond, Va.

"Mental deficiency is hereditary—about 65 per cent."—Southern Medical Journal, September, 1914.

Prof. Dilman's famous study of the hereditary character of the Jukes family occurs to us here. "Ada Juke, who died at the beginning of the last century, at about sixty years of age, was a drunkard, a thief and a vagabond. Seventy-five years later her progeny was found to consist of 834 persons, of whom the history of 700 has been studied. Of this number there have been born 106 illegitimate children, 144 mendicants, 64 sustained by charity, 181 prostitutes and 76 criminals, among whom were seven assassins. In seventy-five years this single family has cost in maintenance, expense of imprisonment and interest \$1,225,000."—Psychology of Alcoholism, Cutten (Yale).

Here the citizens of the State of New York have paid one and one-quarter million dollars to support one family and its progeny under the laws of heredity.

Germain to this is the statement of Dr. A. H. Cook in the above named Southern Medical Journal for September, 1914: "H. H. Goddard has placed on record one of the most instructive families. A normal man fathered through an unknown defective girl an illegitimate son. Four hundred and eighty descendents of this son have been traced, of whom 143 are known defectives. Later the man married a normal woman. Of this union there has been traced 486 descendents, all normal."

Alcohol belongs to the class of medicines we call narcotics. All narcotics affect the higher faculties of man in the inverse order of their development, beginning with the intellect first, the cells of the brain. Like morphin, it is first a stimulant, then a sedative, and finally a narcotic. What is true of alcohol is also more or less true of all the members of its class, especially of morphin, the most destructive and deadly of the group, the alarming use of which leaves in its wake ruined homes, shattered mental and bodily constitutions and the curse of heredity as an inheritance to the offspring. We are told that if the father be a drunkard, the "moral nature of the children is affected, but if the taint be on the mother's side it is the brain and nervous system that suffer." Why is this? We must remember that the brain is encased in a bony structure, mobile to a certain limit until after maturity, thereafter firm, and that the cells of the brain, thus protected, can be nourished or injured (cell starvation) by the blood circulating through them. We know that these narcotics taken into the blood per os or per hypodermic reach the foetus in utero through the umbilical artery: thence through the two internal carotid and the two vertebral arteries it enters the microscopic blood vessels of the pia mater, and at once the brain cells are bathed in blood, either pure or laden with narcotic poison—and the cells are either naturally nourished, or seriously injured by the narcotic circulating in such blood and the mind is invigorated or suffers accordingly. The fact of injury to cell life, either vegetable or animal, from the torula up to the sturdy oak, the patriarch of the forest, or from the ameba up to man, who crowns the summit of this pedestal of ani-

mal life, has long since passed the experimental stage and comes to us with the endorsement of the world's ablest pathologists and investigators. I quote again (see former paper) the great pathologist of the University of London, Sir Victor Horsley: "The nerve cells have extraordinarily diminished in numbers, having degenerated and wasted away. The cells degenerate, shrink and disappear. The cells damaged in this way never recover, and as far as we know are never replaced. See Sir Victor's work, page 121. This explains the mental, moral and physical peculiarities of all drug addicts, whatever the drug used, whether alcohol, morphin, cocaine or the lesser members of the group. No morphinist or other drug user can escape the consequences of his or her acts under the laws of heredity. "As a man sows, so shall he reap" is as inexorable and as certain as any other law of nature, and men of all nationalities and in every age of the world by bitter personal experience not only attest the truth of this heredity law, but its justice. Dr. Drew, medical director of the Massachusetts State Asylum for Insane Criminals, tells us that "alcoholism in the parent always means examples of mental diseases and weak mindedness in the children," but if both parents are inebriate the offspring seems almost doomed from its birth.—Prof. Cutten, page 235.

All narcotics in their action upon the body follow a definite law.

1. They affect the cerebrum.
2. They affect the cerebellum. We have all noticed the stumbling gait and final inability to walk.
3. They affect the oblongata.
4. They affect the cardiac and respiratory centers—the first in man's development, but last to be affected by narcotics.

"Alcohol and morphin enter the blood and are carried by it to the inmost recesses of the brain, and act there injuriously upon the exquisitely delicate structures." Morphin thus carried by the blood is laid up in the various organs and tissues of the body and causes that indescribable suffering of the nervous system which is attested by every drug addict. These unfortunate cases not only need absolute freedom from the drug by elimination, but they need sympathy. Elimination of the drug through the bowels, kidneys and skin

is the only scientific method, and when effected the relief of the patient is certain.

SOME MORE TRUTH ABOUT ALCOHOL.

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In an article published recently in the West Virginia Medical Journal comment is made upon the favorable effect of alcohol in a number of cases of diphtheria occurring in the practice of a very noted pediatricist of national fame, a good man. But I am sorry to say he does not give us the whole story. He fails to explain just how this good result has been brought about, thus leaving open opportunity for the thought that they might have recovered without it, or might have done equally well under the influence of some other drug. Real progress in therapeutics, or indeed in any science must come through the knowledge of the whys and wherefores.

If you ask the average physician why he prescribes alcohol for his patients, he will tell you that he gives it for the stimulating effect. Now, in consideration of the indisputable fact that alcohol has been scientifically proven to be a depressant from start to finish, one may readily understand how much harm may result from giving to a sick person in need of a stimulant a drug having directly the opposite physiological action.

Some years ago physiologists taught that narcotics were drugs having stimulating properties when taken in small doses, but were depressants when taken in large doses. Just at what point stimulation ceased and depression began they failed to elucidate for us. In hospital work one has opportunity to see many accident cases in which over-zealous friends have given the patient alcohol with the best intentions, but with the result of adding to the already existing depression and shock and perhaps causing death.

When a man who has taken a large amount of alcohol is down in the ditch no physician would call his condition that of

stimulation. He has every mark and symptom of depression, and I want to make plain the established but not yet sufficiently appreciated fact that that man's condition has been depression from the first drink to the condition of unconsciousness.

It is well known that alcohol acts first upon the more highly organized or cerebral cells, then upon the next lower, and so on throughout. The first drink of whiskey or other alcoholic, acting first upon the cerebral cells, interferes with function. Even in very small amounts ability to reason is lessened. Experiments carried out along these lines prove conclusively the depressant action on these cells. Larger doses temporarily paralyze the cerebral cells, and at this stage the individual will say and do things that he would not do were he in his normal condition. The cerebral functions being in abeyance, he is now on a par with his friend, the lower animal, which does not possess that reasoning part of the brain. The red nose and face are due to a temporary parietic condition of the vaso-constrictor center in the brain. Again depression.

The next part of the brain to feel the effect of the drug is the cerebellum, which has to do with equilibrium, and the gait becomes unsteady, the man staggers. Next the medulla and spinal cord are under the influence of the drug and he is in the ditch. He is for the time paralyzed. The increase in pulse rate during the first stage of acute alcoholic intoxication is due to a depressant effect on the pneumogastric nerve, assisted by the dilation of the blood vessels. This phenomenon may have deceived many physicians, leading them to believing it due to stimulation. I believe it possible that alcohol may do good in the case of a lobar pneumonia by its property of vaso-dilatation, but this can be accomplished by the use of nitro-glycerin and other drugs.

Alcohol is a protoplasmic poison; is a foreign substance when introduced into the body; is not a medicine, not a food; and its only proper place is in the grain. No doubt many physicians prescribe it from custom. They have never given the matter much thought. Too many of our text books copy one from the other, and in

this manner many silly customs have been perpetuated. The time is ripe for each one to think for himself and act advisedly.

Selections.

THE TREATMENT OF CEREBRO-SPINAL MENINGITIS.

Dunn, in the American Journal of Diseases of Children for February, says that it is not within the scope of his paper to discuss the general or symptomatic treatment of cerebrospinal meningitis. The only question concerns the specific forms of treatment which may be employed in these diseases.

The value of serotherapy in the epidemic form has been so definitely established that no doubt can now exist that this method of treatment is indicated in all cases in which the disease is due to infection with the diplococcus intracellularis. The method of administering the serum has been widely discussed in recent medical literature. The author calls attention only to one or two facts which are sometimes forgotten. The antimeningitis serum is a specific immune serum, and is only of value in that form of cerebrospinal meningitis which is caused by the diplococcus intracellularis, and is of no value in any of the other forms. The serum is practically of no value when given subcutaneously, but must be injected directly into the spinal canal. The reports have shown that the earlier in the course of the disease the serum is used, the better is the effect; therefore the physician should perform lumbar puncture and be prepared to use the serum as soon as possibility of epidemic meningitis is suspected and cannot be excluded.

The following is a condensation of the method employed in administering the antimeningitis serum:

1. When lumbar puncture is performed in a suspicious case, be prepared to inject the serum. If the cerebrospinal fluid withdrawn is cloudy, make the injection of serum immediately and without waiting for a bacteriologic examination. The next doses of the serum are to be given only if diplococcus intracellularis has been demonstrated.

2. Always withdraw as much cerebrospinal fluid as possible at each puncture and inject full doses of the serum. Thirty cubic centimeters of serum should be injected in every instance in which this quantity of fluid or less has been removed, unless a distinctly abnormal sense of resistance in the spinal canal is encountered after as much serum has been injected as has been removed. When the amount of fluid withdrawn exceeds 30 c.c. introduce a large quantity of serum—up to 45 c.c., or even more—without reference to the quantity of fluid removed, unless abnormal resistance is encountered.

3. In very severe or fulminating cases repeat the injection of serum within the twenty-four-hour period, as soon as the symptoms intensify, or, when the condition remains stationary, after the lapse of the first twelve hours.

4. In cases of average severity make daily injections of full doses for four days. If diplococci persist after the fourth dose, continue the injections until they have disappeared.

5. If the subjective symptoms, including fever and mental impairment, persist after the diplococci have disappeared or after the four doses have been given, and improvement is not progressing, wait four days, if the condition is stationary, and then repeat the four injections. Should the symptoms have become worse before the expiration of this period, the injections should be resumed immediately.

6. In relapse, which is indicated either by reappearance of the diplococci in the cerebrospinal fluid or recrudescence of the symptoms, the four doses at twenty-four-hour intervals are to be repeated and the subsequent treatment is to be conducted as for the original attack.

7. This plan of treatment is to be followed until the patient is free from symptoms, the diplococci disappear from the cerebrospinal fluid or the chronic stage of the disease supervenes. The serum has proved of some benefit in the chronic stages in which the diplococci are still present in the meninges. When the condition of hydrocephalus has been established the injection of serum into the spinal canal promises little. It is possible

that direct intraventricular injections may be of benefit in this condition.

Tuberculous meningitis has no established specific therapy. It is an interesting fact that in almost all of the few cases of reported recovery from this disease early lumbar puncture or repeated lumbar punctures were employed. While it is impossible to establish any possible value in this method of treatment, the disease is so uniformly fatal that the author believes this method of treatment, which does no harm, is worthy of trial. The disease is too rapid in its course to offer any prospect of success from vaccine therapy. He therefore believes that tuberculous meningitis should be treated with early and repeated lumbar puncture.

In pneumococcus and streptococcus meningitis the outcome is very discouraging. In epidemic meningitis the value of serotherapy appeared to depend on the concentration with which the serum could be applied in this disease through direct injection into the spinal canal, while it was without value when given subcutaneously. The antipneumococcus and anti-streptococcus sera have been more or less discredited as effective agents against their respective organisms, but they had only been used by subcutaneous injection. It occurred to the author that, on the basis of analogy with the Flexner serum, these sera might also be of value when injected intradurally, and it was determined to try this method of treatment. The diagnosis cannot be made, however, at the time of the first lumbar puncture, at which time the obtaining of cloudy fluid gives a large balance of probability in favor of the epidemic form. In most of the pneumococcus and all of the streptococcus cases, on account of this balance of probability, the Flexner serum was first injected. In the cases complicating lobar pneumonia, no antipneumococcal serum was at hand. After the examination of the cerebrospinal fluid revealed the true diagnosis, it was necessary to return with a supply of the appropriate serum. In nine of the pneumococcus cases and two of the streptococcus cases the patients died before the appropriate serum could be given. In the three other pneumococcus cases the patients were already moribund when the serum was given, and no favorable effect

was observed. In the four streptococcus cases the patients lived several days after the serum therapy was instituted, and it was thought at this time that the progress of the disease was less rapid than before the use of the serum. In two cases there was apparent a marked diminution of the number of organisms found in the cerebrospinal fluid. There was, however, no convincing proof of good effects.

In view of the fatality of these forms, the author believes that this method of treatment, on the ground of the analogy of epidemic meningitis, is worthy of further trial. The diagnosis should be made as early as possible, and the interval between the diagnostic puncture and the giving of the serum should be brief.

For influenza meningitis there is no specific therapy established. The writer is inclined to advocate early and repeated lumbar punctures on theoretical grounds, as a harmless method of treatment, the possible value of which may be established in the future.

In staphylococcus meningitis the evidence points toward vaccine therapy as theoretically a valuable and practically an effective method of treatment. The known great value of vaccine therapy in staphylococcus infections is a strong theoretical argument in favor of this treatment. In practice cases of recovery from staphylococcus meningitis, under vaccine therapy, in which improvement has followed each injection of the vaccine, have been reported. A homologous vaccine should be employed.

The following table shows the specific methods of treatment which in the opinion of the writer are available in the various forms of cerebrospinal meningitis and which should be more widely tried until further evidence proves or disproves their value:

Form.	Treatment.
Tuberculous.....
.....Early and repeated lumbar puncture
Epidemic.....Antimeningitis serum
Pneumococcus.....Antipneumococcus serum
Streptococcus.....Antistreptococcus serum
Influenza..Early and repeated lumbar puncture
Staphylococcus.....Homologous vaccine

In the presence of a tumor in the right iliac region it is rarely safe to exclude appendicitis from the diagnostic possibilities.—American Journal of Surgery.

THE PROBLEM OF INFECTION IN TUBERCULOUS FAMILIES.

John B. Hawes, 2d M.D., Assistant Visiting Physician, Director Tuberculin Department, Massachusetts General Hospital (Boston Medical and Surgical Journal, August 6, 1914).

In the preface of Dr. Hawes' recently published book on Early Pulmonary Tuberculosis Prof. Richard C. Cabot of Harvard University writes:

"There are plenty of large authoritative books about tuberculosis. There are plenty of small books which are not authoritative. Dr. Hawes has written a book which is small and yet authoritative."

Therein lies the great merit of anything coming from the pen of a man who is devoting his entire time to this important subject. Dr. Hawes says:

It is now a generally accepted fact that a very large amount of tuberculous infection occurs in childhood in the intimate contact of family life. MacCorison and Burns of the North Reading State Sanatorium in Massachusetts, in an article entitled "The Role of Family Clusters in the Prevalence of Pulmonary Tuberculosis," have shown in a striking manner how such family infection occurs and where there is one case of consumption in a family that others will be found on careful examination. Out of 1,300 admissions they found 134 instances of family clusters of three or more. They believe that "the swiftest channel for the spread of this disease and for the furtherance of its activity is through family lines." As far as such infection is concerned, we need accept only the fact that it does not enter into any intricate and detailed study of its exact time and method of invasion.

There are three large groups of consumptives that are the chief factors in family infection. The first is a class of cases large or small, depending on the nature of the community and the standard of anti-tuberculosis work therein. This class consists of the undiscovered consumptive. Richard Cabot has said that every case of typhoid fever should be looked upon as a disgrace to the community in which it exists. I feel still more strongly that the discovery of a patient with advanced consumption who must have been distribut-

ing death and disease for months if not for years prior to his discovery is a terrible disgrace not only to the medical profession but to the community at large. One of the most encouraging signs of progress is that such cases are not so common as they were and that the public is more alive to their danger. As a factor in family infection they are bound to prove a constantly diminishing one.

The second class comprises those known cases of consumption living in their homes, under more or less adequate supervision. Many of these receive little or no real treatment of any kind, but are merely entered on the books or indicated on a map as a black or red-headed pin. Ten years ago when I first became interested in tuberculosis work, I was an ardent and enthusiastic believer in home treatment. It was my privilege to help Dr. Joseph H. Pratt of Boston in his original class and to form the second tuberculosis class in this country. In almost every city in Massachusetts I have described how tuberculosis can be treated with absolute safety at home, and have stated that the intelligent consumptive is no more a danger to those about him than is a man with a wooden leg. I have changed my mind absolutely about all this. It is only in rare instances that I can now justify myself in advising a patient with bacilli in his sputum to remain at home without having had previous training in a sanatorium or elsewhere. In localities where there are inadequate facilities for hospital or sanatorium care treatment in the home is better than nothing. As a substitute for sanatorium treatment, however, I believe that it has no place. A few years ago, when the newer sanatoria in Massachusetts were opened, and as is often the case, many advanced consumptives remained in the institutions but a few days or weeks and then insisted on going home, the late Dr. Arthur T. Cabot, then chairman of our board, said to me: "Hawes, even if we take these advanced cases out of their homes for only a week or for twenty-four hours we are accomplishing something." I believe firmly in the truth of this statement and that this second group of known consumptives who are now allowed to remain in their homes, without having had any sanatorium train-

ing, should and will be like the first class—a small and diminishing one.

This brings us to the third group, discharged sanatorium patients. I believe this to be the one to which we should devote our energies and the one which will show the best results as a reward for our efforts. I cannot but feel there has been much taken for granted as regards this class of patients. Doctors, nurses and social workers have felt that because a patient has been to a sanatorium and has been discharged improved or otherwise, as the case may be, after a short or long stay, he must have learned his lesson and must know how to care for himself and how to protect others. Unfortunately this is not always the case. On account of this feeling nurses and social workers devote their energies to other patients, leaving the discharged sanatorium patient in a position of false security at a most vital time when a few words of caution and advice would help him to keep well and at all events warn him against infecting others.

Some time in the future our aims in Massachusetts are to have a trained social worker in each of our institutions. It will be the duty of such a person to become acquainted with the patients, devoting her attention especially to those about to leave, finding out their plans for the future and preparing the way for them. In addition to this, instead of the one field worker which we now have, we hope to have one or more for each institution. It will never be our plan by any such arrangement as this to supplant or discourage local efforts. This problem is purely a local one. The fact that a patient has gone to a state sanatorium must in no way remove the responsibility of his city or town concerning the care of his family, examination of its members, cleaning and fumigating of his house or tenement and supervision of the patient on his return. Our work on behalf of the state will be to direct and encourage such local work.

In concluding his excellent paper Dr. Hawes summarizes the subject as follows:

1. Tuberculous infection takes place chiefly in childhood years in the intimate contact of family life.

2. There are three classes of consumptives which are the chief sources of family infection, the unknown case, the known

case treated in his own home, and the returned sanatorium or hospital patient.

3. For reasons given above the last class of returned sanatorium patients is the most important one and best repays our efforts.

4. The responsibility of the state toward its patients does not end when the patient is discharged, nor does the responsibility of the municipality end when the patient leaves for a state sanatorium.

5. Co-operation between state and local forces must be constantly striven for. Tuberculosis is primarily a local problem. The state may well direct and advise, but not replace local work.

6. Our results in Massachusetts with what little machinery we yet have, as based on these 600 discharged patients, shows that much can be accomplished in preventing family infection in the manner above described.

F. LeM. H.

SCIENTIFIC MEDICINE VERSUS QUACKERY.

W. J. Robinson, M.D., New York.

* * * *

Regular medicine is not what it was a hundred or even fifty years ago. We have broken the chains of authority; we no longer follow blindly the dicta of leaders; we investigate and analyze all statements regardless from what source they may come; heterodox opinions are now given space in almost all our journals; and what is of the utmost importance, in the profession itself there are thinking and fearless critics who are not afraid to point out our weaknesses, to ridicule our foibles and to guide us to the right path. And let us remember that all the accessory aids which are required for the progress of medicine—the microscope, the bacteriologic laboratory, the physiologic laboratory, the chemical laboratory, all the physical instruments of precision—are in the hands of the regular profession, and not in the hands of the quacks.

And let us further remember that every discovery of any importance within the past half or three-quarters of a century—*anesthesia, antisepsis and asepsis, diphtheria antitoxin, the X-ray, Finsen light,*

radium, antimentingitis serum, the role of the mosquito in the transmission of malaria and yellow fever (a discovery which alone is worth billions of dollars to the human race), the isolation of the active principle of the suprarenal gland, the introduction of cystoscopy, the discovery of the tubercle bacillus, the gonococcus, the spirochaeta pallida, the Wassermann reaction, Ehrlich's "606," in short, every discovery of importance either in sanitation, prophylaxis, medical and surgical treatment or in diagnosis of disease—has come from the hands of the regular medical profession or those directly connected with it.

Lastly, let us also remember that the requirements for entering upon a medical career are becoming higher and stricter, the preliminary education is of a higher character and the course itself is more extensive and better in every respect.

Nil desperandum. The future of medicine is in the hands of the regular medical profession, and we are tolerant enough to take in everybody who is sincerely desirous of practicing scientific medicine, even if he happened to graduate from a sectarian college. But we do not want ignorant and presumptuous quacks. For the sake of the people we must keep them out.

In concluding this general survey I will now give you a summary of what I have said:

Summary and Points of Emphasis.

1. The human body is a very complex and very delicate organism. To understand its normal mechanism (its physiology) and its abnormal derangements (its pathology or disease) requires years of theoretical study and practical experience.

2. The public is not capable of judging as to who is and who is not a competent physician any more than it is capable of judging as to who is and who is not a good steamship captain, a good electrician, a good chemist, a good engineer, a good astronomer, a good mathematician. Only competent boards from the respective professions or trades can decide that more or less satisfactorily.

3. Without laws and regulations for the practice of medicine, the country would be overrun by ignorant conscienceless quacks, deceiving, cheating and preying upon the public, and the damage to

the people's health and the increase in mortality would be something fearful.

4. To talk of free competition in the practice of medicine shows a defective mentality. Medicine is not a trade like selling shoes or clothes. When a person has had his health ruined or has been driven to an untimely grave, then it is no consolation to him or to his relatives to know that the doctor who treated him was an ignorant unlicensed quack. It is too late. The quack should not be given the opportunity to succumb in the survival-of-the-fittest struggle after he has done incalculable damage; he should be prohibited from entering into the struggle; he should not be punished after his misdeeds, he should be prevented from committing any.

5. The laws that we demand for the regulation of medicine are, most emphatically, not for the protection of the medical profession, but for the protection of the people. We are willing to admit anybody to the practice of medicine who can give proof that he is more or less competent to perform the delicate duties of a physician.

6. That there is incompetence and ignorance in the medical profession is admitted, but the remedy for that is not letting down the bars for all comers to enter, but raising them still higher, so that eventually only really competent and intelligent men and women may be entrusted with the heavy responsibilities of healing the sick.

7. The regular medical profession is aware of its shortcomings, but it is honestly trying to eliminate them by raising the standard of preliminary education, by enlarging the curriculum, by increasing the number of years required for completing the medical course, by extending the laboratory facilities, by recommending hospital experience as an obligatory part of medical study; in short, it is doing everything in its power to raise the standard of the physician of the future. While as to the quack, all he demands is the abolition of all criteria, of all standards, of all educational requirements.

8. The statement that drugs are absolutely useless, and never are of any benefit in the treatment of disease, proceeds from ignoramuses who have not used and are not familiar with the action of drugs.

I make the positive statement that there is not at the present time a single physician of any eminence who denies the value of drugs. He may object to the abuse of drugs, to too great reliance on them, but not to their proper use. And there is not a single physician who does not use some drugs occasionally. And what's more, the fakers who publicly decry the use of drugs as poisons use some few drugs in their practice, in secret. But, of course, the drugs they use are "all right," because they are "mild and harmless"—so they say.

9. The idea conveyed by quacks, physical culturists, naturopathic (so-called) doctors, osteopaths and that ilk, that the scientific medical profession treats by the means of drugs only, is utterly false. There is not an agency in the world, material or immaterial, which the regular profession does not use in the treatment of disease. As to diet, it is an important subject of study with us, and the real advances in the science of dietetics and the nutritional value of foods are made by the medical profession and the physiologists and chemists who work hand in hand with it.

10. No conciliatory attitude is to be adopted with the Christian scientists, mental healers, absent-treatment quacks, osteopaths, chiropractics, etc. The greater part of their claims is impudent fraud, while the grain of truth in some of the cults is incorporated in the regular system of medicine.

11. As to various quack institutes, consumption and cancer specialists, lost-manhoo professors, etc., etc., they should be treated as ordinary bunco-steerers or highway robbers are. They are worse than common thieves. They deserve no consideration, as they show none toward suffering humanity. Unless agreeing to give up their practice absolutely, they should be driven out of the country or put behind prison bars.

12. There is no excuse or reason—except a selfish one—for the existence of different "schools" of medicine. The fundamental subjects—nine-tenths of all studies—are the same in all schools. On the subject of treatment, the schools are coming closer together, and the time is near when there will be only one school of medicine,

just as now there is only one school of chemistry, one school of engineering, one school of physics, one school of astronomy. And that school will be the school of regular scientific medicine.—American Journal Clinical Medicine.

IS ANTITYPHOID VACCINATION HARMLESS?

Ernest Zueblin, M.D.,

Professor of Medicine in the University of Maryland, Baltimore, Md.

A review of the literature of the past few years reveals splendid achievements in the prophylactic fight against typhoid fever, and the high death rate justifies all efforts to stamp out such a harmful disease. The problem of immunization against typhoid fever, once restricted to laboratory and experimental research, long ago became an important practical weapon in the fight against the bacillus of Eberth. It has been applied with great success in the domestic and colonial armies.

The method, of course, did not fail to encourage its introduction as a successful means of protection among physicians, nurses, medical students and all persons exposed to the dangers of typhoid infection. Different Boards of Health successfully investigated the problem, so the method proclaimed as a harmless one is recommended for more extensive application. It is evident that with the favorable impression prevailing we may forget the opinion expressed in foreign circles about the untoward effects observed in cases treated with antityphoid vaccination. As in every new movement several years of careful observation are required before we can fully judge the situation, so also in this instance and as a contribution to the consequences of the prophylactic treatment against typhoid bacilli the following observation may be mentioned:

The case was observed by Dr. F. M. Sloane at Eudowood, to whom I am indebted for the interesting data. The patient is 30 years of age, a militia lieutenant at the Maryland encampment, and enjoyed good health until June, 1912, when he had to submit to typhoid vaccination. Three days after the third dose the patient started a violent reaction with high temperature, was confined to bed for three weeks, troubled with drenching sweats, lost 20 pounds,

had slight cough and expectoration in the morning and appetite was poor. These manifestations were attributed to the typhoid vaccine, but the persistence of the temperature could not be explained for such a long period as being due to typhoid, so a colleague* was called in and he found active pulmonary tuberculosis. Patient went to Eudowood Sanitarium September 4, 1912. At first he stood the air treatment very badly. September 14 a physical examination revealed: In front: right apex: retraction down to third interspace, with harsh bronchial breathing and whispered voice as far as middle right lobe, over left side, a few crepitant rales, over right lung, in back harsh breathing, crepitant rales and whispered sounds, left lung in the back a few crepitant rales and harsh breathing.

At first the patient's condition was very alarming, so an artificial pneumothorax was performed January 25, 1913. The sputum examination April 2, 1913, showed a Gaffke VI and until September 19, 1913, a Gaffke II. After the pneumothorax treatment the expectoration ceased completely. The temperature when admitted to the hospital was 101° with exacerbations in the afternoon until October, 1912. After the pneumothorax treatment the temperature remained below 99° and stayed so, a few occasional colds excepted. The general and local condition has improved considerably and he is able to work on the farm for 10 hours daily.

As no tubercular history could be obtained, the question arises whether tubercular infection resulted as a consequence of the antityphoid vaccination or whether the latter treatment was a sufficient cause of the reactivation of an old, quiescent lesion. The first possibility is not very probable, since the physical findings, the retraction of the right apex, the harsh breathing, whispered voice speak in favor of an old process, which must previously have escaped recognition.

This single fact, gathered from among thousands of successful typhoid vaccinations, must seem surprising, but in going over the literature of the past few years there are a few less optimistic opinions and failures recorded. It is the general opinion that besides the necessary reaction following the antityphoid vaccination these manifestations are of no further consequence for the individual. H. Mery mentions a transient cardiac relapse observed during the vaccine therapy of typhoid fever; Socquee and Chevrel, though in favor of the vaccine treatment, leave some doubt as to its inoffensiveness. J. Louis and E. Combe, however, caution

*Dr. Gordon Wilson (Baltimore).

against the indiscriminate use of the treatment, where any suspicion of a dormant or active pulmonary tuberculosis exists. From their experience with Vincent's polyvalent vaccine they maintain that antityphoid vaccine is able to cause a similar effect as a tuberculin injection. Recently in the Societe de Medecine Legale the question of compulsory antityphoid vaccination in the French Army was discussed with the statement that, notwithstanding the careful elimination of unhealthy recruits of about 7,000 or 8,000 per year, the possibility could not be discarded that some of the recruits dismissed from the army on account of threatened or incipient tuberculosis, who previously had been vaccinated against typhoid, might enter suit against the state, as being convinced that the antityphoid vaccination had caused their pulmonary disease. Although such conditions may not be observed frequently, the law for the compulsory antityphoid vaccination for the army was changed so that the administration of the vaccine is left to the individual impression of the army surgeon in the given instance, whether or not to vaccinate. Also some opposition was encountered with regard to the compulsory protective treatment among the nurses in Paris, based upon the report of the death of two sisters after antityphoid treatment. The recent charges that the vaccine was the cause of one death and the illness of two children who acquired typhoid fever after vaccination have been investigated by Dr. S. S. Goldwater, who reported that the imputations were not based upon the real facts.

Graniux is against compulsory typhoid vaccination, and he mentions the possibility that physicians and health officers may in vaccinating their patients neglect the improvement of defective hygienic conditions. Statistics in armies show that besides prophylactic vaccination the strict observation of sanitary conditions is able to reduce the casualty and morbidity in typhoid to as low level as is usually attributed to the vaccination alone.

Personally, and based upon careful clinical examination of my hospital material (University of Maryland Hospital), it seems to me that incipient tubercular lesions are easily overlooked, that many cases sent to our institution under the

diagnosis of typhoid with pulmonary signs are not due to Eberth infection, but to a fresh or an activated old tubercular process. On the other hand, not infrequently I have seen tubercular changes of the lungs become active in the course of a protracted typhoid infection. Meyer also in his statistics has noted frequency of pulmonary processes occurring in the course of an Eberth infection.

So far there have been no experiments carried out as to how tubercular infection may be influenced by typhoid invasion, but experiments of that kind are on the way at our institution. Further it would be desirable to control the cases with regard to existing pulmonary tuberculosis or with a disposition to such manifestations, previous to, during and after typhoid vaccination. Should it in the course of time be possible to furnish more substantial proof for such a relation existing between these two diseases (the solution of which question, of course, could be greatly helped by the collaboration of the medical profession engaged in sanatoria, asylums, hospitals, etc.), an important question for the general welfare would be answered. It also would be advisable to admit among the contraindications to typhoid vaccination besides old age, cachectic chronic conditions, arterio-sclerosis, cardiac and renal diseases, as endorsed by Hachtel and Stoner, cases of incipient tuberculosis. In making such restrictions, when we consider the extreme frequency of tuberculosis, if a careful physical examination is made, a great number of individuals would miss the advantages of the preventive typhoid immunization, provided that the same doses of vaccine as for healthy persons is given. In typhoid cases, particularly in protracted, relapsing forms of that disease, the feeding with more calories has to be recommended, since experience has shown that with the proper selection of fluid food of a higher caloric value the patients may overcome the injuries of the disease in a shorter period without increase of the danger arising from complications. Later should careful physical examination of the chest reveal a reactivated lesion, then diet, exercise and all hygienic rules have to be observed and enforced.

The present paper is far from minimizing the undoubted merits of a method

which properly carried out has not only saved millions of expenses by loss of wages and time, but it has also preserved to a great extent the lives of our soldiers from disease. Every new method enthusiastically endorsed is not absolutely exempt from inconveniences, which will become more apparent in the course of time. In our aim to preserve human life from unnecessary suffering we try to obtain a method which is most effective but not injurious.—*American Medicine*, July, 1914.

SUCCESSFUL OFFICE PRACTICE.

S. D. Sauer, Ogilvie, Minn.

I think I am making a conservative estimate when I venture the statement that over 50 per cent of the general practitioners in the medical profession are unsuccessful in the attainment of a good office practice, which should give satisfaction to themselves and their patients, and bring a good return for service rendered. The busy doctor, as a rule, handles a large practice and gives very little time, if any, to his office work. Yet this is a part of his work that ought not to be neglected, for proportionately it is far more advantageous, both to patient and to doctor, than any other branch.

To be a good office practitioner the doctor must be painstaking in his diagnosis. Here, more than anywhere, it is being faithful in the little things that count, and especially detailed care in examination, in diagnosis, and in the selection of indicated remedies. Whatever may be justified in the exigency of bedside practice, hurried, slipshod methods of examination do not, never have paid and never will pay in office work. Be careful of the little things, for these make up the big things, and the big things fall into line of themselves. Give me the careful doctor who will not slight a single patient, no matter how many are waiting in the outside office, or how hurried he himself may be. The conscientious office practitioner will give nothing but his best under all circumstances. Better treat a dozen patients thoroughly than a score in slipshod fashion. If you cannot make a diagnosis the first time, better to tell the patient so, and ask him to let

you have a little time to think the case over; nothing is ever lost by this plan.

Another thing that stands in the way of many doctors becoming successful office practitioners is that they are too narrow and hidebound in their views concerning the many drugless and physiologic methods of therapy. These all have their place in medicine, and are real aids in the armamentarium of the ideal office practitioner, no matter what school he may hail from. The day for tabooing these modes of treatment is forever past and gone. They can no longer be classed as fads or isms.

A doctor can, if he be up-to-date in his methods, make considerably more money in a shorter time, staying in his office, than he can by driving over country roads. Too many doctors are altogether too slow and unambitious in taking up the several features which make such a practice successful. Nothing, however, that is of any value is attained without some effort and sacrifice, and it will pay any one who tries it out.—*Medical Brief*.

A SURGEON'S PRAYER.

Doubtless many an operation is prefaced by sincere prayers for help that none but the operators know of. The following brief but remarkably well expressed invocation, taken from a recent issue of the *Journal of the American Medical Association*, shows how one surgeon feels his needs and shortcomings:

"Oh, Lord, now that this day is over, grant me the gift of sleep. Watch over my ligatures and may the peritoneum do its duty. Let me not be envious of the success of the men who work harder than I do. Endow me with humility so that I may change my methods for better ones. May my mistakes give me more concern than my successes. And, Oh Lord, keep my conscience awake even when my intellect nods. Lead me not into the temptation of fee-splitting. Permit me to rise early, oh Lord, making one less mistake each day. Deliver me from the too-long-delayed operation, but grant me strength to do my duty no matter what my mortality statistics may be. For all these and the chief blessing of work, I humbly ask. Amen."—L. M. K.

A MOUTH WASH IN FEVER CASES.

In all fever cases where the tongue is coated, the lips dry and cracked and the teeth covered with sordes, the use of some cooling and soothing mouth wash would seem to be indicated.

Glyco-thymoline in a 25% solution with cold water fills this want perfectly. Its frequent use is grateful to the patient and at the same time a great factor in relieving the condition.

The West Virginia Medical Journal

S. L. JEPSON, A.M., Sc.D., M.D., *Editor.*

L. D. WILSON, A.M., M.D., *Assistant Editor.*

Wheeling, W. Va., November, 1914.

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All articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over 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.

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It will be 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 to the editor and printer.

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Editorial

MEDICAL IMPOSTERS.

As we have before stated in these columns, nearly every county in this state has from one to a half dozen of such men or women holding themselves out for medical practice. Not a few of these have been examined by the State Board of Health and failed to make the required grade necessary to procure a certificate entitling them to practice medicine. One man of whom we know made three failures before the Board. Others of these illegal practitioners are rank fakirs, having no knowledge whatever of medicine, having never even attended a medical school of any sort. Others are traveling vendors of quack remedies, cancer paste, etc. Here is a sample of an advertising card circulated freely by two of these imposters that is so unique in its construction that we present it to our readers:

WE ANNOUNCE TO THE WORLD
THAT CANCER CAN NOW
BE CURED IN 14 DAYS.

Without the use of the knife or Arsenic
Paste.

Costs nothing to try.

If we fail to cure we will fail to get your
money, because we will positively not
take pay until Cancer is removed.

FAIR, IS IT NOT? SEE ANY FAKE
ABOUT THAT?

We have got the remedy and we know it.
TWO THINGS WE DEAL IN—CAN-
CER AND MONEY.

We can relieve you of both. You will
have some money left, but no cancer.

Dr. M. ——— and Dr. S. ———

The men who conceived and executed this advertisement are not without talent, which, however, should be employed in writing local items for a newspaper or ads for a circus side-show. We get many complaints as to these unlicensed practitioners, the writers seemingly believing that the State Board of Health or its executive officer has full authority and power to put these persons out of business.

Here is a sample of the complaints that come to the office of the Secretary of the State Board of Health:

"Dear Sir:—

* * * I will say that D. Practiced medicine here for almost a year and beet all the people he could and then left. He boarded with us for a while and run a store acct. to the amount of \$30.59 and he did not pay it nor his board bill either. while he was here one of my boys hed to be operated on for Necrocious of the bone, and H. ask to go along and help with the operation. thinking that the boy might get to come home a little sooner by him being here all the time, so we let him go; the day before the operation he ask the surgeon to let him use the anasthetic, but when it came to a pinch he refused to help. He didnt do a thing in the operation. He dressed the boys leg 21 times and said it was \$1.00 for each time but when we called for a statement he sent his bill for \$48.00 which would be \$27.00 for the operation. We Paid all his expenses during the operation too. He sent us a statement so it overlaped his store acct. and board bill and then left the country without a settlement. He has also borrowed money from some of the people here and never paid it back. One man has his trunk attached and it is laying here in the station. Would like for you to inform us what course to persue to get even with him. He is a rascäl from start to finish."

The above is a good illustration of the character of most of these medical imposters and also of the degree of intelligence of the majority of the people who permit themselves to be imposed upon. A prominent lawyer of the state recently remarked to the writer, "You know the people are not qualified to select their physician." Of course we physicians have long recognized that fact, since we so often see the crowds rushing after men whom we know to be but poorly equipped for the practice of their profession. Still, the State Board of Health considers it to be its duty, so far as possible, to protect the people against the rank imposters who are found in so many parts of the state, and this although the law does not make it a duty of the Board to suppress unlicensed physicians. The Board believes that it is a public health measure of no small importance to put out of business these ignorant practitioners of the healing art, since they not only directly cause death in many cases, but also prolong invalidism by attempting to cure disease of which they know little or nothing and which could be cured if the patients were under the care of intelligent practitioners.

What is the best method of procedure? Unfortunately the law gives such an imperfect definition of the "practice of medicine" that we are unable to do anything with the faith healers, the drugless healers of various kinds, the most flagrant among which are the chiropractors, who "graduate" in two or three months from an alleged school or by a few weeks' correspondence. The Secretary of the State Board, in his efforts to suppress unlicensed physicians, has preferred to operate through county health officers, asking these officials to collect evidence and present it to the prosecuting attorneys of the respective counties. The reason for this course is that when the physicians of a locality in which these fakirs reside are active in their prosecution this activity is charged to jealousy, a charge that has, alas, very frequently considerable weight with grand juries. It is different when the county health officer, who frequently practices in a community at a distance from the fakir's field of operation, is the active agent in the prosecution, in which case jealousy cannot be charged. During

the past 18 months we have succeeded in driving from the state at least five unlicensed practitioners. We here ask the aid of the physicians of the state in this good work. Without their aid the Secretary of the State Board is absolutely helpless, except in cases presented in his immediate neighborhood. With the aid of local physicians operating through the county health officers, as above suggested, we hope that the state may be in time rid of the many medical imposters now preying upon the people, and for this end let us ever pray.

S. L. J.

UNLICENSED PHYSICIANS.

It seems necessary to call attention of the legal practitioners of the State to a decision of the Attorney-General, given at the request of the Secretary of the State Board of Health in October, 1913. Physicians frequently make application to practice medicine in this State before they have received a certificate from the Board as required by law. Some states permit their Board of Examiners to issue temporary licenses. Our law does not permit this. As the Board meets for the purpose of granting licenses but three times a year, licenses can be secured only at these times. These meetings are generally held in April, July and October or November. Now we are asked, "May not Dr. J., who is here, practice as assistant to a licensed physician? This work would, of course, necessitate his seeing and prescribing for patients regularly." To meet this question the Attorney-General was asked this question: "Has an unlicensed physician any legal right to practice under the protection of a licensed practitioner, whether in the office of or located at a distance from the latter?" The opinion, rendered by Judge Morrison, Assistant Attorney-General, was as follows: "I am of the opinion that an unlicensed physician has no legal right to practice medicine and surgery under the protection of a regularly licensed practitioner, either in the same office with him or at any other place."

Physicians will therefore heed this opinion if they would keep out of trouble. Any physician who knowingly attempts to practice in the State without having received a license from the State Board of

Health will forever destroy his chances of receiving a license, for the Board has so decided. A physician desiring to accept a position as contract surgeon to a mine or lumber camp sometimes seeks a license by our reciprocity regulations. These require that he shall have been engaged in practice in another State for at least one year before the date of application for license. It may seem a hardship to keep him out of a good contract, but the Board cannot set aside a State law, and it is useless to try any "side stepping" in such cases. It will not work to the good of any applicant, and if any such applicant engages in practice he simply cuts himself off, as stated above, from the chance of ever receiving a license. Practitioners would do well to circulate this information, as these young men generally come to the State as assistants to those already engaged in contract practice.

S. L. J.

CANCER AND THE RESEARCH LABORATORY.

True it is, as emphasized by Prof. Ewing of Cornell University, that the significance of the cancer problem is a subject which rarely reaches the attention of the layman and is only vaguely appreciated by most physicians.

According to the statistics of the Registrar-General of England, of women living at the age of thirty-five years, one out of nine dies of cancer. While proof is very difficult to obtain in this field, there is a strong and growing impression among surgeons that cancer is steadily increasing, and it is easy to see that the increased tenure of human life which has resulted from recent progress in such matters as the use of diphtheria antitoxin, the hygienic control of the diseases of infancy, the partial suppression of tuberculosis and the general progress of the medical sciences permit an increasing number of persons to live to adult and middle life and thus reach the cancer zone. Therefore, as Prof. Ewing observes, if present factors continue unchanged, an increasing proportion of what is gained by the improved hygiene of infancy and youth will be sacrificed to cancer. The grave question might be raised whether it were not better to die of diphtheria than to enjoy

an uncertain period of adult existence only to meet the ordeal of death by cancer. For, while the alleged sufferings of laboratory animals is deemed a fit topic for exploitation in the newspapers, the poignant agonies of the cancer patient are suppressed and are rare topics of conversation among physicians. One does not find them detailed even in the text-books of medicine. In view of this situation all thoughtful persons may well ask, what is the medical profession doing for cancer?

Certainly this question is adequately and eloquently answered in the elaborate work of Wolf, "Die Lehre von der Krebskrankheit," and quoted freely by Ewing in his paper bearing on this subject.

Many of the greatest minds in medicine have in every age directed their attention to this subject, and that in recent times, since the introduction of the microscope, great progress has been made in the knowledge of the cancer problem, through the labors of Virchow, Lebert, Waldeyer, His, Remak, Cohnheim, Gaylord and many others. Another fact stands prominent in this history, that with the great advances in the knowledge of the cancer problem, the power to control this disease has made practically no essential progress. Today, as in the Middle Ages, early and complete removal by the knife is the weapon of defense against this disease.

It is known to every surgeon that the operative treatment of cancer is unsatisfactory. Too often the growth is inoperable when first discovered or when receiving operation, and we are grieved and depressed at the discovery of its early recurrence, for only about one-fourth of all operative cases are cured. We are obliged to confess that the true nature of this mysterious and dreaded disease has not been understood, no germ has been discovered which could be held responsible for it, and all heralded discoveries have proved illusory.

Perhaps the most important new facts may be summed up in words of Wachenheim. Investigators bethought themselves to study animals having tumors that resemble human cancer in structure and malignancy. In this respect mice have furnished valuable investigating material, and even in these few years have demonstrated certain valuable facts, es-

pecially that cancer is transplantable, but not infectious in the ordinary sense, like tuberculosis.

There has also been achieved an immunization of mice against the recurrence of cancer after operation.

The future, too, as the past, will witness unremitting toil in the various laboratories, and when a conclusion has been reached or a definite result achieved it will be welcomed by those who are on the firing line with a "well done." Thank God, through the munificence of a few interested philanthropists, this cancer fight has become as broad as the nation itself, and the struggle will not cease until this accursed foe to humanity has been everlastingly vanquished. F. LeM. H.

PUBLIC HEALTH IN INDIANA.

Health administration in Indiana has for a long time past been vigorous and energetic; as it is in many of our other states. It has also been unique, peculiarly up-to-date and popular in its methods of attracting attention and affording instruction. The latest activity of the health forces of the state is thoroughly characteristic. Governor Ralston has issued a proclamation designating Friday, October 2, 1914, as Disease Prevention Day. He urges cities and towns throughout the state to make special arrangements for appropriate exercises, emphasizing the importance of public health, and the joint responsibility of all citizens therefor in order to inspire in them a desire to co-operate in all sane efforts for the prevention of physical diseases. The state board of health has prepared a special bulletin containing a copy of the governor's proclamation and suggestions for the celebration of Disease Prevention Day in the towns of Indiana. Some of these suggestions are terse and apt and deserve to be circulated.

"Get up a public-health procession. In cities the mayor should head the procession; in towns the town board of trustees, the town board of health under the law, should lead. There should be a brass band; drums and trumpets should be used; music is necessary for a procession; school girls dressed in white bearing banners with health mottoes, boys in white or otherwise neatly dressed carrying banners with health mottoes. Where there are high schools, the pupils should try to present some original idea representing the importance of disease prevention."

The advice to business men is equally emphatic.

"Business men should be represented in the procession. The most important business before the business man today is the business of

public health. Retail stores should dress their windows in articles that deal in, belong to or hint at cleanliness and health. Hardware stores can show garbage cans, garden hose, fly traps and rat traps. Dry goods merchants can show a pile of towels and soap arranged around a bath tub. Grocers can make pure food displays and so can restaurants."

The advice to individual citizens is equally direct, so that no one can feel that he is being omitted or has no part in the celebration.

"Let every home, each front yard and back yard, the rears of stores and all streets and alleys be made specially clean for Disease Prevention Day. Let each person wear clean clothes on that day, take a bath, put on a clean shirt, clean socks and clean collar and get his shoes shined. Get a hair cut and a shave, wash your hands and face, clean your finger nails and don't spit on the sidewalks. Let everybody be clean and talk cleanliness and health."

Suggested mottoes for Disease Prevention Day are also contained in the bulletin. Some of these are:

"The only good fly is the dead fly."

"Well-kept alleys pay better dividends than well-kept cemeteries."

"Public health is public wealth."

"Bat the rat and swat the fly."

"Don't take patent medicines."

"All the time is clean-up time."

"Dust, dirt, dampness, darkness, drink will always kill."

That the state board of health does not hesitate to follow its own suggestions is shown by the public-health side-show recently given at the Indiana State Fair. A large circus tent was installed on the fair grounds with banners depicting health topics displayed in front after the manner of the time-honored side-show. The secretary of the State Association for the Study and Prevention of Tuberculosis acted as barker for the show and, through a megaphone, announced to the gathered crowds the attractions to be found within the tent. The Indianapolis newsboys' band gave serenades at intervals in front to attract the people. Inside the tent lectures illustrated with lantern-slides and moving pictures, exhibits, charts and demonstrations on various health topics all served to emphasize the importance and value of health. It is estimated that over twenty thousand people passed through the tent during the State Fair. This sort of a campaign will certainly have a marked result on public sentiment and eventually on permanent health conditions in the state. The people of Indiana are to be congratulated on having a state board of health that is active and progressive, and especially on having a broad-minded, intelligent and public-spirited governor who is sufficiently interested in the welfare of his people to place himself at the head of the public-health movement in the state.

PRESIDENT WILSON APPROVES OF TUBERCULOSIS DAY.

Expresses Sympathy With National Movement and Speaks of Feasibility of Preventing Disease.

Washington, Oct. 29.—President Wilson expresses his approval of the Fifth National Tuberculosis Day Movement during the week of November 29th and also of the work of the National Association for the Study and Prevention of Tuberculosis in a letter to Dr. George M. Kober, the president of that body, made public today. He says, among other things:

"I know that I need not assure you of my very profound interest in and sympathy with the work of the National Association for the Study and Prevention of Tuberculosis, and I am delighted to know that you feel encouraged by the results of its efforts. I sincerely hope that November 29th, the day which you have designated as Tuberculosis Day, will result in awakening the people of the United States still further not only to the necessity but to the perfect feasibility of arresting and preventing this terrible disease."

A number of governors are issuing proclamations on the Tuberculosis Day campaign, calling on the churches and schools to unite during the week of November 29th in an educational campaign against tuberculosis. The movement is not for the purpose of raising funds, but simply to bring to the people all over the country the essential facts with reference to the treatment and prevention of tuberculosis.

Clergymen and others may secure literature for the preparation of addresses and for general distribution from their local anti-tuberculosis societies or from the office of the National Association for the Study and Prevention of Tuberculosis, 105 East Twenty-second street, New York.

Charleston, W. Va., Oct. 12.—Unusual interest is being shown in the Red Cross Christmas Seal campaign this year. Headquarters have already been established in the Union Building, orders being received daily. The interest displayed so early in the year is quite remarkable, as orders have already been received from 26 towns.

The seal this year resembles more closely that of 1912, but in brighter colors and hence more attractive. Jovial old Santa Claus is again resplendent, the seal itself being so pretty and useful that it is well worth the penny invested without the thought which is foremost in the mind of the purchaser that 9/10 of the cent is spent on the tubercular poor of West Virginia.

Last year 574,800 seals were sold in our state. After deducting the percentage which goes to the American Red Cross Society and the expense of conducting the sale throughout the state \$4,632.42 was spent in tuberculosis work. This year the sales should be at least doubled. Will you not do your part now by

helping them at headquarters to find agents for the sale of the seals in your town or county?

State News

IN MEMORIAM.

Dr. William Holmes Yeakley was the oldest child of Martin P. and Martha Ann Yeakley and was born near Winchester, Va., June 14th, 1873. He received his early education in Winchester and was graduated from the Richmond College of Medicine in 1899. The same year he was made resident physician of the Western State Hospital for the Insane at Staunton. While here he met and afterwards married Eleanor Straith Ransom, daughter of Captain Thomas Ransom. Mrs. Yeakley and one son, William Holmes, Jr., survive him. He located at Davis, W. Va., in June, 1902, moved to Keyser in 1907, where he was actively engaged in the practice of his profession until the time of his death.

It is usual to write of our departed brethren as having had lovable qualities, many friends, intuition, charitable impulses, large practice, etc. These are all very fine and Dr. Yeakley had them, some of them to a superlative degree. Nevertheless they are fairly common. Every good sized town has one or more physicians of whom these things can be said. The subject of this sketch had one quality which too few of us possess—a genuine love for medical organization. Immediately after graduation he became a member of the Virginia Medical Society.

Soon after he came to West Virginia he became president of the Barbour-Randolph-Tucker Medical Society. In September, 1907, he became secretary of the Grant-Hampshire-Hardy-Mineral Society, which position he held at the time of his death.

With no reflection on those who held this office before he did, it can be said that he was the life of the society, and that under him it became one of the most active in the State Association. This was by no means an easy matter, the four counties being separated by mountain ranges, lying on different railways; indeed, for most of his official life two of the counties had no railway. Only those who have held the post of county secretary can know of the difficulties encountered. To succeed one must have a genuine love for the profession; must be able to subordinate self whenever the interests of the society demand it; must be blind to slights, intended and unintended.

On one occasion, to stimulate interest, a meeting was held in the extreme end of his district. This involved a trip overland of forty odd miles. Imagine his feelings when not one of the local men attended the meeting. How many of us could have stood up under these difficulties and gone ahead and made of his society one of the very first in the association?

Endeavoring to stimulate further interest among the members, he established and edited

the Potomac Bulletin and founded the Keyser Academy of Medicine.

Dr. Yeakley served for years as Councilor of the State Association.

In a letter received by the presiding officer while the Bluefield meeting was in session Dr. Yeakley said: "Owing to my recent serious illness I cannot possibly be with you, but I want to assure you of my good will and hope you will have the best meeting in the history of the association. I had hoped to serve as a member of the House of Delegates, and regret exceedingly my inability to be there."

In April a splinter from a rake handle entered his finger, giving rise to a very serious infection. For some time his life was despaired of. When the infection subsided it was seen that his heart was seriously crippled. In June he went to Staunton, intending to spend some time camping on a small stream near that city. On June 25th, 1914, he was seated in front of his tent, while his wife and sister-in-law were in bathing. They got beyond their depth; the doctor rushed to their rescue and succeeded in saving them. The effort proved too much for an enfeebled heart and he sank without a struggle. Whatever we may see in his professional or private life to admire or to criticize, we can have nothing but unstinted praise for his life as an active member of the West Virginia State Medical Association.

Few, very few, of our number equalled him, perhaps none surpassed him.

(Signed) R. E. VENNING,
W. M. BABB,
R. W. LOVE,
A. P. BUTT,
Committee.

Dr. Staunton of Millcreek recently presented to the Kanawha Medical Society a patient who had been bitten 45 days previously by a rattlesnake. The doctor gave an interesting account of the case. The patient is about well.

Dr. Wade H. St. Clair announces to the profession that he is limiting his practice to general surgery and gynecology. He has established his office at the Bluefield Sanitarium.

Dr. O. D. Barker of Parkersburg, who has spent some months in Baltimore recently in post-graduate work, has established himself at the corner of Fifth and Market streets and announces that his practice is limited to diseases of the genito-urinary system.

We are glad to announce that our old friend and former fellow-member of the State Association, Dr. J. N. Alley, who has for some years been superintendent of the government sanitarium for tuberculosis at Lapwai, Idaho, has recently been elected president of the State Medical Association. He will preside over a meeting of the state associations of Idaho, Oregon and Washington next year. The doctor is worthy of the honor, and we extend our congratulations.

Removals—Dr. K. M. Jarrell from Clearcreek to Beckley; Dr. W. H. Talbott from Rio to Keyser; Dr. S. Trimble from Orlando to Burnsville; Dr. W. R. Jobson from Fairmont to Raleigh, N. C.; Dr. S. A. Draper from Logan to Huntington.

* * * *

Ohio County Medical Society has recently been honored by the presence of Dr. Bainbridge of New York and Dr. Rosenbloom of Pittsburgh. The former gave an illuminating lecture on "Cancer," with many stereopticon pictures of tumors, vegetable and animal, and the latter a lecture on "Infection and Immunity."

* * * *

On the occasion of the recent examination held in Clarksburg by a committee of the State Board of Health the president and secretary of that body by invitation read papers to the Harrison county physicians assembled at St. Mary's Hospital. The subject of Dr. Jepson's address was "The Benefits and Obligations of Medical Societies," and that of Dr. Golden's was "How to Discuss the Public Health Problem With the Public." A large number of physicians were present, who greatly enjoyed the liberal luncheon served before the reading of the papers.

Society Proceedings

Barbour-Randolph-Tucker Medical Society.
Editor West Virginia Medical Journal:

The above society held its regular October meeting in Elkins on the second, having present Drs. Murphy, Hoff, Gruber, McIntosh, Sturdivant, Golden, Lawson, Daniels, Moore, Neal, Ladwig and Irons.

Dr. Murphy, the president, presided.

The secretary reported 40 paid up members on the roll, with two new members to be received at the January meeting, 1915.

The treasurer's report showed the society to be in a good condition financially.

Under remarks for the good of the society, The Irregular Practitioner and his menace both to the physician and the public was discussed. This pest is found in almost every community and seems to flourish alongside of a regular, educated, competent physician, where he is more of an annoyance than competitor, but is a real menace to the community in that he often essays to treat disease of which he knows little or nothing, and frequently robs the ignorant patient of both money and health, and not infrequently of life itself. The strongest thing about the whole business is that otherwise intelligent people will forsake a well educated, accomplished physician for one of these illiterate quacks. This morbid craving of the people must be now what it was when it caused P. T. Barnum, the great showman, after years of close observation, to proclaim, "The American people like to be humbugged," and it seems the more they get of it the better they like it.

Philippi was selected as the place for the

next regular meeting, which will be the first week in January, 1915.

The annual election of officers resulted as follows:

President, J. L. Miller, Thomas; First Vice President, A. H. Woodford, Belington; Second Vice President, W. D. Miller, Weaver; Secretary-Treasurer, J. C. Irons, Wildell; Censor for Randolph county, L. W. Talbott, Elkins (the Censors for Barbour and Tucker counties are hold-overs, all being elected for three years, the term of one expiring each year).

Dr. B. B. Sturdivant of Harding, W. Va., read a most excellent and well prepared paper upon Pellagra, which was discussed by Drs. Lawson, Golden and Murphy. So far as we know only one case has ever been reported from West Virginia. Dr. Murphy holds to the opinion, founded upon the articles appearing in the A. M. A. Journal, that this disease is contagious or communicable, while others think it is rather more endemic than contagious.

"Atrophic Rhinitis" was presented by Dr. E. R. McIntosh in a well prepared paper. Dr. McIntosh said this is a quite common trouble, and more frequently diagnosed by the general practitioner when we have the foetid form, with foul discharge described as ozoena. This disease requires local, constitutional and specific treatment, and may take months to cure, and if neglected may result in serious destructive conditions.

He recommends sprays of hydrogen peroxide or permanganate of potash in solution 5i to Oj.

On motion of Dr. Golden, the society expressed its gratification that Drs. Murphy and Perry have recovered from their recent dangerous illness, and also expressed its sympathy to Dr. Conwell in his present serious illness, with the hope that he may have a speedy recovery. The Secretary was instructed to write each a letter expressive of the action of the society. Dr. Murphy was recently operated upon for appendicitis, Dr. Perry has just recovered from typhoid fever and Dr. Conwell is now suffering from tetanus, the result of an accidental gunshot wound of the ankle, inflicted while hunting.

At the evening session Dr. Moore gave a talk on "Children's Clinics," based upon his observations at the Harvard School of Medicine. Dr. Moore claims this school is well equipped in material and men.

Dr. Daniels gave a talk on what he deplored as "Medical Apathy." He regrets the seeming lack of interest among the profession either in medical literature, research or society work. It is difficult to get the members to prepare or discuss society papers. He paid especial attention to the seeming indifference of the medical men, either personally or through the press or medical journals, in dealing with the illegal, so-called, practitioners, which by their effrontery are becoming a public menace.

Discussed by Dr. Golden and concurred in, more especially as to medical society work, by the secretary.

Dr. Golden gave a talk on "Ectopic Gestation," giving his experience and observations

for a period of about 17 years. He says this is not a common and yet not an infrequent condition, and for this reason was liable to be overlooked by the general practitioner. Causes not definitely determined. He described as leading signs missed menstruation for days rather than months, pain, usually more marked on affected side, but frequently general in lower part of abdomen, flow more excessive than in normal menstruation, tenderness of uterus on palpation, cervix paler than in normal pregnancy. A mass may be felt on palpation. Collapse, either with or without hemorrhage, but more surely with hemorrhage. Other frequent signs, pain on urination or defecation.

Dr. Golden emphasized the importance of an early diagnosis. Early operation is simple and safe, while a delayed one may be complex and dangerous, owing to dangerous probable complications which may arise.

The society was honored by a call from Dr. Harriet B. Jones, who was visiting the schools and college in Elkins. She very graphically related the great work she is doing among the public schools of the state in educating the children as to the nature and danger of tuberculosis and how it may be avoided. She urged the hearty and faithful co-operation of every physician in this great health preserving educational propaganda. The Barbour-Randolph-Tucker Medical Society will gladly render loyal support to this great work.

J. C. IRONS, Secretary.

Kanawha County Society.

A regular meeting of this society was held at Hotel Kanawha on October 7th. The society was honored by the presence of Past Assistant Surgeon Bryan of the United States Public Health Service, who addressed the society on "Typhoid Prevention."

Last year, Dr. Bryan remarked, there were 234 cases of typhoid fever in Berkeley county, thirty of which resulted in death. The great good that has been accomplished along sanitary lines during the six-month campaign among the farmers was shown by a comparison of the record of last year with that of the present. Only thirty cases of typhoid fever have been reported in Berkeley county this year. Dr. Bryan declared, and only one death has been attributed to typhoid fever this year.

Typhoid fever, the speaker said, besides being a public menace, is a costly disease and invariably involves a great expenditure of money, often depleting the treasury of the family in which it breaks out. In this connection he called attention to the fact that in the mitigation of the disease in Berkeley county this year the people had saved many thousand dollars.

Big Saving to Families.

Using \$5,000 as a basis of calculation, that being the value of a human life according to the schedules of accident companies, Dr. Bryan emphasized that only \$5,000 has been lost in Berkeley county this year, as against \$150,000 last year.

The lecture of the principal speaker was discussed by Dr. W. W. Tompkins, Dr. J. E. Robins, Dr. George A. MacQueen, Dr. J. E. Cannaday, Dr. James Putney and other physicians, during which a number of interesting points on the prevention of disease were brought out.

Dr. P. L. Gordon and Dr. G. C. Schoofield also responded to toasts. The former told of "Some Boyhood Experiences" and the latter of "His Latest Story."

On the City's Streets.

The toastmaster, Dr. Shawkey, then referred to the recent campaign of the Charleston Mail against unsanitary streets, and called on Walter E. Clark, its editor, to address the society along that line.

Mr. Clark referred to the city of Charleston as "superlative in almost every respect among cities of its rank," said he was glad he came here to live, but added that doctors and laymen alike had no difficulty in reaching the diagnosis that Charleston, from a civic standpoint, is sick. He said this was shown by the fact that, although large sums of money have been expended for public improvements, much of it must have been wasted, as many streets and vacant lots and premises are in a dirty condition, while a large proportion of the streets are badly paved. He appealed to the doctors to join with the editors in striving to improve the state of public opinion on these subjects, which are so vitally related to the health and well-being of the people.

Following the meeting a seven-course dinner was served in the dining room of the Kanawha, and a number of brief and interesting talks were made.

(The editor was invited to this feast of reason and here expresses his regrets at his inability to be present. Had he been there he would have felt like saying that, while a splendid work is being done in Berkeley county by the men of the Public Health Service with the aid of that prince of county health officers, Dr. Henshaw, yet not all of the improvement in the typhoid situation can be credited to improvement in sanitation. This is nowhere in the state a bad typhoid year, as was the last. Besides, on account of the widespread typhoid of 1913, much of the susceptible material was used up.—Editor.)

Ohio County Society.

February 23, 1914.

Meeting was called to order by President Thornton. Dr. J. W. Gilmore read a paper on "Therapeutic Pneumothorax." Dr. Ackerman said that absolute rest is necessary for the healing of tuberculosis. This in the young is carried out by a plaster jacket. In tuberculosis of joints it is best to secure bony ankylosis. Pneumothorax for tuberculosis is still in the experimental stage. For pulmonary hemorrhage it is the proper procedure. Dr. Schwinn stated that it is more difficult to select suitable cases for this treatment than to do the operation. Embolism, one complication liable to arise, is obviated by opening down to the pleura, then inserting the needle. Infection and effusion of

serum may follow. There are cases that will not respond to other treatment. The X-ray is an advantage in determining the thickening of pleura. The principles involved are rest and developing scar tissue. Where pneumothorax cannot be applied immobilize the infected side of the chest by resecting several ribs and applying a pad which permits collapse. A case after pneumothorax improves because the circulation is retarded, especially in the lymphatics. This means that toxins and bacteria are not absorbed. Results will not justify the operation unless the patient can be under control sufficiently long, one and one-half to two years. Patients often give up treatment before this time. Dr. Thornton reported one case which he has treated several times and good results were obtained. Process started in the lung on the opposite side. Dr. Gilmore in closing said that the heart sometimes dilates owing to the sudden collapse of the lungs.

Dr. Ivan Fawcett read a paper on "The Treatment of Acute and Chronic Conjunctivitis." Dr. Kelly said that eversion of the eyelids is difficult in children. Unless all the sclera can be watched a sclero-corneal ulcer is liable to form. Dr. Gilmore, in speaking of ophthalmia of the new-born, reported some infections after very rigid Crede methods had been followed. After careful observation he concluded that the infection came from the infant's own hands. Prophylaxis was to wrap hands in gauze. Dr. Fawcett in concluding described the best method of applying treatment in cases of ophthalmia of the new-born.

March 2, 1914.

Regular meeting, President Thornton presiding. Dr. J. A. Campbell read a paper on "The Use of the Sphygmomanometer in Medicine and Surgery." Spoke of its early use by Jané; ay and others and of its more common use in recent years in hospitals and by insurance examiners. Any abnormality in circulation, he said, results in disease. Failure of circulation means diminished blood pressure. The observation of arterial tension is most important and, while palpation can often detect this, the use of the instrument gives greater certainty. The reflexes control contraction of the blood vessels. In order to understand blood pressure one must understand the laws of hydrostatic pressure. Vasomotor tone is a most important factor in controlling blood pressure, as are energy of the heart, peripheral resistance, volume of blood and its viscosity. The doctor spoke of the systolic, diastolic and the mean pressure and the means of determining each. He described the technique of taking blood pressure, the palpatory and auscultory means of estimating the pressure. After discussion by a number of the members Dr. J. R. Caldwell read a paper on surgical treatment of the prostate. He gave in detail the anatomy, pathology and histology of the prostate. Said it reached its full development at 20 years; spoke of the hypertrophy of the gland, the adenomata and carcinomata; said that the gonococcus is the most frequent cause of infection. The middle

lobe is the most frequent situation for adenomata. The prostate in its enlargement becomes both intra and extra vesical. Simple hypertrophy and cancer may exist in the prostate simultaneously; tuberculosis is also sometimes present, following that of the genito-urinary tract. He gave the symptoms of hypertrophy and the important diagnostic points, impressing the importance of cystoscopic examination. The preliminary treatment of the patient preparatory to operation was given. He said that anesthesia, hemorrhage, uremia and heart complications influence the mortality rate. He then detailed and illustrated with drawings the supra-pubic prostatectomy, and gave the post-operative treatment in these cases. Dr. Schwinn spoke of the difficulty of operation at times. He classed the growths of the prostate as adenomatous, fibrous and carcinomatous, ten per cent of those diagnosed as benign being malignant. He described the two-stage operation. Dr. Reed spoke of hemorrhage and acute nephritis ingrafted upon chronic nephritis as causing death. He also referred to residual and back pressure of the urine distending the ureters and pelvis of the kidneys. Further discussion by Drs. Howells, Burns and Thornton. Dr. Osburn reported an unusual condition of the brain which he found in a recent autopsy. Calcified places were found on the top of the brain under the dura mater. Dr. Schwinn gave it as his opinion that this was a localized pachymeningitis with resulting calcification.

J. E. BURNS, Secretary.

Progressive Medicine

INTERNAL MEDICINE.

Dr. John N. Simpson.

Modern Treatment of Bright's Diseases—By Justin Herold, M.D., New York Medical Journal, October 10, 1914.

Modern metabolic research in the last 20 years has given predominance to the lightening of the kidneys' work in renal therapy. The strain on the kidney caused by water secretion should not be over-estimated, even under pathological conditions. The use of large amounts of saline solution has been shown to be injurious. From the researches of Chittenden and Mendall it has been shown that the amount of protein in an ordinary diet can be diminished one-half with no loss in weight and efficiency, provided carbohydrates and fats are increased to take its place. In the choice of albuminous foods Strauss thinks that even in acute nephritis two to four eggs may be taken daily. The Von Noorden school has shown that there is no difference between red and white meat in nephritic patients. Meat should be well done. Strauss believes that the residual nitrogen of the blood is far more dependent upon the state of the renal functions than upon the alimentary factor. He does not cut the amount of water for the patient below the normal. Van Noorden alternates drink periods with thirst periods in chronic nephritis. Ortnor forbids game and

salt water fish, unless the latter is very fresh. Cereals, butter, cream, oil, moderate smoking and one cup of coffee in the morning are allowed. Tomatoes, asparagus, onions, garlic, radishes, celery, fried and greasy foods, hot sauces, mustard, cress and rich and strong cheeses are not allowed. Alcohol, except light wines, irritates the kidneys. Water should not be taken in excess to prevent a rise in blood pressure. Alkaline and chalybeate waters are preferred. These induce cartharsis and diuresis. To lower blood pressure restrict both diet and drink. When the heart gives out, rest in bed, with a diet of eggs, cream and cereals. Administer digitalis, strophanthus, caffeine and strychnin. Blood letting to the amount of one pint is advised.

Woolen clothing should be worn all the year. Sweating is recommended in edema and in threatened uremia. Patients should live in a dry, warm climate if possible.

Drugs recommended are the bromine-sodium salicylate, potassium-citrate and acetate, liquor ammonii acetatis. Hot baths, Turkish baths and hypodermics of $\frac{1}{4}$ grain pilocarpin hydrochlorid are given to cause free sweating. Edema of the legs may call for incisions along the shins. Salt free diet has been recommended for edema also. Bowels should be kept open by salines, cascara, senna and aloes, with occasional use of calomel and elaterium.

The appetite kept up by bitter tonics, the headaches relieved by bromides, the anemia combated by iron. Prognosis in chronic nephritis less favorable than in acute nephritis, but life may be prolonged for several years and without suffering by the patient.

Treatment of of Complications of Bright's Disease—By H. A. Hare, M.D., Therapeutic Gazette, September 15, 1914.

Name of disease ambiguous. Chronic parenchymatous nephritis means a degenerative change in the secreting structures of the kidney, the uriniferous tubules and the Malpighian tufts as well. In the chronic interstitial nephritis there is a marked overgrowth of connective tissue. The degeneration changes in the secreting epithelium are far more gradual, and it is possible for the kidney to do its work fairly well through a period of many years. In the parenchymatous type it is only a matter of months until the patient dies. They differ as much in their modes of treatment as in their pathology. There are no drugs nor any dietetic treatment capable of curing either form of the disease. We can at best only prescribe methods of life, habits as to diet and suitable drugs to delay the process or hold it in check. In both forms an even, mild climate is best. Avoid exposure to cold associated with dampness. Exercise with moderation.

Diet—Hare thinks both the avoidance of meat and the use of large quantities of milk to be erroneous. Use only food easily digested. Avoid game that has started to putrify and meat extracts.

Both kinds of meat, red and white, are equally good. Milk diet is too bulky and not bal-

anced. Makes many persons bilious and induces intestinal putrefaction. Carbohydrates are very good. The vegetable foods, such as the cereals, contain them, and the proteins which, with red meat, make a better balanced ration than milk.

He especially condemns the skim milk diet, since the loss of the cream is very unwise. In parenchymatous nephritis he would not restrict the diet at all, because the patient has such a short time to live, and the diet does not seem to make much difference, and the comfort of the patient does.

Treatment should be directed to the symptoms connected with the cardio-vascular system. There is a gradual rise of blood pressure, which may be due partly to a spasm of the muscular walls of the arteries and in part to arterio-capillary fibrosis.

When the pressure is due to spasms of the arteries he recommends the electric cabinet bath or hot air baths in which the patient's head is not exposed to the heat, but is kept cool with an ice compress. Besides lowering blood pressure these measures may increase the action of the skin and elimination of wastes.

Drugs which alter blood pressure are first the nitrites, chief of which is nitroglycerin. They are not prolonged in their action and are useless in fibrosis. Then the iodides are useful. When there is a high blood pressure and cardiac symptoms are present, on auscultation a weak first sound and an accentuated aortic second, it is necessary for the patient to rest in bed. Give small doses of digitalis or strophanthus, combined with the nitrites. Nux vomica is also efficient. In dealing with a high blood pressure it is of vital importance not to attempt to lower it unless the heart is manifestly greatly fatigued. In many instances the high blood pressure is distinctly compensatory in its nature and is essential to comfort and functioning of the various organs. A lower blood pressure would not furnish the tissues sufficient blood.

The vertigo and dizziness demand rest in bed. Since they are usually due to digestive disturbances, free purgation is useful along with moderate doses of digitalis and strychnine.

Hare advises no blood letting except in uræmia. He prefers liquor ammonii acetatis to Basham's mixture as a diuretic. Aleoholic beverages in general are to be prohibited unless patient has been accustomed to them. Then a small amount of whiskey may be allowed or, when the kidney secretion is scant, a little gin.

SURGERY.

Dr. Frank L. Hupp.

Diagnosis and Surgical Technic of Acute Abdominal Conditions—J. Y. Brown (Surgery, Gynecology and Obstetrics, June, 1914. Reviewed in New York Medical Journal).

J. Y. Brown believes that, as many of these patients are received profoundly intoxicated, it

is advisable, unless the patient has vomited blood, to wash out the stomach before the anesthetic is given; the removal of the stomach contents will greatly aid both anesthetist and operator. The abdomen should be prepared in the usual way and the wound of entrance should be carefully explored. No information whatever can be obtained by the use of the probe. As soon as the abdomen is opened the liver and spleen are examined, and if hemorrhage from either organ exists it should be properly dealt with. If such hemorrhage cannot be controlled through the median incision, it is advisable to cut the rectus at right angles. This procedure, while by no means ideal, will enable the operator quickly to control the hemorrhage, and produces less shock than would follow the forcible retraction of the median incision and the rough handling of the injured viscera. The anterior border of the stomach is now examined for perforations. If no perforations are found, a rent is made in the gastrocolic omentum, opening into the lesser peritoneum. Through this opening the posterior wall of the stomach is examined and any injury to the stomach or pancreas is noted. If the patient is profoundly shocked, it is generally the writer's custom to start irrigating the abdominal cavity with saline as soon as the peritoneum is incised. A stab wound is made above the pubes with the drain placed in the vesicorectal pouch and the saline flows from the tube. This irrigation is not done for cleansing, but for stimulation. In the repair of perforations of the bowel he has found that they can best be closed either by a purse string suture or by a through and through stitch, supplemented by the Lembert stitch. Not infrequently multiple perforations are found in close proximity, necessitating bowel resection. It is far better to resect in such cases than to repair with suture if there is the slightest question regarding the blood supply to the bowel. The after treatment of all of the cases above considered should be as simple as possible. It is his custom unless there are special contraindications to allow such patients to have all the water they desire. Strychnin is never used and morphin is rarely needed. Proctoelysis, tap water being used by the Murphy method, he has found of value. The Fowler position is practically abandoned as a method of treatment, not only in the types of injuries above discussed, but in other acute work.

Should Lumbar Puncture Be Adopted as a Routine Practice? Urological and Cutaneous Review, March, 1914, contains the following interesting editorial:

Notwithstanding that we shall continue to place much dependence upon the Wassermann test of the blood as indicating a previous leucetic infection or the presence of a focus somewhere in the body, yet syphilologists are quite well agreed that this reaction has its diagnostic limitations, and particularly in determining the existence of syphilitic foci in the cerebrospinal tissues. This phase of syphilis assumes still more important proportions when we remem-

ber how often a Wassermann of the blood may be negative in the face of syphilis of the cord. The largest significance of this latter phenomenon lies in indicating the need for ascertaining the reaction of the spinal fluid and using it as a control during the progress of treatment. Thus it should be examined before instituting treatment and the following points determined: Pressure, albumin content, leucocyte count and Wassermann reaction. Jeanselme, Vernes and Marcel Bloch emphasize this need, and even maintain that examination of the spinal fluid is of more importance to the patient than a Wassermann of his blood. Since an excessive quantity of albumen in the spinal fluid, a leucocytosis or a positive Wassermann of the same indicates a leuetic cerebrospinal focus, the prophylactic value of aggressive treatment instituted immediately upon the determination of such findings is clearly obvious.

It is maintained by some that lumbar punctures should be made from time to time during the course of treatment and the usual therapeutic measures continued, until the blood Wassermann is negative and the cerebrospinal fluid shows a normal albumin content and leucocyte count, together with, of course, a negative Wassermann. The single objection to this precaution is that attached to it is the necessity of puncturing the lumbar canal, and whilst in the vast majority of instances this is a simple and harmless operation, yet in some cases patients have been subjected to much distress as a result of the operation. However, in such cases there has usually been a gross and easily avoided error of technique. This operation should be done in a hospital; it is not an office procedure. The information disclosed through lumbar puncture is undoubtedly of sufficient importance to lead us to look upon the procedure as well worthy of adoption, if not as a routine measure, at least in those cases which offer the slightest suggestion of the possibility of latent cerebrospinal syphilis.

Splenectomy for Pernicious Anaemia. Dr. Warren Coleman and Dr. John A. Hartwell of New York, at the recent meeting of the Association of American Physicians (Reported in New York Medical Journal, August 15th), reported a typical case of pernicious anemia that grew steadily worse in spite of four months' treatment with arsenic, iron, hydrochloric acid and four transfusions. Splenectomy was performed as a last resort. Ten weeks later, January 13th, neosalvarsan was administered. The use of neosalvarsan made it impossible to draw any conclusion as to the effects of the splenectomy, except in the interval before its administration. In this interval there was no evidence of more than temporary improvement. At the present time, April 24th, six months after the operation, the patient, while looking better and feeling better, was just beginning to sit up.

Dr. Herbert C. Moffitt of San Francisco had been able to collect thirty-one cases of splenectomy for pernicious anemia from the literature, and he reported eight which were done in

San Francisco, one in his own service. The results had been variable. In eight cases death had resulted either immediately or soon after operation. A number of other cases had not improved. In still others reported in the literature surprising improvement had taken place. In his own case paresthesia, which was obstinate before operation, disappeared at once afterward. There were other striking changes in the blood regeneration which followed soon after operation in many cases. He had had opportunity to study the spleens after operation in eight cases, and the picture was practically the same in all. Contrary to clinical observations, the weight of the spleen was considered greater than normal, varying from 450 to 500, and from that point down to 350 to approach the normal of 280 grams. Most observers recorded the size of the spleen in pernicious anemia as not increased, while operative results showed the spleen was considerably larger than normal. The recent work on splenectomy should not distract attention from the ultimate causes of the disease. He had mentioned some time ago the similarity between pernicious anemia in man and pernicious anemia in animals, such as horses. Since that time he had had opportunity to observe some cases in animals and to make sections from the liver and spleen in certain cases. The microscopic appearance of the spleen and liver in these cases was that noticed in the organs removed at the operation for pernicious anemia. From a spleen removed in January an emulsion was made and injected hypodermically into a horse, with no change in the anemia. The operation of splenectomy in horses was difficult. Many arteries went into the spleen and possibly the operation could not be successfully done. He had in mind tying the arteries of horses whose spleens were affected with pernicious anemia, and it would be interesting to observe whether, as in human cases, cutting off the circulation in horses would have any effect in stopping hyperhemolysis, which was characteristic of the disease in animals as it often was in human beings.

Pneumothorax for Hemoptysis—Edward von Adelung, Boston Medical and Surgical Journal, July 30, 1914.

The value of induced pneumothorax to control bleeding from the lungs is hardly sufficiently appreciated. The older means of treating hemoptysis consists of physical and mental rest, starvation, thirst and the use of certain medicaments. The drugs commonly employed act by slowing the blood stream (as does rest) or by reducing blood pressure (as do rest, starvation and thirst) or by increasing the coagulability of the blood (as do hunger and thirst). There can be no doubt that these measures employed intelligently and persistently yield results. But usually an appreciable amount of blood is lost before these measures can act, and again the bleeding is extremely likely to recur after a time. For the latter reason the patient is advised to keep his bed for a week or more after the bleeding has stopped.

Thus it is seen that the medical treatment involves considerable loss of time and subjects the patient to the unpleasant and often harmful by-effects of the drugs used. This is especially true of opium, the most valuable of the drugs used for hemoptysis.

Pneumothorax, on the other hand, acts promptly and obviates the disadvantages of the drugs mentioned. The hemorrhage having been controlled, the patient may be allowed to continue about as was his habit, perhaps even to continue at his occupation. Instead of harmful by-effects pneumothorax has a beneficent after-effect; it places the diseased lung in a condition favorable to healing.

To produce pneumothorax air or other gas is allowed to flow through a hollow needle which has been pushed through the thoracic wall just far enough to let its lumen open into the pleural sac. As the gas enters the negative intrapleural pressure is abolished and perhaps a positive gas pressure substituted. This results in collapse of the lung, with perhaps some compression. Naturally the tension of the wall of the bleeding cavity is thus relieved, and the cavity is collapsed to a degree depending on the amount of fibrosis of its wall. In any case the change of pressure from negative to positive leads to the cessation of hemorrhage. By introducing a little more gas every few days the positive pressure may be maintained so that hemorrhage cannot recur, and furthermore, the sick organ, the lung, is placed at physiological rest, a condition eminently indicated in tuberculosis. And meanwhile, unless otherwise contraindicated, the patient may be allowed to go about instead of being confined to the bed.

In five successful cases the author used his portable apparatus modeled after Murphy's original apparatus.

More recently Murphy has suggested an ingeniously simple procedure for meeting the emergency presented by hemoptysis. It consists of introducing a hypodermic needle into the pleural space and allowing atmospheric air to be sucked in until the patient feels distress. The needle is dulled by rubbing on a stone, the skin is cleansed, a puncture of the skin is done with any sharp instrument, and the boiled hypodermic needle is then inserted into the pleural sac with its outer end covered by sterile absorbent cotton which filters the air that passes in. I have had no experience with this method, but feel that it is entirely permissible and efficient in an emergency. But however induced, pneumothorax, when practicable, is the best way to control bleeding from the lungs.

PEDIATRICS.

Colds in Children—T. S. Southworth (Journal American Medical Association) of New York says that recent years' experience has taught him to respect the common infectious cold as far from a trivial affection. Its bacteriology is yet uncertain and we may have several organisms to contend with. Infants appear to

be especially susceptible to these infections and when it invades a household it is likely to go through several members. In institutions where they care for children it spreads with great rapidity, and as sequels ear disease is common, pneumonia rather less so, but not infrequent. The most frequent injury, however, is inflicted by their influence on nutrition, especially in bottle-fed infants. We are apt to look on these as colds when they are in reality systemic infections. Such colds are an unfortunate handicap in conducting feeding cases in private practice and digestive disturbances caused by them are common. The loss of weight leads the nurse or mother to overfeed the infant. Household infections are shown by recurring attacks during the colder months, and they may occur also in the warmer seasons. The amount of injury done to young children can scarcely be estimated, especially in oral and sinus complications. Traveling on trains, children's parties, dancing schools, etc., are frequent methods of exposure, and Southworth emphasizes the importance of this risk. In treating a case isolation is often difficult unless the child is confined to bed and this aid is lost during convalescence. He does not consider it, however, impracticable, and if parents could realize the greater danger from this cause they would enforce it, as they do in cases of the regularly recognized contagious diseases like diphtheria, scarlatina and even mumps and chicken-pox. It is a comparatively simple matter for the physician to acquaint the mother with the risks incurred and to advise her to keep those having the slightest cold from contact with the children. But Southworth knows of no text-book that teaches the danger of the common infectious cold and no medical school or health board which has taught or enforced precautions against this contagious disorder.

S. L. J.

Vaccine in Pertussis—Kelsal, in Therapeutic Gazette, details his experience. Thirty cases treated. Age two months to 12 years. Most of them under three. Advises 25,000,000 to 50,000,000 bacilli at a dose. Some reaction follows. For the older 100,000,000 bacilli may be used. Repeat dose in two to seven days or sooner, as the effect of the first wanes in about four days. In all his cases 3 to 6 doses were given at intervals of three to five days. The writer says that when given in the stage of incubation it does not prevent the disease, but if given after exposure it will prevent if several doses are given. He adds:

In every instance amelioration of the symptoms was secured. The paroxysms were rendered milder and less frequent, the disease in the majority of cases was shortened to about four weeks, and in the latter days of the attack the paroxysms were so mild and infrequent that the comfort of the little patients (as well as their parents) was materially increased. Quite frequently on the next visit, after the first administration of vaccine, the writer would be pleasantly greeted by the parents with the statement that "the baby rested much better

the first night, that he only coughed once or twice during the night, whereas before he coughed all night." Of course this was most gratifying.

S. L. J.

A Substitution for Stitches in Circumcision—Dr. S. M. Strong, in *American Journal of Surgery*, avoids the use of stitches in circumcision as follows:

After the prepuce and the mucous membrane have been cut away in the usual manner the skin and the mucous membrane can be made to adhere together very satisfactorily by applying several hemostats around the cut surface, placing them on the skin from before backward in such a manner as to grasp the mucous membrane and the skin with edges approximating between the jaws of the hemostat for $\frac{1}{2}$ inch and compressing the jaws tightly. The fenestrations of the blades press the tissues together in corrugated ridges, and they will remain adherent, when after a few minutes the hemostats are removed. No sloughing occurs at the point of compression. The usual circular dressing is applied, leaving the meatus free. This dressing is changed every twenty-four to thirty-six hours. Healing is usually by first intention. In a very small percentage of cases a bleeding vessel may have to be ligated, but this occurrence is very rare and generally compression controls the hemorrhage.

S. L. J.

Epinephrin in Whooping Cough—Report of a case illustrating the good effects of epinephrin in whooping cough, as first advocated by G. V. Fletcher. The case was that of a delicate child of 7 years in whom pertussis was complicated with bronchitis, which was becoming more and more severe. The child had been ill for six weeks when the author began with the administration by mouth of 3 minims of 1:1000 epinephrin solution every four hours. Almost immediately a marked diminution in the severity and frequency of the paroxysms was noted. The author was soon able to limit the administration of the drug to three times a day and continued it thus for three weeks, at the end of which time the child had completely recovered from the cough and had steadily improved otherwise, there being a total disappearance of the anemia and wasting produced by the persistent vomiting.—W. J. Lord (*British Medical Journal*; *Medical Record*, August 30, 1913).

S. L. J.

Antitoxin in Diphtheria—S. S. Woody, Philadelphia (*Journal A. M. A.*, Sept. 5, 1914), says that he is entirely satisfied that diphtheria antitoxin as generally used is given in doses far too small. The object we have in view is the rapid and complete neutralization of the diphtheria toxins by a single large dose of the antitoxin if possible. This cures the patient rapidly, minimizes complications and the infectious period is shortened. The location of the disease process and its extent, the virulence of the infection and the patient's general condition should, of course, be considered, but he thinks that no case, however mild, should receive less

than 10,000 units, and when both tonsils are well covered with exudate and the palate, uvula and nose involved and the disease of three days' duration or more, he would give 150,000 to 300,000 units. In nasal cases with marked symptoms of toxemia from 50,000 to 150,000 units; in laryngeal cases from 30,000 to 45,000 units and a corresponding increase of dosage when combined with other varieties. A practical advantage is the avoidance of the discomfort and pain of frequent doses. He holds that large doses are not more harmful than small ones, as less serum is administered and the possibility of anaphylactic shock is so distant that it should not influence us in the least. He doubts whether we have as yet used diphtheria antitoxin in doses that give its full therapeutic efficiency. The results in the author's cases are reported for the various years from 1908 to 1912, showing a marked decrease in the mortality with the increased doses.

S. L. J.

To Disguise Castor Oil—Klein recommends the following method of administering castor oil, which he learned from the Arabs: Pour 15 to 20 grams of castor oil into a glass of milk and warm the mixture, stirring frequently. In a few minutes an emulsion is formed, which may be sweetened with orange peel syrup. In this form the oil loses its disagreeable taste, and besides smaller doses are required to obtain the desired results. Fifteen to twenty grams will usually be sufficient to act as a purge in the adult.—*Medical Summary*.

S. L. J.

EYE, EAR, NOSE AND THROAT.

Drs. H. R. Johnson and P. A. Halev.
Intranasal Operation for Stenosis of the Lacrimonasal Duct—This condition has long been regarded as belonging to the ophthalmologist and treated from that standpoint. The results have been very uncertain and far from uniformly satisfactory.

All who have had experience in the treatment of epiphora and dacryocystitis have met with many failures and disappointments, the tear overflow and purulent discharge from the sac persisting after prolonged dilation with probes. This is due in many cases to a recurrence of inflammatory thickening of the mucous membrane lining the duct, to cicatricial contraction and, as claimed by many, to the loss of capillary influence when the canaliculus is slit. For these reasons the operation of dilating the duct with sounds has been largely discarded for excision of the tear sac. This, of course, is effective in eliminating dacryocystitis, but too often the overflow of tears remains unchanged or even worse, requiring the removal of the lacrimal gland.

In view of these disadvantages the idea of establishing permanent drainage of the sac by removing the nasal wall of the duct and getting a free and permanent opening into the nose was conceived. Many of our best rhinologists are now advocating this method.

E. M. Holmes of Boston, in June, 1914, An-

nals Otol., Rhinol. and Laryngol., reports five cases operated on from the nose. Three of these were perfectly successful in relieving the dacryocystitis and overflow, while one was only partially successful on account of extensive bone necrosis and one was a failure.

His method was to make a U-shaped flap just anterior to the attachment of the middle turbinate, dissect and elevate this flap, then with curette or burr remove the nasal wall of the duct until the sac is exposed. Then turn the flap under upon itself, thus bringing mucous membrane in relation with the exposed duct, in this way avoiding granulation formation with subsequent cicatricial occlusion.

Dr. L. D. Green, San Francisco, in the October, 1914, California Medical Journal, reports cases cured by the internasal operation. His technic is as follows: Under cocaine and adrenalin anesthesia the mucous membrane and periosteum immediately in front of the attachment of the middle turbinate are raised in the form of a quadrilateral flap with its attachment below and turned down over the inferior turbinate.

This exposes the bony wall of the lacrimal fossa. With appropriate chisels or burrs the bone is removed till the sac with its membranous attachments is thoroughly exposed. The sac is then grasped with forceps and a liberal piece of its nasal wall is excised.

Before the mucous membrane is replaced in its position a piece is cut away at its posterior-superior angle, thus leaving a free opening into the sac. The nose is then packed and left until the following day. The sac is irrigated daily from the nasal side until healing is completed.

While this method has some disadvantages, it is a decided improvement over any of its predecessors. Holmes frankly says: "In whatever manner we drain the lacrimal sac into the nose I am of the opinion that we shall find that the secretion will not be as easily and well cared for as when it is drained into the inferior meatus under normal conditions, but if we can establish drainage and rid the patient of the continual annoyance of overflow of tears and the danger of eye infection and accumulation of pus it is better than removing the reservoir and the fountain of tears which is constantly washing out the conjunctival sac."

I think all will agree that it is better to establish an adequate outlet rather than remove the lacrimal gland and with it the physiological protection to the eye.

H. R. J.

Cervical Adenitis—Nathan T. Stauffer, D.D.S., M.D., New York Medical Journal, October 10, 1914.

The author makes the statement that 75 per cent of the cases of enlarged cervical glands can be cured without external operation if seen before they have advanced to the stage of suppuration.

The remaining 25 per cent that cannot be thus cured may be classified as (1) soft lymphadenomas, (2) Hodgkin's disease, (3) true lymphatic leukemia, (4) sarcoma.

There is a distinct group of cervical adenitis

seen in American children between the ages of two and seventeen years, showing a gradual enlargement of the submaxillary or cervical glands proceeding slowly from gland to gland, finally breaking down and suppurating.

The author became interested in cervical adenitis from observing so many neck scars commonly called tuberculous scars. These children as a rule had been in the hands of general surgeons and many had recurrences. While generally accepted that the causative agent is the bacillus tuberculosis, many investigations reveal the presence of other organisms of the pus-producing variety.

The text books fail to show the mode of entrance of these organisms or why the cervical chain of glands are most commonly affected. The author observes further that these enlarged glands are found in children who are mouth breathers, tonsillitis habitues or who have foul mouths from carious teeth or suppurative otitis media. Anatomical investigation show that the glands of the head and neck are divided into superficial and deep chains, all of which drain into the lymphatics of the neck. One point of particular interest is that the head and neck glands drain into the thoracic duct as it empties into the innominate vein and is carried directly to the heart and lungs. Following this up it can readily be seen how a tubercular or other infection of the tonsil, adenoids, teeth or ears may be carried to the cervical glands and thence to the heart and lungs. This establishes a definite pathway for the entrance of the infection to the lungs other than is generally accepted, viz., the air passage route, and explains the frequency of endocarditis following tonsillar and adenoid infections.

Adenoids are physiological structures, which with rare exceptions atrophy before adult life. The adenoid age is from two to fifteen years, and corresponds strikingly with the adenitis age, which is stated by Mayo, Dowd, Mueller and others to be from two to seventeen. After examining thousands of throats and finding hypertrophied tonsils and adenoids, decayed teeth or suppurative ears uniformly present in adenitis cases, the author has become convinced that these conditions are prime factors in the production of cervical adenitis. He has also proven the truth of his conclusions by removing these causes, with the result that the adenitis disappeared without proceeding to suppuration or requiring external operation. In this connection the writer calls attention to the importance of the strictest oral hygiene, for even after the complete resection of the tonsils and adenoids the adenitis will continue if suppurating ears are neglected, or if decayed teeth and diseased gums are not carefully cared for by a competent dentist.

An economic view of the situation shows 90,000 deaf people in the United States, 51,000 of whom were deaf from childhood, 34,000 from hypertrophied tonsils and adenoids, 31,000 unclassified.

Bellevue Hospital reports show that 47 per cent of the children with tuberculosis have hypertrophied tonsils and adenoids. H. R. J.

GENITO-URINARY and DERMATOLOGY.

Dr. A. P. Butt.

Pruritus Ani—For this usually intractable condition Lynch recommends an operation based upon the procedure of Ball and Krause.

A point is chosen about one and a quarter inches from the anus. At this point a one per cent solution of cocaine is injected. An area extending to the posterior midline is thus anesthetized. At the point above mentioned a small curved incision is made, about one-half inch long, and extending just through the skin. Through this incision a blunt-pointed dissecting scissors, curved on the flat, is introduced. With this instrument a blunt subcutaneous dissection is now carried out, working to the anus mesially and to the raphe anteriorly and posteriorly.

When completed there is an area of skin extending from the anterior raphe to the posterior commissure and involving all the skin within a radius of one and a half inches from the anus, which has been deprived of its sensory nerves.

Any bleeding may be controlled by pressure. When the bleeding has stopped a small piece of rubber tissue is introduced into the incision and permitted to remain twelve or twenty-four hours. Sometimes a horse hair stitch is taken through the incision, but this is not usually necessary. As a rule at the end of forty-eight hours the wound is entirely healed.

Either at the same sitting or at some subsequent time the same procedure is carried out upon the other side. Lynch has operated thirty cases by this method and is well satisfied with the results.—Abstract American Journal Surgery, from Medical Record, June 13th, 1914.

Treatment of Urticaria—W. T. Coughlin, in the Inter-State Medical Journal, states that to relieve the itching in urticaria both lotions and powders may be used, either singly or together. The best lotion is either a solution of phenol in hot water to which glycerin has been added, as

℞ Phenolisgr. xxiii (1.5 gram)
Glyceriniʒi (30 grams)
Aque ferventis.....ʒiv (120 grams)
M. et ft. lotio.

or one of hot water containing thirty-three per cent of vinegar. These are to be mopped on, and while they are drying the surface is powdered either with fresh starch, bismuth subnitrate or zinc oxide containing two per cent of menthol or camphor. Internally valerian may be given. Bromides and chloral hydrate may make matters worse, their use often giving rise to urticaria. Digestive disturbances are often the cause of the condition. If this is the case in the patient under observation, a dose of castor oil followed by a bland diet will prove beneficial.—New York Medical Journal.

Treatment of Herpes Zoster—Gottheil, in the Therapeutic Gazette, says that he has seen distinct benefit, especially in severe extensive cases of herpes zoster, from the internal ad-

ministration of acetyl-salicylic acid or the salicylates, including salipyrin (antipyrin salicylate) in full doses. The medication should be begun as soon as the diagnosis is established and continued not only until the dermal lesions have healed, but till after all the symptoms of neuritis have disappeared. Locally a dusting powder of starch to which a small amount of cocaine or some similar local analgesic has been added, together with as tight bandage dressing as the patient can conveniently bear, is fully as efficacious and far more agreeable than wet dressings or ointments. Sometimes one or two injections of morphine are required to control pain during the night at the height of the disease.—New York Medical Journal.

Infections of the Urinary Tract in Infants—W. R. Ramsay, in St. Paul M. J. Int. Abs. of Surgery.

In this second report the author adds 100 cases to the series of 60 that he reported a short time ago. In ninety per cent of all cases the infection was due to the colon bacillus. Quoting Goppert, he states that one to one and one-half per cent of the infants brought to his clinic suffered from infections of the urinary tract, ten per cent being in boys and ninety per cent in girls. He also adds a series of 20 cases of urinary infection resulting from a diplococcus resembling the pneumococcus, details of which he will report later. Most of the acute cases apparently recover completely, but are prone to relapses. Pfoundler discovered that the blood from cases suffering from acute infection with the colon bacillus was able to produce clumping of the bacilli, just as the blood after the method of Widal produces clumping of the typhoid bacilli. The immunity, however, from one attack is very transient, since reinfections are much less common than the acute variety. Several of the acute cases seen five years previously, however, are not chronic. They assume the form of a chronic bacteriuria, with more or less local irritation. Pathologically Ricker's findings were few in comparison with the severity of the symptoms. The records from microscopic examinations of the mucous membranes were usually negative. This included the mucosa and submucosa of the pelvis, kidney, ureters and bladder.

Reviewing the work of Hinman, the author points out the futility of the use of hexamethylenamin, particularly in those cases where the kidney is involved. In chronic cases of bacteriuria the author thinks the prognosis ultimately bad.

The Effect of Chronic Alcoholism on the Organs of Man, Especially on the Sexual Glands—E. Bartholet, Int. Abs. of Surgery.

Many clinical and experimental studies have shown that alcohol has a toxic effect on the organs of the body and on the sexual glands. The author tried to ascertain whether this injurious effect could be demonstrated microscopically. Therefore he made microscopic examinations of the testicles of 163 chronic drink-

ers and of 100 non-drinkers. He found that the chronic alcoholics died sooner than the abstainers, and that all the organs of the former seemed to degenerate more frequently and to a greater degree than those of the latter. The testicles were the organs most frequently involved, 86 per cent of them showing signs of degeneration. This degeneration began very early and led very quickly to complete atrophy of the testicle and to azoospermia. Fatty degeneration was the first change to set in and it proceeded very rapidly. There was also sclerosis, with cells interspersed through the connective tissue, and progressive atrophy of the glandular parts of the seminal ducts. Unfortunately he could not get much material for examination of the female glands, but he obtained the ovaries from ten female alcoholics. He believes that the effect of alcohol on the female glands is as great and as rapid as on the male. He did not find a single normal ovary in the cases examined.

OBSTETRICS AND GYNECOLOGY.

Dr. Richard E. Venning.

Placenta Praevia and Its Treatment—Nagel (Surgery, Gynecology and Obstetrics, July, 1914).

The author thinks that few cases are suitable for abdominal Caesarean section, the contra-indications being (1) infection from the patient herself; (2) fever; (3) examinations made by physicians and midwives before admission to the hospital; (4) tamponade; (5) extensive hemorrhages; (6) marginal insertion of placenta (because in this case the patient can be confined in a simple manner); (7) in cases where foetus is either dead or not viable.

Vaginal Caesarean section and accouchement force is not advisable because the incision must be made through the placental site, opening large maternal vessels.

The Braxton Hicks method has given the best results in the hands of this operator, and he asserts that by this method, even in most unfavorable surroundings, the prognosis is as good as Caesarean section under the most suspicious conditions.

Bipolar version should be performed as soon as two fingers can be admitted through the os and a foot brought down, a loop placed around the same and the case left to nature. In cases where the placenta covered the os the fingers are burrowed right through into the amniotic cavity. The first obtainable foot is grasped and brought down into the vagina chiefly by the abdominal hand. How far the foot can be pulled down into the vagina depends upon the dilation of the os. If the breech is immediately pulled into the pelvic brim severe laceration of the cervix with hemorrhage would occur. Usually it is not advisable to pull the leg down further than the knee, which is sufficient to check the bleeding, and if hemorrhage should occur, due to the os becoming more dilated, the foot may be drawn upon slowly until plugging is again complete and the expelling of the foetus is once more left to natural forces. Rapid ex-

traction is only justified when the os is fully dilated and the child is still alive.

Pituitary Extract in Obstetrics (Journal of Obstetrics and Diseases of Women and Children).

Druskin considers the use of the pituitary extract safer than any operative procedure in obstetrics, but it must be used with discretion and judgment, like any other therapeutic agent. The results should steadily improve with increased experience. In properly selected cases and in proper dosage it is almost always effective. The use of the drug is remarkably free from danger, even when given in enormous doses. In obstetric cases one dose generally suffices, but may be repeated in one hour if the action has worn off, or even repeated in twenty to thirty minutes if there is no response.

The general mode of administration is intramuscular, but in cases of slightly dilated cervix it should be given subcutaneously. In cases of atony or post-partum hemorrhage, on account of its sensitizing action, combine it with some preparation of ergot.

Head at Outlet—These cases respond splendidly to the action of pituitary extract. Often the child is born in less time than it takes to sterilize the forceps.

Inertia, Primary—It should not be employed unless the physician has acquired considerable experience, particularly if the head is above or at the inlet.

Breech presentation offers no contraindication for the use of the extract and sometimes obviates intrauterine manipulation. No difficulties need be feared in delivering the after-coming head.

Abortion—The extract is valuable in hemorrhage due to abortion and has proven an excellent substitute for packing, possessing the added advantage of reducing the size of the uterus.

Caesarian Section—As a prophylactic agent against excessive bleeding and atony of the uterus the extract should be injected at the outset of the operation and followed by an injection of ergot when suturing the uterine wound.

Sepsis and Intestinal Paresis—The extract combines three actions that play an important role in peritonitis. First, the stimulating action on the peripheral blood vessels and direct tonic action on the heart; second, the stimulating action on the intestines, overcoming paralysis and distention; third, the action on the kidneys, flushing the toxin out of the system.

Retention of Urine—Pituitary extract will often overcome paresis of the bladder when everything else fails. Should be given at the time the bladder is distended. No Crede or manual separation of the placenta should be attempted without a trial of the pituitary extract.

Metrorrhagia in the lying-in period, foul smelling lochia and retained membranes should be treated by pituitary gland in combination with ergot.

UNUSUALLY LARGE BABY.

Mrs. L— was due to be confined October 15, 1913. She menstruated last January 12, 1913. She was taken in labor at 2 A. M. November 7. I was called at 4 A. M. and recognized a breech presentation. The second stage of labor began at 10 A. M. Pains being hard and no engagement at the time, after two hours counsel was called and it was decided, after careful examination, that the child could not be born alive, naturally. She was taken to the Enloe Hospital and Caesarean section performed by Drs. N. T. Enloe, Ella F. Gatchell and W. B. Johnson. The child was a boy, weighed 18 pounds, measured 23 inches in length, leg 9½ inches, arm 7½ inches long, circumference of chest 17 inches, circumference of head 15 inches. The convalescence was uneventful. The mother and boy returned home November 17, the wound entirely healed and the mother as well as following a normal labor. The mother weighs 130 pounds, the father 160 pounds. I can vouch for all these weights and measures.—Ella F. Gatchell in California State Journal.

CORPORA LUTEA NOW AVAILABLE.

Corpora lutea is largely used to control the symptoms following the removal of the ovaries, especially in young women, and to relieve the nervous disturbances attending the natural menopause. Reports have appeared on its successful employment in the treatment of amenorrhea, dysmenorrhea, chlorosis and menorrhagia. It is now supplied by Parke, Davis & Co. in desiccated form, in capsules of five grains each, equivalent to about thirty grains of fresh corpus luteum. Only the yellow granular material from fresh ovaries is used in its preparation, the remainder of the gland being discarded because of its lack of therapeutic value.

While comparatively a new product, there is sufficient evidence at hand to warrant the opinion of one writer, who expresses the belief that "in corpora lutea we have a preparation that will be a blessing to womankind."

TREATMENT OF DYSMENORRHEA.

S. W. Bandler, in the "Archives of Diagnosis" for January, 1914, points out that to assure a dysmenorrhic patient that the cervix, because of its length, rigidity, or stenosis, is the primary factor in the trouble is to tread on uncertain ground. To perform a surgical dilatation of the cervix and make it more or less permanent by the use of an intracervical stem or by a cutting operation, without first knowing that the cervix is the main offender, often leads to a disappointment. If one is able, on the other hand, painlessly and without danger of infection or tissue injury, to dilate the cervical canal two or three days before menstruation, or even when the pains have begun, and the patient is thereby relieved of the dysmenorrhea, any surgical procedure then thought nec-

essary can be done with considerable certainty as to the result.

To dilate the cervix painlessly and safely, the author finds most advisable, in office practice, the use of the galvanic current. He employs aluminum sounds of various diameters, always smaller than the size which might be used if a little force were applied. A large plate is applied to the abdomen or under the sacral region, the negative pole being in the uterus, and a current of from five to ten milliamperes is passed for five to fifteen minutes. The intracervical negative pole causes a relaxation of the muscular fibers, the sound thereupon slipping out. At the same sitting, or the next, a somewhat larger electrode may be substituted, and this may be repeated as judgment dictates, the electrode being always drawn out as soon as the patient experiences pain or discomfort. The intracervical pole causes, especially if a white or yellow secretion is present, an oxidation of the secretions with resulting production of bubbles. If the electrode fits too closely in the cervix and there is no egress for this frothy product, an increase of pressure occurs in the uterine cavity and cervix, pain resulting. If one, two, or three treatments on successive days before menstruation lead to a painless menstrual flow, fairly satisfactory proof is afforded that the cervix plays an important part in the production of pain in the individual case. In many cases the author has, by the procedure described above, given relief from uterine colic.—S. L. J.

OBSTETRIC TECHNICS.

A. M. Brandt, M.D., in a paper before the North Dakota State Med. Assoc., and published in "The Journal Lancel," says some very severe things concerning the practice of this branch of medicine. He says that for 25 years this branch of medicine has been behind all others and "at present time conditions are deplorable." He says Dr. Williamson a few years ago found that ordinary practitioners lose proportionately as many women from puerperal infection as do midwives, and that more deaths occur from obstetric operations improperly performed than from the infections at hand of midwives. There is greater fetal mortality and still greater amount of maternal invalidism.

A great deal may be done by adhering to a few well tried and definite principles. His observations are based on a thousand cases. The woman should be seen before time for delivery and size of pelvis and child estimated. A man must keep his hands clean by abstaining from rough work, not even overhauling his automobile. Gloves, well sterilized, should be worn and no vaginal examinations made. A gloved finger in the rectum is safe and perfectly capable. Iodine, 3.5 per cent of the tincture should be freely used about pubes, thighs and external genitals. Forceps are used too often. Many question if the Caesarean section is not preferable.—G. D. L.

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Original Articles

TREATMENT OF FRACTURES OF LONG BONES.

J. W. McDonald, Fairmont, W. Va.
Surgeon to Miners' Hospital.

(Read before West Virginia Medical Association,
May, 1914.)

The ideal result in the treatment of these fractures is that of a correct anatomical union with re-establishment of the proper function, and, while it is true that there may be a good functional result with an indifferent anatomical result, the surest way to have a good functional result is to have a good anatomical union. And in the consideration of these fractures it must be remembered, that there are but few cases in which the coincident injuries to the soft tissues are so slight as not to be considered in the pathological study, and in any case of fracture the local cellular destruction may be so extensive or complete, with such impairment of nutrition, that a local caries or necrosis or non-union may result.

In a series of 1080 cases of fracture, 790, or about 73%, were cases of fracture of long bones; 170, or 21%, in upper extremity, and 620, or 79%, in lower.

Fractures are classified as simple, when the skin is not broken and the bone presents a sharply defined line of fracture, about 60% of the above.

As comminuted, when the skin is unbroken with the bone shattered or in

small pieces or fragments, about 4% of the above.

As compound, when the skin is open with the fracture well defined, about 11%.

As compound-comminuted, when the skin is lacerated and open and the bone in fragments, about 25% of the above. In these cases there is nearly always serious damage done the softer tissues.

The morbid anatomy and pathological conditions presented by any case of fracture are essentially the first consideration, as on these conditions the subsequent treatment depends.

In the simple fracture there is the local cellular destruction involving the marrow, endosteum, bone structure, periosteum with the fascia or tendinous attachment of muscles, or, if near a joint, the ligaments. And in the injuries to the soft tissues, there may be the torn blood-vessel or nerve or the lacerated muscle, all of which must be considered and especial care taken that the primary damage be not added to by manipulations for reduction, the applications of splints or casts or bandage, or by a bad position of the limb. Circulation, sensation and motion should always be tested after any reduction or dressing. Pain after any dressing is a dangerous pressure, or bad position. There is, of course, local tenderness and soreness, but opiates are unnecessary after proper dressing.

It is not necessary to hasten to a reduction very soon after the injury; very often with contusion of the soft tissues it is better to adjust the limb in good position

in a pillow or padded box until this condition has improved. In the review by Hitzrot of the theories of Dupuytren and the work of Wieder the regeneration of bone is divided into five stages—first to fourth day, the period of infiltration; fourth to twelfth day, period of absorption of the exudate and replacement with connective tissue; twelfth to eighty-fifth day, the period of reorganization; eighty-fifth to two hundred and eightieth day, the period of permanent callus formation, and thereafter the changes taking place in the callus. During the period of infiltration there is an exudate from the ends of the broken bones which is practically a fibrin, and with the ends of the bones in close apposition there is a barrier to this exudate which may prove sufficient to prevent the connective tissue growth which is the osteoblast carrier for the formation of callus; any other tissue interposed between the ends of the bone will prevent union for the reason that the osteoblasts can travel only on an unobstructed connective tissue bridge.

Very large or serious contusions may be incised to release the blood from the contused tissues, not necessarily making the fracture a compound one, although there is a wide difference between a fracture made compound aseptically and one made compound and exposed to infection. In the open treatment of these fractures they are made compound, and the advisability of this method of treatment has brought much discussion.

Mr. Lane in a recent lecture says that "as regards my reason for operating on simple fractures I have nothing to add to my paper on this subject in 1894 that operative measures offer the patient the following advantages:

"(1) They at once relieve the patient from the pain of any movement of the fragments upon one another.

"(2) They free him from the tension and discomfort due to the extravasations of blood into and between the tissues.

"(3) They shorten the period of disability during which he is incapacitated from work, since union is practically by first intention, and consequently very rapid and perfect.

"(4) Lastly, and by far the most important, they leave his skeletal mechanics

in the condition in which they were before he sustained the injury."

This paper was practically the foundation on which the open method and especially the plating of simple fractures was based, and, while the reports of commissions appointed to examine the results of the method do not advocate the practice, they emphasize that failures of plating are not due to the principles involved, but to the operator, and, following the technic of Lane, the operation is authorized. A definite reason for the plating of any simple fracture, and one which would be a legitimate one, would be any simple fracture which could not be reduced by manipulation and properly held by carefully adjusted splints.

P. Fredet (Int. Abst. S. G. O.) restricts the open treatment of fractures to those cases which are incapable of healing by conservative methods, and his cases led him to the following general conclusions: (1) Operation should not be attempted without a perfect equipment. (2) It should be restricted to grave fractures which cannot heal by bloodless methods and those which will be greatly delayed in union. (3) The operation is too difficult to be undertaken by any but experienced operators, but he believes that the open treatment will find as broad a field for itself as has the operation for the radical cure for hernia. The most favorable time for intervention is the tenth day after the injury, but for compound fractures it is necessary to wait until the wound has healed. He has waited 134 days to avoid operating in an infected field. The most absolutely rigorous antiseptic precautions are taken, the hand never put into the wound and no instrument used the second time. This experience corroborates the findings in the regeneration of bone, and operative interference should not be had until the bone and tissues are on the defensive. Bone rallies slowly in its defense to injury, while tissues like the peritoneum are quickly stimulated.

Dujarier (Int. Abst. S. G. O.) uses wire or hooks, and concludes that the following are the indications for open treatment: (1) In transverse fractures when the ends cannot be held in contact; (2) in oblique cases operation is indicated in every case with the exception of those in which there is

very little displacement, the over-riding being not over one centimeter. The contraindications are the general condition of the patient or such local conditions that would make an aseptic operation impossible.

The following are the main conclusions of the Committee of the Council of the British Medical Association as given in the paper on the report by Mr. Lane:

"The statistics relative to the non-operative treatment of fractures of the shafts of long bones in children (under 15 years), with the exception of fracture of both bones of the forearm, show, as a rule, a high percentage of good results. These are unlikely to be improved upon materially by any other method of treatment. Operative results in children expressed in percentages are approximately the same as non-operative.

(2) It is possible by either non-operative or operative treatment to obtain good results in children.

(3) In comparison with the non-operative results in children the aggregate results of the non-operative method in those past childhood are not satisfactory.

(4) From the analysis of age groups it is clear that there is a progressive depreciation of the functional result of non-operative treatment as age advances—that is to say, the older the patient the worse the result.

(5) In cases treated by early operation the deleterious influence of age upon the functional result is less marked.

(6) In nearly all age groups operative cases show a higher percentage of good results than the non-operative.

(7) No method, whether operative or non-operative, which does not definitely promise a good anatomic result should be accepted as a matter of choice. For this reason immobilization and massage of themselves have not been found to secure a high percentage of good results. They are, however, valuable supplementary methods of treatment. Similarly of operative methods those which secure reposition and absolute fixation of the fragments yield better results than those methods which fall short of this; imperfect fixation by wire or other suture has been found to be an unsatisfactory procedure in the treatment of fractures of the long bones

except with the olecranon process of the ulna.

(8) Operative treatment should not be regarded as a method to be employed in consequence of failure of non-operative measures, as the results of the secondary operations compare very unfavorably with those of the early operation. In order to secure the most satisfactory results from operative treatment it should be resorted to as early after the accident as possible.

(9) It is necessary to insist that the operative treatment of fractures requires special skill and experience and such facilities and surroundings as will insure asepsis. It is therefore not a method to be undertaken except by those who have constant practice and experience in such surgical procedures.

(10) A considerable proportion of the failures of operative treatment are due to infection of the wound, a possibility which may occur even with the best technic.

(11) The mortality due to the operative treatment of fractures of the long bones has been found to be so small that it cannot be urged as a sufficient reason against the operative method.

(12) For surgeons and practitioners who are unable to avail themselves of the operative method the non-operative procedures are likely to remain for some time to come the more safe and serviceable."

In the operative plan, the vanadium steel plates of Sherman, the straight screw and Lowman's bone clamp are preferred. These steel plates are not so liable to break, the screw does not work out, and the clamp gives control of the apposition and holds the plate while the screws are being placed. There are but few cases of simple fractures of the shafts of long bones that cannot be reduced by manipulation and held by properly adjusted splints. One advantage the operative method has is that it makes an easier reduction, and if it is found that if the simple fracture cannot be reduced to but a slight deformity it could be made compound for reduction whether it was necessary to plate the bone to hold it or not. In the adjustment of splints care must be had of the position of the limb for the apposition and the comfort of the patient. Almost any kind of a splint will keep a bone in line, but evenly distributed pressure will

greatly aid in the recovery. Another later teaching is that the bone must not be too rigidly or firmly held; allow slight play at the ends of the bone to stimulate the connective tissue bridge and osteo-genesis. The winding plaster bandage should not be used unless it is split lengthwise as soon as the plaster is set. An easily applied plaster bandage is made by taking two layers of loosely woven flannel as wide as the circumference of the limb, sewn lengthwise through the middle; the upper layer is held against the limb, thin plaster is then applied and the outer layer brought up against it. The limb is laid in a pillow until the plaster hardens. This gives a hinged splint which is very serviceable, allowing change of pressure and in compound cases easy access to the wound in any part.

Any splint should be so applied that the limb can be examined when desired, and at least twice a week the limb should be examined, measured for length, and the line of the limb noted and any error corrected. A probable source of failure to get a good result is that the injured limb is put up in splints and not examined again for too long a time to note shortening or angulation.

The pathology of comminuted fractures is that of the simple plus the shattered condition of the bone—the bone in fragments. Any of these fragments may show such impairment of nutrition as to become foreign bodies. Comminuted fracture of the long bones is rarely seen without extensive contusion of the soft tissues; and, as in simple fracture, the tissues may be incised to release the blood, and if the bone is in small pieces the case may be made a compound-comminuted one. Remove the detached and easily detachable fragments. Just as in simple fracture, there is wide difference between an aseptic and infected case. In the dressing of these cases if possible leave a fragment of bone between the ends of the good bone for the osteo-genetic bridge. This is rarely strong enough to prevent a buckling and shortening, and some form of extension should be used, the mechanics of which must be worked out for each case.

The pathology of compound fractures is that of the simple plus infection. All cases of compound fracture may not be infected,

but to treat them as such will prevent serious difficulties and aid in a prompt recovery. The wound in these cases should be protected by sterile dressings and rubber dam while the patient is being cleaned up, the wound bathed with one-half strength tr. iodine; the bone put in apposition, nothing touching the wound at any time but sterile dressings and instruments. Do not use any strength bichloride solution after using iodine.

In the compound-comminuted cases there is destruction of the bone with contused-lacerated wound of the soft parts, and the latter is of the first importance. What has been injured and to what extent? Can it recover? Especial attention must be given the conditions of the blood vessels, and it has been found that injured veins are more dangerous than injured arteries. Given a wound with uninjured large vessels, the wound will recover. Judgment must not be too hastily expressed in these conditions, as usually the patient is in severe shock, and after the shock has passed the wound may present quite a different picture. While reasonably certain the wound or the fracture has been infected, the most careful aseptic care must be had in the dressing and handling. Make drainage carefully through dependent parts. There is usually some sloughing from the contused tissues. It is usually difficult to determine just what fragments of bone should be removed. The practice of taking the detached and easily detachable pieces is the best, but if possible leave some fragment for the connecting bridge. There is no case of fracture that of itself warrants an amputation, and success in the treatment of these cases will depend upon the ability to handle tissue during the process of healing, and during this process there are many conditions that must be constantly kept in mind—bone structure, fascia, muscle and tendon repair, conditions of the circulation and nerves—the impairment of which will give a poor result.

Treatment of the fractures of long bones in which the fracture is close to a joint presents some different features for each case, but the principle given will apply to all. Wiring an olecranon, nailing shafts to heads of bones or nailing a long oblique fracture of the shaft are procedures war-

ranted by the conditions found, and some remarkable recoveries are noted in cases of failure by secondary operation along these lines. Possibly the greatest principles involved in the care of fractures are, first, the mechanics, and, second, asepsis. In the open cases asepsis, of course, comes first, in the closed cases mechanics. To obtain the best result in the treatment of any fracture it is necessary to have the co-operation of the patient. In the cases of fracture in children the limbs can be held by dressings and bandage, but in the adult there is no splint or bandage that will hold a limb in line if the patient wants it out. Treatment of the grave fractures should not be undertaken without a hospital care, not only for the technic of dressing and nursing, but even more so for the reason that in the hospital these cases have to obey your instructions about diet, position, rest that will not be obeyed in private homes. No physician or surgeon is warranted in giving an opinion on the results of the treatment of any case of fracture without full and complete knowledge of the primary morbid anatomy and pathology and the details of the nursing care of the case during the treatment.

The effect of systemic conditions on the healing of fractures should be considered. In syphilides the chances for non-union are greater; in diabetics the union is delayed; in rheumatic or gouty cases the union is not delayed, but complications by attacks of arthritis were noted. In every case of fracture in alcoholics the union has been delayed and complicated by malnutrition, difficulties in caring for the skin, and in a grave compound-comminuted case there is absolutely no hope of a good recovery. One of the most difficult cases to work out was a compound-comminuted fracture of middle third of femur in a hemophiliac, the first complication being the enormous slough caused by the pouring of Monsell's solution in the wound, and the second was the bleeding. It terminated, however, in a good result.

Discussion.

Dr. Hupp said:

It seems to me that surgeons are divided into three classes with reference to the subject of fractures:

First, those who might be called ultra-conservatives and who seldom, if ever, operate upon fractures.

Second, the extremists, who operate on every case.

Third, the conservatives, who select their cases and endeavor to bring to bear palliative measures before resorting to the open method.

I think we will all agree that the first and second classes have the greatest number of bad results, while the second perhaps have the greatest mortality, and the third the best results with the lowest mortality.

This is a very large subject, and there are many things to be considered aside from the mere approximation of bones and the permanent retention of the fragments with some mechanical device.

Sir Arbuthnot Lane made the startling statement in Chicago last November that if there were surgeons who were finding it necessary to remove many of these plates from their simple fractures because of sepsis it was because such men were not familiar with the modern technique, and that they had better never attempt this kind of surgery. He further says that the man who attempts this work, not knowing how to clean up and keep his fingers out of these wounds, had better go back to the plow or the farm.

Lane has never removed a plate, and his matchless technique as many of us saw it in London last summer at Guy's and the Children's Hospitals, if followed as he has taught it, will always be attended with success.

The public is on to this game and will hold the surgeon responsible in the future for his sins of omission and commission. Ordinary precautions in fracture surgery are not enough. These cases should always be treated as extraordinary cases. We must always remember, as Lane has so emphatically pointed out, that in the open treatment of fractures we are:

First—Converting a simple into a compound fracture.

Second—We are introducing foreign material into these wounds.

Third—We are traumatizing bone already damaged, even to the extent of drilling a hole into the medullary canal.

Fourth—That all plates and foreign material interfere with the nutrition of the bone and often lead to necrosis unless the technique is absolutely perfect and a rarifying osteitis and necrosis with the subsequent plate removal invariably spells incompetency.

I wish to report a case which recently came under my observation. A coal miner sustained a compound-comminuted fracture at the upper third of the shaft of the femur with marked displacement of the fragments and great contusion and laceration and burning of the soft parts to such an extent that amputation at the hip joint seemed almost unavoidable.

Complete relaxation under ether was effected and extension and counter extension practiced after the method of Royal Whitman of New York, abducting the limb and applying Buck's extension in this abducted position. There was a large granulation area left on the front of the thigh, extending from the groin almost to the knee and occupying almost one-half the circumference of thigh. This surface was

grafted with an amniotic sack after the technique suggested to Stern by Carrel. For the details of this interesting technique see original paper of Stern in the *Journal of the American Medical Association*, 1912, Vol. LIX, page 523. This graft broke up into islands and in five or six days more than three-fourths of this large granulated area had covered in with new skin. This method should certainly be tried in all of these large surfaces, as it entails no hardship to the patient, nor does it necessitate any suffering on the part of the donor.

SMALLPOX—DIAGNOSIS AND SANITARY CONTROL.

S. L. Jepson, M.D., Wheeling, W. Va.

During the past year smallpox has prevailed in this State more widely than ever before within my knowledge. Never before has it appeared in a form as mild. After having managed outbreaks of this disease in a severe form, where the mortality reached something like 15%, and one outbreak in which forty cases occurred that were extremely mild and entirely without mortality, it is my experience that it is a much more simple sanitary problem to control the former than the latter. The reason is plain. The serious form of the disease is quite easily diagnosed and the patients are from the inception of the disease sick enough to remain in bed. Hence the exposures are limited in number. On the contrary, in the mild form the patients suffer so little that they do not deem it necessary even to remain indoors, much less in bed. The result is that numerous exposures occur before a diagnosis is made, and unfortunately when the disease in this form makes its appearance in a community the cases first seen, even when occurring in the adult, are called chickenpox, no isolation is practiced, the patients are permitted to mingle freely with the well, and the result is that the seeds of an epidemic are freely scattered before even the physicians of a community are made to realize the true nature of the disease. Hence I have formulated a rule which, although not without exceptions, may be accepted as practically true to the great advantage of any community. This rule is as follows: When the physicians in any locality differ as to the diagnosis of an acute eruptive disease in an adult, some calling it chickenpox

and others smallpox, the disease is smallpox. Time and again have I seen the truth of this proposition demonstrated. Only once have I seen it fail to prove correct, and this was in a community where smallpox existed and where a widespread epidemic of chickenpox prevailed. Therefore I insist that every patient, and certainly every adult patient, who presents himself with an acute eruptive vesicular disease should be isolated at once and kept so until every vestige of doubt has passed. If the disease prove to be chickenpox, in three to five days the vesicles will have flattened down, little remaining but dark crusts. If it be eczema, the character of the disease will in two or three days become plainly evident. Occasionally impetigo contagiosa may for a time deceive the physician, but the fact that this is a disease peculiar to children and appears chiefly around the mouth makes it not difficult of diagnosis. If the case be one of smallpox, almost invariably the symptoms, even in the mild cases, are more severe than in the other diseases named. A history of headache, backache, nausea, one or all, may be elicited by close questioning, symptoms of a prodromal stage of several days which does not exist in chickenpox. And let it be ever kept in mind that chickenpox in the adult is one of the rarest of diseases. In my whole professional career I have seen but three or four cases of this disease in persons over twenty years of age. That several cases resembling chickenpox should occur almost simultaneously in several adults in the same community is to my mind proof positive that the disease is not chickenpox but smallpox. And yet I have encountered in the past year an instance where a reputable physician treated three adults in one family with this form of acute eruptive disease, called them all chickenpox, and by this inexcusable mistake to my certain knowledge communicated smallpox to 13 persons and possibly many more. I know also of an instance where a physician, on the seventh day of the eruption, persisted in calling the disease chickenpox when he certainly should have known that no case of this disease ever showed such a perfect crop of vesicles as was present in this case on the seventh day. Such blunders are simply inexcusable, and should and do

subject physicians to the just criticism not only of their professional brothers, but even of intelligent laymen.

I do not propose here to present a complete differential diagnosis of smallpox. I commend you to a careful study of modern authorities to refresh your knowledge on this point. But a few words on the subject of diagnosis may be here permitted. Since the most common error and the most disastrous consists in calling cases of mild smallpox varicella, I will not here refer to any other disease which may be mistaken for smallpox.

(1) Varicella is very rare in adults.

(2) The prodromal period of smallpox is three or four days, that of chickenpox one day or less. As a rule we do not know of the existence of the latter disease until the eruption appears, while in smallpox patients feel bad for several days prior to the eruptive stage.

(3) In varicella the fever continues after the eruption appears; in smallpox it drops to about normal with the appearance of the eruption.

(4) In varicella the eruption first appears on the trunk and generally most abundantly on the back; in smallpox on the face and wrists.

(5) In varicella there is as a rule no eruption on the palms of the hands and the soles of the feet. In smallpox the eruption always appears in these places.

(6) In chickenpox the eruption appears in crops, a new one coming on the first, second and third days. By the time the last appears the first are drying up. In smallpox the eruption appears in but one crop, the vesicles continuing to develop in size from day to day, until, in the more severe cases, the full development is reached on the ninth day. In the very mild cases the development is complete at an earlier day.

(7) The vesicles in chickenpox differ greatly in size. In smallpox the size is somewhat uniform.

(8) In chickenpox a pin prick causes collapse of the vesicle. This is not true in smallpox.

These points should be well established in the mind of every physician, and with a careful history taking of every doubtful case there should not be the errors that have been so frequently made in the past

year. Such errors, resulting as they have done, in the wide prevalence of a disease that should have been stopped in its inception, entail a great and unnecessary expense on a community, and a severe trial to physicians themselves, to say nothing of the loss of practice often resulting to those directly engaged in the management of a smallpox epidemic.

The diagnosis having been made, what shall be done? Believing that the suggestions I have made in the Board of Health Bulletin and also in the West Virginia Medical Journal are sufficiently clear and full, I here repeat them:

1. When called to a case of this disease isolate the patient in a room as free from furniture as possible.

2. At once vaccinate every member of the household.

3. Secure the names of all persons who have been in any way exposed to the patient, search them out and vaccinate immediately, keeping them under observation for 16 days and seeing them daily for the last six days of this period.

4. But one person should be admitted to the room of any patient, and that person should not be allowed to come in contact with any others.

5. If several cases occur in a community, by far the safest and most economical measure to stamp out the disease is to put all in one building, if such can be found. In this way we avoid the infection of a number of houses with their contents and the necessary destruction of much property that cannot be disinfected, such as pillows, etc. We also avoid the great expense entailed by having to support at public expense a number of quarantined families.

6. After the death or recovery of the patient close every crack and crevice in the room, moisten the room with steam and fumigate with formaldehyde or sulphur. 1—Place a metallic bucket in a tub of hot water in the middle of the room, put in the bucket not less than 10 ounces of powdered permanganate of potassium and pour on this 20 ounces of formalin. 2—Or crush six pounds of stick sulphur, put in bucket as above, add a little alcohol and set fire to it. In either of the above cases close the door, stop all cracks from the outside and leave the room closed

for twelve hours. Then open all doors and windows and have all woodwork and furniture in the room cleaned with boiling water. Better still with a bichloride solution. All bed and body clothing that can be washed should be soaked in bichloride solution 1 to 2,000 and then boiled and washed. Destroy what cannot be disinfected.

A word on the subject of vaccination. Of course we physicians well know that vaccination well performed and repeated as necessary is an absolutely certain preventive of smallpox, just as certain, in my opinion, as is an attack of smallpox. Therefore this is the one disease that need not exist. The money loss entailed by loss of time of the patients, medical attendance, nursing, destruction of clothing and other property that has become infected, guarding and feeding of quarantined patients is enormous and absolutely unnecessary. But it is very difficult to impress the people with the truth of these statements, and hence they must continue to pay the bills until they absorb more light and knowledge. These we have tried to give as we have been called to different infected localities in addresses to the people as opportunity presented. Not more than one-tenth of the children in rural schools have been vaccinated. An intense prejudice exists against the operation based on misinformation as to its results, many false reports being in circulation as to arm amputations and other terrible disasters said to have followed it. I tell the people what is true, that in a personal experience of over forty years I have never seen any result worse than a very sore arm, and that I have never seen any physician who ever told me that he had ever seen any worse result. As a result of one talk in a school in a village of about 500 population 94 vaccinations were done; so I feel that the people are quite willing to be enlightened on the subject. This is missionary work that I commend to the health officers present.

Here are several facts as to the protective power of vaccination drawn from my personal experience: 1—The only successful vaccination I have had was considerably more than sixty years ago. I have never contracted smallpox, although exposed more than a thousand times in

treating cases, at one time having 36 cases on hand. 2—I vaccinated an infant five weeks old three days after exposure and allowed it to suckle its mother through an entire rather severe attack of smallpox, and it did not contract the disease in any form. 3—I vaccinated another infant ten months old on the fourth day after exposure and permitted it to suckle its mother through an attack of smallpox, and though vaccinated late it was so far protected that it had but six or eight small vesicles on its face, was not ill a day and never took any medicine.

On the other hand, I vaccinated an old couple much against their will. As I learned some days after, the woman washed the arms of both with alcohol as soon as I had left the house. Both contracted smallpox. The husband, vaccinated many years before, recovered; the wife, never vaccinated, died. Is it too harsh to call this a case of suicide? 2—In a family whose head was a smallpox guard I vaccinated all the children except an infant of five weeks. The mother protested against the operation, even when I assured her that it would die if it contracted the disease, and that the responsibility for its death must rest on her. All the vaccinated children lived; in about three weeks the infant died of smallpox. Is it too harsh to call this a case of infanticide? 3—Among the last forty cases I have treated there was but one patient who claimed to have ever been vaccinated. If this operation possesses no protective power, why should there be so very small proportion of cases among the vaccinated, but one-fortieth? As Schamberg has recently shown, in twenty years Germany, well vaccinated, lost but 1,000 people from smallpox, while for a like period her neighbor Austria, poorly vaccinated, lost about 240,000 of her population. In 1910 in the whole German Empire there were only 236 cases of smallpox. There have been many more cases in this little state in the past year. Niagara Falls has recently had hundreds of cases because of the unwillingness of the people to be vaccinated. So general was the epidemic that the State Health Department insisted on the closing of all churches, schools, theaters, dance halls, moving picture shows, public libraries, factories, workshops and even the

hotels, unless the employes submitted to vaccination. What an outrage that a community should be made to suffer these inconveniences because of the ignorant prejudice of a limited number of the citizens.

Not all of this prejudice is because of fear of the result. Some people still think that smallpox can be warded off by cleanliness of person and premises, an absurdity that no intelligent physician will for a moment entertain. An unprotected person, if exposed to the disease, will contract it just as certainly when clean as when filthy, in clean premises as in filthy ones. While we would be very slow to encourage unsanitary conditions, yet those who entertain the idea that they may escape smallpox by observing the best sanitation must have their minds disabused of this erroneous idea. It will not work.

The intense prejudice against the only certain preventive against a vile disease, the vast expense entailed by enforcing quarantine regulations, guarding and feeding shut-in families, destroying valuable property because it can not be disinfected, have led me to the opinion that we should no longer strictly quarantine smallpox, no longer guard and feed families, and pay for destroyed property, but should adopt the Minnesota plan, which is simply to placard the house containing smallpox, allow the well members, if properly vaccinated, to go about their callings, and announce to the public that if they desire they can be protected from smallpox, but that no other way than vaccination will longer be enforced. It may take a little time to educate the people to endure this radical change, but we will come to it sooner or later, and I am ready for it now.

THE USE OF PITUITRIN IN OBSTETRICS.

H. G. Tonkin, M.D., Martinsburg, W. Va.

Perhaps no discovery in therapeutics in recent years is of more importance than that of pituitrin, an extract of the posterior or infundibular portion of the pituitary body. While this product is of value in several pathological conditions, perhaps in none does it stand out more brilliantly than in the field of obstetrics.

Before going into the therapeutics of

pituitrin it might be well to mention briefly a few of the pioneers in hypophysis therapy. The leading ones who have taken up this work are such men as Dale, Frankal-Hochwart and Frohlich, Bell, Hofbauer, Bondy of the University of Breslau, Voight of the University Obstetrical Clinic at Berlin, Richter of the University of Vienna and others.

Pituitrin, as the infundibular extract has been named, exerts several very important physiologic actions in addition to its effect on the uterine muscles. Judging from this latter effect, it is only reasonable to suppose that it is capable of promoting the action of any non-striated muscle tissue either by direct effect or through the controlling nerves. It is for this reason that pituitrin is of exceptional value in overcoming the intestinal atony frequently following abdominal operations, especially when the organs have been extensively manipulated, and also is it of value in atony of the bladder, post-operative or post-partum.

Several instances have been recorded in which pituitrin was employed locally in very much the same manner as adrenalin has been used to control hemorrhage. In severe menorrhagia gauze packs saturated with the preparation have been reported as resulting in a suppression of the flow, although I have not personally used it for such.

The ability of pituitrin to produce and to strengthen uterine contractions is at the present time the most important feature of pituitrin therapy. Current medical literature teems with reports of cases in which pituitrin rendered unnecessary the application of forceps, which otherwise would have been urgently demanded.

Opinion is practically uniform that pituitrin has no power to initiate contractions of the uterus unless nature is fully prepared. For that reason it is not indicated in efforts to produce artificial abortion when such is required in eclampsia, or any of the other pathological conditions that render an early labor advisable. It is generally conceded that pituitrin should be administered when the cervix is almost or quite obliterated, or, in other words, during the second stage of labor. It is still doubtful whether pituitrin should be administered in an effort to hasten labor

in cases of eclampsia on account of its increasing the blood pressure. Some observers contend that the blood pressure is only slightly increased and that this increase may be safely ignored.

Pituitrin should be administered in every obstetrical case in which the pains appear to be inefficient and in which a shortening of the duration of labor is desirable. It is necessary to determine that there are no serious bony or other deformities that would render impossible the birth of the child without operative interference. Cases in which primary or secondary uterine inertia exists probably form the ideal cases for pituitrin therapy. It frequently happens that the pains are very satisfactory in the first stage, but when cervical dilatation is complete they become weak or disappear and labor fails to progress. These cases are, as a rule, promptly and satisfactorily influenced by the injection of pituitrin.

Narrow pelvis of moderate degree does not constitute a contraindication, provided it is possible for a natural birth to take place. In albuminuria and severe cardiac diseases with broken compensation, in which it is advisable to relieve the patient of all work possible, pituitrin is of considerable value. On behalf of the child the infundibular extract may be resorted to when the heart action is rapid and irregular, and if there is danger of intrauterine asphyxia. Placenta praevia also is an indication for the hastening of labor after rupture of the membranes has taken place, dilatation is complete, and version has or has not been performed. Satisfactory results in this pathological condition has been claimed by Hofbauer, Schmid, Fries, Studeny and others. In a centrally placed placenta praevia, however, Hauch and Meyer claim that the action of the infundibular extract is not absolutely certain.

While pituitrin is not suitable as a means of instituting abortion, according to Hirsch and other observers, yet it is believed to be of value in accelerating the natural evacuation of the uterine contents. It is also of considerable value in controlling the hemorrhage of abortion.

After the administration of pituitrin certain after effects remain that are highly desirable. For example, in the last stage of labor there is a quick separation of the

placenta and complete absence of or only slight secondary hemorrhage. There is a marked tonic effect upon the renal function, a stimulation of the urinary bladder and the intestinal tract, thus promoting active elimination. Because pituitrin renders unnecessary the application of forceps in the majority of cases, it thus removes to a great extent the possibility of puerperal sepsis.

To briefly summarize the uses of pituitrin in obstetrics, in reviewing the history of the several cases in which I have used it, I have found that the results in the first stage of labor are not satisfactory unless the cervix is effaced or considerably dilated. With an undilated cervix it is not recommended; that it is a valuable stimulant to uterine contraction; that it is most efficacious during the second stage of labor; that it is of some value in the third stage; that post partum it is also of some value, but not better than ergot; that I believe its proved value is limited to the second stage of labor; that the contractions caused by this agent appear usually within ten minutes; they are essentially rhythmical and of greater efficiency at the expulsive stage of labor. It will not excite labor pains except possibly at term, and so is of little value in the induction of abortion. The drug is administered intramuscularly, commonly in 1 c.c. doses, and repeated at frequent intervals if necessary until satisfactory contractions have been secured. Reaction varies markedly in different individuals.

PRINCIPLES OF CRIMINAL ANTHROPOLOGY.

Arthur MacDonald, Washington, D. C.,
Honorary President of the "Third International Congress of Criminal Anthropology" of Europe.

Criminal anthropology is a recent line of research. It includes the study of man mentally, morally and physically, and necessarily depends on the results of many sciences. It is therefore distinctively synthetic in character. Criminal anthropology affords more opportunity for persons of ability to carry out the highest ideals than any other branch of inquiry.

The following are some of the princi-

ples of criminal anthropology, or what might be called its platform:

1. Degrees of criminality should be estimated according to detriment to the community. From this point of view international crime or war is by far the greatest of all crimes.

2. History is mainly history of the abnormal, especially war, and one of the objects of criminal anthropology is to lessen and prevent war. Montaigne says: "It is more barbarous to kill a live man than to roast and eat a dead one."

3. The greatest of all studies is man, which is based upon the individual, the unit of the social organism.

4. If the study of civilized man is to become a science it must depend upon investigation of large numbers of individuals, and the method should be the same for all classes if we are to distinguish between the normal and abnormal.

5. The best method of study for criminal anthropology is that of the laboratory in connection with sociological data.

6. The thorough investigation of ONE human being with the means at the disposal of science would make a volume.

7. All facts about human beings are important from the scientific point of view, whether those facts be immediately available or not.

8. All that is diseased is abnormal, but not all that is abnormal is diseased; thus a hand with six fingers is abnormal, but not necessarily diseased.

9. We must study the normal to comprehend the abnormal.

10. When the normal acts in an unsuitable way, or at the wrong time or place, it may become abnormal. The fundamental conception of the abnormal is EXCESS of the normal; but

11. The difference in degree between the normal and abnormal can be so great as to result in a difference of kind: just as when two fluids reach a certain amount a precipitate is formed which is very different from the ingredients from which it was deposited.

12. Abnormal man may be abnormal in the right direction, as genius man, talented man or statesman; or in the wrong direction, as criminal, pauper or defective man. It is all MAN, and the study of these different classes might be called the

anthropology of the living as distinguished from prehistoric anthropology.

13. Of all forms of abnormal humanity crime is nearest the normal; the study of criminals, therefore, is mainly the study of normal men, and knowledge gained may be generally applicable to the community as a whole. Therefore,

14. The prison and reformatory can serve as a humanitarian laboratory for the benefit of society. As the surroundings of the inmates are similar, conditions for scientific research are favorable.

15. As in machinery we first repair the parts out of order, so in society we first study the criminal, pauper, insane, feeble minded and other defectives, all of whom constitute about one per cent of the community. But

16. Why should we allow one per cent of society to cause so much trouble and expense to the remaining ninety-nine per cent, crime alone costing more than one-half billion dollars annually? It is mainly because of neglecting the young, where study of man should begin. For

17. There is little hope of making the world better if we do not seek the cause of social evils at their foundation.

18. No evil can be PERMANENTLY lessened without first finding its cause. There is probably no ONE cause of anything, but a chain of causes.

19. Drunkenness is not only one of the main causes of crime, but one of the greatest enemies of humanity, because it brings suffering upon so many innocent people.

20. We cannot be tempted to do wrong unless there is something in us to be tempted; that something is a part of ourselves as distinguished from our environment; therefore,

21. The comprehensive study of man requires investigation of both individual and his surroundings, for the environment may be abnormal rather than the man.

22. Cranks or mattoids who attempt the lives of prominent persons are very important solely on account of the enormous injury they can do to society. They therefore should be studied most thoroughly.

23. Just as the physician studies his patient in order to treat him properly, so one should study the criminal.

24. The exhaustive investigation of a

single criminal illustrates just how and by what steps both environment and inward nature lead to criminal acts.

25. Criminals, paupers and other defectives are social bacilli which require as thorough scientific investigation as the bacilli of physical disease.

26. No one should be held responsible for the first fifteen years of life, nor is any one accountable for the tendencies inherited from ancestors. As the die is usually cast before adult life arrives, responsibility is most difficult to determine, and is often a minimum quantity. Therefore.

27. In judging human beings we should emphasize their excellencies rather than defects. As has been said, to know all is to forgive all; yet

28. Every person dangerous to property or life, whether insane, criminal or defective, should be confined, but not necessarily punished.

29. The determinate sentence permits prisoners to be released who are morally certain to return to crime. The indeterminate sentence affords the prisoner an opportunity to reform without exposing society to unnecessary danger: but

30. Society has no right to permit prisoners to be released who will probably return to crime; for

31. Where it is a question between justice to the individual or justice to the community, the community should have the benefit of the doubt.

32. The prison should be a reformatory and the reformatory a school; the object of both should be to teach good mental, moral and physical habits; both should be distinctly EDUCATIONAL. There should be a minimum temptation to do wrong and a maximum encouragement to do right.

33. Institutions for reforming human beings should have the conditions as similar as possible to surroundings outside, so that when inmates are released they may adapt themselves more easily to society and not become misfits.

34. Every one has the right to a proper bringing up; and

35. The time has come when we should study a child with as much exactness as we investigate the chemical elements in a stone or measure the mountains on the moon.

36. One purpose of criminal anthropology is, through knowledge gained by scientific study, to protect the weak, especially the young IN ADVANCE, before they have become tainted and fallen; not locking the barn door after the horse is stolen.

37. The treatment of young criminals should be the prototype for treatment of adults, and procedures against them should have as little publicity as possible.

38. Publication in newspapers of criminal details is an evil to society on account of the power of imitation. In addition it makes the criminal proud of his record, develops the morbid curiosity of the people, and it is especially the weak who are affected.

39. Place confidence in the so-called bad boy, awaken his ambition and teach him to do right for right's sake.

40. Put the criminal upon his honor. A criminal once said, "If they will not believe me when I tell the truth I might as well tell lies."

41. Nothing will hinder development of the young more than the prospect of having plenty of money and no necessity to work. Idleness often leads to crime.

42. It is more important to know what is good than what is true; for

43. Increase in intellectual development is not necessarily connected with increase of morality, and education which trains the mind at the expense of the will is a questionable education.

44. The longer we live the more we appreciate the average honest man, as compared with the dishonest talented man.

45. To any observer of life the impracticability of pessimism and the advantages of optimism are evident. It has also been estimated that

46. Most of our thoughts, feelings and acts are indifferent: but of those remaining, three-fourths are pleasurable and one-fourth painful, indicating more pleasure than pain in the world.

47. Act as thou wouldst act if all the consequences of thy act could be realized at the moment thou actest.

A thought, good or evil, an act, in time a habit, so runs life's laws; what you live in your thought-world, that sooner or later you will find objectified in your life.
—Ralph Waldo Trine.

REPORT OF FIVE CASES OF DEMENTIA PRAECOX TREATED BY NUCLEIN SOLUTION (LUNDVALL'S FORMULA).

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R. M. Bobbitt, M.D.,

Assistant Physicians West Virginia Asylum, Huntington, W. Va.

Reviewing the works of Lundvall, Bayard, Holmes and others with regard to the treatment of dementia praecox by the use of nuclein solution, it was decided that the same experiment would be carried out in a few cases at this institution.

In the cases here treated the diagnosis was made purely from clinical symptoms and without the Abderhalden test. However, we feel certain as to the diagnosis in each case.

All of these cases were given calomel and laxative salines and a normal leukocyte taken. They were then started on intramuscular injections of nuclein solution. The formula used was that modified by Lundvall to contain besides the sodium nucleinate, small quantities of arsenous acids, quassis and hetole. We began with a dose of one cubic centimeter and gradually increased it during the first two and one-half months to ten cubic centimeters and then increased or diminished it according to the reaction of the patient. The solution was injected deep into the muscles, using aseptic precautions.

The theory of beneficial results obtained by the use of this solution is by the production of an artificial hyper-leukocytosis and by the marked tonic action of the formula. The febrile reaction heretofore described by Holmes and others has been a chill with rise of temperature to 102° to 103°, with general malaise and sometimes aching pains throughout the body, and the leukocyte count increasing to as high as twenty thousand per cubic millimeter.

This reaction occurs within a few hours following the injection of the solution.

The reaction obtained in our cases was not as severe as spoken of by other authors. We obtained a chill in only one case after the patient had received eleven cubic centimeters.

We received no febrile reaction on the administration of less than three cubic centimeters. The reaction obtained on doses over this amount were distinct but not severe, the temperature rising from 99° to 101°, the pulse rate being moderately increased and a feeling of malaise occurred in some cases. Our first marked hyper-leukocytosis occurred after the injection of five cubic centimeters of the solution. The hyper-leukocytosis in our cases ranged from 11,000 to 15,000 a few hours after administration of the nuclein, the count in one case being as high as 17,500. Our intention was to increase the patient's leukocytes to 20,000 per cubic millimeter, but this figure was never reached in any of the cases. In making differential counts of the leukocytes of these patients the polymorphonuclear neutrophiles were found to be relatively increased. There was never any local reaction.

Agreeing with Itten, who had nine cases without any results, we wish to note here that we not only found a lack of the claimed tonic effect, but four of our five patients persistently lost weight and their physical condition became poor. One case, however, gained three pounds during the five months.

We were impressed by the absolute lack of mental improvement in four of these cases. Case No. 1 showed some temporary improvement, taking more interest in a routine life and talking more lucidly to her people. However, this improvement lasted only a short while.

We discontinued the administration of nuclein because of the persistent loss of weight with failing health and lack of mental improvement.

The following table gives a report of these cases in brief:

SANITARY CONTROL OF WATERWAYS.

By Scott G. Highland,
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and Sewerage Systems.

In the State of West Virginia there is no adequate control over pollution of streams and sanitation of waterways in general, such as obtains in Pennsylvania, Ohio, New York and a number of other states.

The State Board of Health has general powers relating to nuisances, and presumably could secure the abatement of cases of gross stream pollution on the ground that they constitute a public nuisance. However, the State Board of Health has never used its general powers in this way except possibly in minor and unimportant cases.

At the next session of the legislature it is the earnest desire of all who are familiar with the prevailing conditions that the existing laws may be supplemented for the better preservation of the public health by preserving the purity of the waters of the State. The State Board of Health should have general supervision and control over the waters of the State in so far as their sanitary and physical conditions affect the public health and comfort. It should order sewage disposal works to be installed to correct and prevent their pollution. The Board should be authorized in connection therewith to establish a Bureau of Sanitary Engineering, with a sufficient appropriation for its organization. Broad and active duties of investigation and study may be prescribed.

The Bureau of Sanitary Engineering should examine into all public and private systems of water supply and prepare maps and drawings of the same for reference. It should examine and patrol as far as possible the watersheds or catchment basins of all public water systems and investigate and report upon all sources of pollution of all public and private systems of sewage disposal: it should inquire into and investigate offensive trades and nuisances, disposal of trade wastes, sewage and other offensive matters, devise means for their

No. Sex. Age	Occupation	Inhered. infl.	Past history before onset of disease.	Duration of disease	Type of case.	Time of treatment.	Min. dose.	Max. dose.	Normal leucocyte count per cubic millimeter.	Type of reaction leucocyte count per cubic millimeter.	Phy. con. at end of 5 mos.	Men. con. at end of 5 mos.
1 F 29	Student.	Denied.	Bright and industrious, but peculiar.	9 yrs.	Hebephrenic.	5 mos.	1 cc.	12 cc.	5,800	Temp. 99.8 mod. rise in pulse rate leuk. 14,000.	Lost 3 lbs. Phy. con. same.	Slight temporary improvement.
2 F 30	None.	Grand blood rel.	Habits irregular.	4 yrs.	Hebephrenic.	5 mos.	1 cc.	10 cc.	8,200	Temp. react from 99.4 to 101 with rise in pulse rate, general malaise leuk. 12,500.	Lost 6 lbs. Phy. con. poor.	No improvement.
3 M 25	Book-keeper	Father alcoholic.	Temperate, hard student, good education.	7 yrs.	Hebephrenic.	5 mos.	1 cc.	12 cc.	8,000	Febriile reaction, leuk. 18,000.	Lost 16 lbs. Phy. con. poor.	No. improve. Worse.
4 M 24	Student.	Denied.	Always peculiar, hard student.	5 yrs.	Hebephrenic.	5 mos.	1 cc.	12 cc.	5,900	Slight rise in temp. and pulse rate leuk. 13,400.	Lost 13 lbs. Phy. con. poor.	Mental con. Worse.
5 M 30	Clerk.	Denied.	Always healthy, industrious, bright mentally.	6 yrs.	Hebephrenic. Some evidence of catatonia.	5 mos.	1 cc.	12 cc.	6,600	No febrile reaction leuk. 12,000.	Gained 3 lbs. Phy. con. about same.	No improvement.

control and perform such other duties and exercise such other functions as the State Board of Health may designate.

The examination of public and private water supplies should be made systematic and sufficiently frequent to keep the public informed at all times as to the condition of the water.

The best service can be rendered the people of the State by not merely trying to remedy existing unsanitary conditions, but also by taking care that proposed construction shall not be of such a character as to give rise to them in the future.

Lack of Engineering Services, Plans and Records.

The search for maps, plans and records of and information concerning the various water supplies and sewerage systems of West Virginia has shown that many municipal systems have been built without the engagement of proper engineering services, and that in many cases both design and construction are defective. The effort of many municipalities to keep down expenses on water works construction by getting along without the services of an experienced engineer, or by engaging an engineer of inferior qualifications, has resulted in deficient plants.

State Supervision.

The only sure remedy for the general faults named is strict supervision by the State Board of Health over all water supply and sewerage design and construction as well as over the operation of such systems after they are built. Sources of water supply are too often chosen without due regard to both physical and sanitary quality of the water yielded or without consideration of possible necessary treatment, and sewage is often disposed of in what may seem to be the manner which will be the least expensive without regard to the nuisance that may occur or to the effect that may be produced on neighboring settlements.

As population increases the need becomes much more acute for protecting the rights of a community against transgression through the failure of others as well as protecting its own health and interests from possible short-sighted policy. Many of the most progressive states have

long since recognized the great advantage of centralized authority over the design, construction and operation of all water supply and sewerage systems.

In West Virginia it is time that the State Board of Health be given, by definite legislation, the above mentioned supervisory powers. At the present time there is no law requiring that plans for sewerage construction be submitted to the State Board of Health for approval; and in all parts of the State water systems can be constructed without the slightest interference from that body. The people have no protection whatever, unless later the water can be proven bad, in which case improvements may be required under general powers which the Board possesses. Much sewerage construction has been undertaken by the developers of real estate, and each of these gives thought only to his own sewerage problem. In most cases the effect in the past has been to get the sewage off the development as quickly and as cheaply as possible, regardless of the effect on neighboring settlements. As no supervisory authority worth mentioning has been exercised, few of the systems have been built according to good practice, and many foul conditions have arisen. Usually the system built by one promotor does not fit in with that established on the neighboring development. When public systems are finally built there will be such a conglomeration of small isolated systems as to make the problem of fitting them into a comprehensive scheme most difficult.

With the institution of personal examination of private water supplies the public will receive the direct benefit of suggestions made from a first hand knowledge of conditions, and assistance can be rendered in procuring new supplies where old ones have been condemned. After the state has been gone over in this way the knowledge of the condition of its water supplies, both public and private, will be most complete, and a great step will have been taken towards reducing the high death rate from typhoid fever and other water-borne diseases which now exist. In thickly settled communities it is impossible to maintain well waters in a safe condition, no matter what safeguards are attempted in the matter of caring for sewage and

drainage, as so many different polluting influences exist that are entirely lost sight of. There is only one remedy to be applied in thickly settled communities, however small, and that is for everybody to take water from the public water supply where one exists, and where there is none to have one installed as quickly as possible.

The urgent necessity of creating a water district for each municipality covering its entire suburban population is reflected in the decrease of water-borne diseases in cities where the water supply is under the careful supervision of a skilled chemist, with full authority over suburban settlements where separate systems are maintained, and where the source of supply is often questionable and inadequate. The importance of state control over all water supplies is here apparent, for the exchange of a grossly polluted water supply for one not much better would be of little benefit.

In West Virginia it is not a question of conservation of the water supplies, but the preservation of the natural purity and wholesomeness of the sparkling mountain streams of the state, famous for their coolness and salubrity.

Original Abstract.

THE TRAUMATIC NEUROSIS.

By Tom A. Williams, M.B., C.M., Edin.,
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Soc. De Neurol., Paris, etc.

Of this misnomer the cause is shown to be merely psychic, derived from a false notion of the patient which induces depressing emotions, which disturb both the bodily health and life relation. A clear illustration of the mechanism is that of the "conditioning" of the gastric reflex of dogs by psychological stimuli whether these are pleasurable or painful. The removal of the extraneous suggestion would remedy the neurosis but for the fact that memory maintains its action. So that the mental content must be modified at its foundation, and this requires considerable analysis of the patient's trends. Hence the

complete failure of such naive procedures as reassurance and suggestion.

Law suits and malingering, so often interwoven with these cases, have created misunderstandings. But indemnity is not necessarily curative even of the maligner. A case which lasted seven years after receiving heavy damages is reported.

In the complicated case proper psychological reconstruction, made possible by clear analysis, inevitably cures, as the mechanism of neurotic disturbances after accidents differs in no way from that we find when there has been no accident at all. Furthermore, its nature is not of a complexity beyond the understanding of a layman, so that its principles can readily be grasped when presented in court by an expert witness who really understands them.—The American Journal of the Medical Sciences, October, 1914.

Selections.

SCOPOLAMIN SEMI-NARCOSIS, OR "TWILIGHT SLEEP."

George C. Mosher, A.M., M.D.,
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At the outset I want to express my appreciation of the compliment paid the writer by the publication in the recent issue of the Bulletin of the Jackson County Medical Society of an extended bibliography by the Librarian of the Medical Library Club on the subject of semi-narcosis by scopolamin. This shows the intense interest in the subject and affords our members an opportunity to prepare themselves to intelligently discuss the paper. The Obstetrical Section is to be congratulated on this innovation, and it is to be hoped it will become an established custom. It is a matter of regret that the list was not greatly extended. Not to mention the publication in every medical journal in this country. Recently the laity has been given a broadcast on twilight sleep, which is phenomenal. The Literary Digest, McClure's Magazine, The World's Work and practically every popular magazine, especially those particularly devoted to women readers, such as the Ladies' Home Journal, The Delineator and The Woman's World, have had sign-

ed articles by obstetricians of international reputation. The New York Times has a full page article written by a physician. Other metropolitan papers have followed this with stories of the "Twilight Sleep." In fact no other topic except this has vied with the war.

The laity thus being given a general and popular idea of the subject, it is the duty of our section to be prepared to meet intelligently the arguments of our patrons and to crystalize the medical sentiment of the community on the matter. In the language of the author of an article on this topic in the October number of the American Journal of Obstetrics, "To either commend or condemn a therapeutic measure without personal knowledge and experience with the drug is unscientific and not in accord with the tenets of progressive American medicine."

Since the dawn of civilization the world has been stirred by the discovery of any means designed to lighten the pains of child-birth. The humanitarian instinct of the twentieth century offers no exceptions to this broad sympathy; therefore, when a popular magazine made public, through the writings of a grateful patient, the suggestion that this technique of Kronig and Gauss at the Freiberg Clinic resulted in actual painless labor, the statement at once filled the minds of all prospective mothers with the hope of their being automatically relieved of any possible suffering in the episode to which each of them looks forward with more or less dread and apprehension, as well as joyful anticipation.

Unless one has kept in close touch with the thought of these expectant patients it is impossible to realize what a sensation has been created by these stories in lay periodicals. Insistent appeals come to the advisers of these mothers that the method may be used for their accouchement.

It is a satisfaction, therefore, to the writer that the section asked for statement of the status of twilight sleep at the present time. First, because of the widespread interest on the part of our patients; and, second, because of the fact that it gives an opportunity to sound a warning.

Like every one of the discoveries in obstetrics save only that of Semelweiss and Oliver Wendell Holmes regarding puer-

peral sepsis, the application of the remedy is limited in its utility. Cases must be selected as to idiosyncrasy, the mental peculiarities and temperament of the patient. Gauss claims that 70% of his cases are successful. At the New York Lying-In Hospital 25% only are on record as being thus relieved. This latter is accounted for by the fact that many cases come in well advanced in labor; 60% of them under observation from the onset of labor were successful. The Jewish Maternity Hospital in New York reports 200 cases in which 90% were successful.

Most important of all requisites for success is the environment, which includes a darkened delivery room, properly equipped, also the necessary quiet, which is absolutely essential. This makes it a hospital procedure rather than one of universal application. Dr. Ross McPherson in his recent paper on the subject explains this by saying that it is not only to be admitted, but to be emphasized that the method is only practical for general practice in private houses when the finances of the patient permit the transfer of a complete working force to her room, for the entire duration of labor.

The constant attendance of the obstetrician after the use of the scopolamin has been begun is all important, in order to keep the patient within the range of amnesia which has fancifully been called the German Twilight Sleep. This medication requires a delicate and constant alertness on the part of the attendant. The whole success of the method is based on these points. To this carefully worked out method and to its rigid adherence, rather than to any claims of originality Kronig owes his fame. There is no question that there is a wide variation in the susceptibility of individuals as to the effect of scopolamin. The evidence of untoward results shows how much depends on the judgment and experience of the obstetrician as to size of the dose and the frequency with which it is administered.

The painless childbirth by scopolamin is the outcome of a method which we all remember was recommended with much eclat twelve years ago. The H. M. C. tablet which was then tried out by many of us was the forerunner of the recent vastly more scientific and elaborately developed

technique. However, it is certain that much of the criticism of the Freiberg method is based on the objections which applied to the old system; in fact a prejudice rather than a judgment.

Since so much surprise has been expressed by magazine writers that doctors, whom, as they say, they have looked on as being engaged in an unostentatious philanthropy or eleemosynary pursuit, and the fact that they have been rudely awakened by the discovery that for twelve years this method has been available but ignored by the profession, it is but just to explain to our patients the real facts.

According to the experience of twelve years ago the greatest objection to the method was the profound narcotism which followed the indiscriminate administration of morphin $\frac{1}{4}$ grain, one of the ingredients of the tablet which in unvarying proportions was first offered to the profession by the manufacturers. The untoward results of that treatment included uterine inertia, often requiring the use of forceps to terminate the labor and in a number of cases fatal asphyxia of the foetus. It requires no argument to determine that these things having been disclosed the treatment soon fell into deserved disrepute, and its use was condemned in all of the large maternity hospitals.

Kronig and Gauss have reported up to the spring of this year 5,000 cases treated by the Freiberg method. These have been in every instance under constant surveillance. They claim that uniformly good results, both as to mother and child, have been experienced. Similar reports have come from other of the smaller hospitals in Germany.

Much stress has been laid on the fact that these patients are up the second day. All except those suffering from lacerations are given setting up exercises similar to those in military drill. These are not peculiar to Freiberg, but are the method of the German school of obstetrics in general, and have no significance in reference to Dammerschlag, but are merely coincident to the treatment. In this country it has not been considered desirable to shorten the lying-in.

The scopolamin treatment is to be first credited to Von Steinbuchel, who in 1902

began its use. In 1906 Gauss reported that he had begun it in 1903, and after three years gave a record of 500 cases. In 1907 he published an additional glowing account of 1,000 cases. Kronig followed with his report. Franklin S. Newell of Harvard reported 112 cases in 1907, but abandoned the method on account of foetal asphyxia. Hocheisen of Berlin, after 300 cases, opposed the treatment, claiming, first, it did not accomplish the desired result; second, that it could not be regarded harmless; third, it could not be recommended in private practice because of the necessity of extra assistance, which could not be summoned promptly in emergency.

The recent statement concerning the scopolamin treatment, giving the views of some of the greatest masters of the art of obstetrics in America, shows the conservatism which properly hedges about all innovations in medicine. Dr. Barton Cooke Hirst of Pennsylvania thinks the element of suggestion an important feature in the successful application of twilight sleep. Dr. Joseph B. DeLee of Chicago, who observed the treatment in Freiberg in 1913, was impressed by the fact that five of the cases he observed were terminated by forceps. Dr. Charles M. Green of Harvard had formerly used the old method, but was not impressed because of the unsatisfactory results obtained. Dr. J. Whitridge Williams of Johns Hopkins has tried the plan and is now ready to begin a new series of cases before he reaches a final conclusion. Dr. Henry D. Fry is opening a service for the twilight sleep at Georgetown Hospital, Washington, and endorses the scopolamin treatment.

Drs. Harrar and McPherson, in the October number of the American Journal of Obstetrics, have a most interesting and valuable study of 100 cases under scopolamin semi-narcosis and 100 cases without, as a control, which were under observation during the past summer at the New York Lying-In Hospital, in which they show by statistical comparison the advantage of the scopolamin treatment.

In the 100 cases by scopolamin the labor averaged 16 hours; without, 18 hours. In 37 cases of the scopolamin patients lacerations followed; in the cases without scopolamin were 46 lacerations. The third stage

of labor under scopolamin was 13 minutes; without scopolamin, 16 minutes. In the scopolamin cases there was hemorrhage ten times, of which two were rather severe, but controlled without packing. These, it is to be observed, were cases in which pituitrin had been given more than an hour before delivery; in those without scopolamin there was hemorrhage 13 times, two of which required packing. Forceps had to be used in the scopolamin cases 17 times; in the control cases 11 times. This is explained by the fact that Harrar and McPherson discovered that there was a more rapid dilatation of the cervix than usual, but a delay in the advance of the presenting part on the perineum. They state that having resorted to the ingenious addition of pituitrin when this delay occurred at the outlet the need of forceps was obviated.

In regard to foetal asphyxia the results are most significant. In the hundred scopolamin babies nearly all cried at once and gave no evidence of drug influence. Eight were moderately apnoeic, but responded promptly to flagellation and tubs. Two required artificial respiration. The asphyxia was due to the delay of the head. Under the old technique the asphyxia was the result of repeated doses of morphine. In the hundred babies born without scopolamin seven were born asphyxiated, two requiring tubs and artificial respiration for twenty minutes. Two still births occurred in each series.

These cases, largely primiparae, were not selected especially, but were taken seriatim. It is needless to argue as to statistics from an institution which, like the New York Lying-In Society, stands as the conservative representative of obstetric authority. The writer considers this the most valuable statement yet made in this country as to the Freiberg method.

A most enthusiastic article appears in the October, 1914, number of the *Modern Hospital*, written by Dr. W. H. W. Knipe of the Post Graduate Hospital, New York, who, as he says, went over to Freiberg in July a profound skeptic, but came back an ardent advocate of the Kronig method. He is convinced that the treatment has come to stay. He advises hospital authorities to study the matter and to be prepared to handle it intelligently. Specially

trained nurses who must be familiar with the method are imperatively needed for the treatment. It can only be successfully followed in the absence of the physician by nurses who have been drilled in all the details themselves. Not only is it essential that the maternal and fetal pulse be counted every fifteen minutes after the treatment begins; but the nurse must test reflexes and in the absence of the physician give the injections according to his instructions. This presupposes not only nurses of more than average intelligence, but also that they be thoroughly trained in the operating room technique of twilight sleep methods. In Freiberg four months' experience as assistant in the delivery room is required before the nurse is given charge of a case. Dr. Knipe emphasized the need of hospital facilities being provided, as the system is necessarily a hospital procedure.

In striking contrast to this enthusiastic statement the following quotation from an article by Dr. Knipe in the *November Delineator* is given. It is pertinent and pointed and must result in great benefit to the host of magazine readers who are interested. "Recently lay gossip in this country has seized upon twilight sleep as one of the greatest medical discoveries of the age. The result is that throughout the land a host of prospective mothers, with their natural apprehensions of the horror of travail magnified by all the careless things that have been said and printed, are demanding of their physician that they confine them with this treatment. Their demands are so insistent that physicians, with a most natural desire to give patients the benefit of this relatively painless method of bearing children, but lacking the intimate experience that the method requires on the part of practitioner, and rushing in where angels would fear to tread. I shudder to think of the consequence. Sometimes I can see tombstones scattered all over the land bearing the inscription, 'Erected to the memory of Twilight Sleep and to the sympathetic physicians who tried to do better than they knew.' It is invariably in connection with a hospital and the organization of a hospital that the method should be considered. It is not a treatment suitable or possible in other surroundings. Neither Pro-

fessor Kronig nor Professor Gauss has ever consented to treat a patient with twilight sleep outside the clinic precincts.

"I would not have it understood that *Dammerschlaf* is a bad method in childbirth; on the contrary, when properly carried out, it is a wonderful boon to woman in her hour of trial. But in the hands of the physician who has not had the opportunity of adequately studying the method it is an exceedingly dangerous procedure."

Comment by the editor of the *Delineator*:

"During the past summer Dr. William H. W. Knipe went abroad to obtain the truth about 'Twilight Sleep,' or '*Dammerschlaf*,' as the Germans call it. The originators of the treatment, Professors Gauss and Kronig, of the famous *Frauenclinic* of Freiberg, admitted him to that hospital and permitted him to work with and assist them daily during three months. We regret that for the present we must decidedly warn our readers against 'Twilight Sleep.' The application of the method is exceedingly delicate and dangerous. It should not be employed by any physician who has not mastered it. It should not be employed in general practice. It should not be employed outside of hospitals."

A trial has been made in a series of cases at the German Hospital; undertaken after the fullest possible study of the literature available, and after much correspondence giving the arguments pro and con relative to the virtue of the treatment. Specially suitable delivery room with double doors and heavy shades to the windows are arranged to give the ideal conditions for the treatment. The operating or delivery room nurses are drilled in the method and are greatly interested in it.

As a typical example of the method three cases are selected. The first case to be presented was peculiarly valuable, as it was a patient delivered by the writer twice before, and in each instance much concern was experienced because of untoward conditions. The first labor, a tedious one, was followed by inertia, forceps delivery was found necessary; in the second one atony with a profuse post partum hemorrhage of secondary type gave much alarm—in this third labor, perfectly normal in every detail; at the urgent request of the patient the *dammerschlaf* system was fol-

lowed; one dose of narcophin combined with scopolamin and at intervals of an hour and a half three doses of scopolamin alone, each 1/400 grain, with the gratifying result of a termination, in a voluntary manner, of labor in six hours. The patient, a woman of culture and a bright observer, is enthusiastic over her experience. She made a rapid, uneventful recovery. She was asking for food within a few hours after delivery and began to beg to be allowed to sit up the second day. The baby has made uniform gains and is a most decorous infant in every particular.

The second case was a primipara with an R. O. P. While her labor was not remarkable as the former, it was ended by voluntary efforts, although it was expected naturally that forceps might be necessary. The labor was much shorter than the average R. O. P. case. Two doses of scopolamin followed the initial dose of narcophin and scopolamin. No general anaesthesia was used.

The third case, which was a multipara, was also a short uneventful one, and the patient was ready to leave the hospital in fourteen days in good condition. This last case was a referred one, coming from a neighboring city, and was in the hospital because of a partial premature separation of the normally implanted placenta, with hemorrhage. The possible danger resulting from this condition was the reason for her being under observation. Two doses were given at intervals of two hours, the mother effected delivery of a breech presentation without the usual suffering and without assistance. The foetus, being in the sixth month, naturally did not survive.

An attempt to use the treatment in a case delivered at the home was not a brilliant success. It was difficult to determine the reason, unless the environment did away with the element of suggestion. This case was also a college-bred woman, a friend of the first patient delivered by the scopolamin method, and was quite familiar with the claims made for it. The only effect observed was that for a quarter of an hour there was no pain, and then the labor was terminated in a remarkably short period. The treatment may have been initiated too late. The patient nor the baby had any untoward symptoms.

While these patients all make the same

efforts that others do who had no scopolamin, and appear to experience pain with the contractions, they sleep between the pains and disclaim all suffering. The forgetfulness of the incidents of the confinement has a distinct psychological advantage in avoidance of shock.

It is curious that even today men advance the views held by Prof. Opitz of the University of Giessen, who says, "I do not say anything against the use of either general anaesthesia in labor or the amnesia attending the scopolamin in obstetric cases; I only consider that apart from certain exceptional cases it is not right to make normal birth absolutely painless. Amnesia of this kind, in my opinion, deprives the mother of something of which her memory should not be robbed!" The list of men of such opinion is rapidly growing less.

Scopolamin, which has been used since 1902, has been criticised by observers on account of untoward effects. Gauss, after a great deal of attention to this form of amnesia, believes the variation not so much due to unstable character of the drug as to the difference in the resisting power of individual patients. My observations coincide with those of Gauss. These views are also held by Recascus Klein, Preller and Kronig. Hocheisen of Berlin, who does not favor the Freiberg method, is its most prominent European opponent, and his views may have been prejudiced by environment of his patients or because of large doses being given.

Thus, while the advantage of the scopolamin treatment may be said to include the actual relief of much of the agony otherwise suffered in labor and in the minimizing of shock, the amnesia leads to forgetfulness of what the patient has borne. She is spared the later memory of that suffering and also no fear is present during a subsequent pregnancy, as is sometimes felt under ordinary conditions, when the patient retains a vivid recollection of her former experience.

In the exceptional case the labor is undoubtedly delayed. The child has been asphyxiated. It suffers, however, similarly from the use of morphin, so frequently given indiscriminately to dull the labor pains. General anaesthesia, long continued, to a greater degree than has been

realized, the writer believes, is also the cause of much foetal mortality.

Dr. Rongy, in distinguishing between asphyxia and oligopnea, which latter condition often is found in babies delivered by the scopolamin method, quotes Gauss and Holtzbach, who believe that oligopnea is due to the depression of the peripheral filaments of the vagus (intrauterine). When the child is born it requires a longer period to accumulate a sufficient quantity of carbon dioxide to stimulate the respiratory center in the medulla. Scopolamin babies, even when born in oligopnea, breathe and cry at once on birth, then both circulation and respiration become shallow, but within ten minutes the child gradually resumes its normal condition. None of these babies, he says, required artificial respiration. He therefore considers the condition void of danger to the child when the scopolamin treatment is properly used.

A few words as to the drugs themselves and the method of administration are added. Narcophin is a derivative from opium, containing narcotin and morphin in proportion of 1:1—a meconic acid salt—narcotin-morphin meconate. It represents, dose for dose, one-third the potency of morphin. The effect of the narcophin is apparent in from ten minutes to a maximum effect in three hours. The climax is somewhat difficult to calculate because of the variation in stage of labor, progress of labor pains and the somnolency produced. The anaesthetic effect is usually greater than the sporic effect.

Scopolamin is of the solanacea family. Included in this list are belladonna, hyoscyamus and stramonium. Scopolamin has qualities somewhat similar to hyoscin and atropin. Pharmacologists claim that scopolamin and hyoscin are identical chemically, and it is disputed as to whether the pharmacological effect is the same. Like atropin, scopolamin allays pain; it dilates the pupil; long use depresses the respiratory vaso-motor centers. Eschrer says collapse has followed 1/100 grain by the mouth. The patient recovered. A fatal case is recorded following a dose of 1/50 in an alcoholic patient with pneumonia. Each had been preceded by morphin $\frac{1}{4}$ grain. As an anesthetic it is given in dose of 1/200 grain or combined with mor-

phin $1/3$ grain $2\frac{1}{2}$ hours, $1\frac{1}{2}$ hours and $\frac{1}{2}$ hour before operation. Recommended before general anaesthesia. Less ether required. It promotes a tranquil state of mind.

The remedies are given as follows:

After the labor is inaugurated so there is approximately three fingers dilatation and pains are from four to six minutes apart, an initial dose of 0.5 to 2 c.c. scopolamin hydrobromide 0.03 per cent combined with narcophin 1 c.c. of solution 1 per cent is administered. Suggestion does undoubtedly enter into the treatment, as the curtains must be kept drawn and the room absolutely quiet. Loud conversation is forbidden after the first dose is given. After a period which it is advised should be two or three hours the patient is tested as to her memory by being asked some question. If she responds readily and intelligently another dose is given, this time scopolamin alone, and in dose of 0.5 to 1 c.c. of the solution, no narcophin being used. Her powers of receiving and maintaining new impressions are again tested at intervals, and if necessary to continue the artificial hypnosis the injection may be repeated. Evident onset of disturbance of consciousness should, of course, check additional administration.

At Freiberg, it is said, this dosage has been kept up for several days; careful attention to maternal and fetal pulse showing no ill effects on either patient.

The contraindications are appreciable disturbance of circulation or respiration; severe general debility of the mother; primary uterine inertia arising from gradual diminution of strength of pains; febrile diseases; acute anaemia; premature escape of liquor amnii.

The combination of scopolamin and narcophin has been recommended in eclampsia; so the question as to its use in presence of nephritis is a moot one. The writer does not use it under these circumstances.

It is convenient to have the solution put up in ampules, but this is not always available on account of the war, the drugs being imported from Germany. In order to obtain a more stable solution of scopolamin Straub of Freiberg adds sextet alcohol mennenet to the scopolamin. Dr. Knipe suggests that chemists can as readily

make up a stable solution for hospital use by adding mennenet so that 1 c.c. of the solution equals .0003 grams of scopolamin. For convenience two syringes are suggested, one of 2 c.c. of the narcophin, one of 1 c.c. of the scopolamin.

Notes of time of each injection, subjective symptoms of the patient, facts as to sleep, motions of the hands, color of the face, as well as the usual record of patient under other conditions should be carefully preserved.

The total dosage in any case is recommended not to exceed of narcophin $\frac{3}{4}$ grains and of scopolamin not to exceed $\frac{3}{50}$ grain. If necessary to complete any case by general anaesthesia ether should be preferred to chloroform.

To recapitulate:

Scopolamin treatment in the hospital by the Freiberg method is a success.

Its application is limited to cases in hospitals because of the necessity of environment and technique being absolutely under control of the obstetrician.

Delivery room in hospitals must be specially protected from light and noise.

Operating room nurses must be specially trained in administration of the drugs and interpreting symptoms.

Untoward results are from overdoses, and such unexpected effects are not so much due to unstable preparations as to individual idiosyncrasy.

Labor is apt to be somewhat prolonged.

Foetal asphyxia has been asserted.

Patients rally readily because shock is minimized.

Contraindications: disturbed circulation or respiration-dystocia, inertia uterina, premature escape of liquor amnii, severe debility of the mother.—Bulletin Jackson County Medical Society, Missouri.

TREATMENT OF DYSMENORRHEA

Dr. P. Brook Bland, Instructor in Gynecology, Jefferson Medical College, Philadelphia, Pa.

* * * * *

The treatment of dysmenorrhea may be divided into medical and surgical, and the medical treatment into both local and general. Of course the first consideration in the treatment of this condition is to deter-

mine its cause, and from the great variety of conditions that are associated with painful menstruation and the difficulty in determining the cause of the pain it is obvious that positive indications as to treatment cannot be given.

General Medical Treatment—After a consideration of the great variety of conditions responsible for painful menstruation, it is evident that the affection is not entirely overcome by the employment of drugs. It has been asserted that it is best to exhaust all general therapeutic measures before submitting a young unmarried woman to a pelvic examination to determine the cause of her menstrual pain. This statement I do not regard as justifiable, and unfortunately it is followed by a great majority of physicians who, therefore, administer numerous remedies with the hope of affording the patient relief, and all the while work in total ignorance of its cause. I believe that all cases of marked dysmenorrhea call for an internal examination, and the physician who hesitates to make this exploration fails to perform his full duty to his patient. In virgin women vaginal exploration can be successfully executed under short chloroform anesthesia without harm. In all cases of dysmenorrhea every effort should be made to improve the individual's general health. She should receive plenty of fresh air both by day and night and be instructed to practice deep breathing. Her diet should be plentiful and nutritious, and besides eating three good meals daily she should receive in addition food between meals, such as fresh red beef juice, milk and eggs. Graduated exercise in the fresh air should be advised, but the danger of over-exertion should be emphasized. She should have several hours of sleep, and it is well to secure two hours of sleep each afternoon. While exercise is important, rest is also of the utmost value, particularly during the menstrual flow, and the patient should be instructed to remain in bed two or three days before the advent of the flow and the first two days during the flow. Over-exertion, fatigue and excitement should be absolutely avoided during the flow. It is said that more benefit is derived from rest in the treatment of dysmenorrhea than any other remedy. Constipation is commonly associated with dys-

menorrhea, and it is therefore important to induce daily evacuations, and a mild cathartic daily for three or four days preceding the flow is very effectual in giving relief. Inquiry should be made concerning the patient's wearing apparel, and any faulty method of dress, such as tight corsets and constricting waist bands, should be prohibited.

Concerning the use of drugs for the relief of menstrual pain, no greater error can be made on the part of the attending physician than to prescribe or administer opium or the various forms of alcohol. Patent medicines are frequently resorted to by women for the relief of pain. These nearly all contain some form of opium, and their use should be urgently discouraged.

In the inter-menstrual periods, particularly if the patient is anemic, Bland's pill combined with arsenic and cascara sagrada is one of the best agents at our command. It is also of decided advantage to administer bone marrow to women of this type. In neurotic dysmenorrhea the nervous symptoms should be combated by the administration of the compound salts of phosphorus, the bromides, valerian, asafoetida or other nerve sedatives. I have had excellent results from a combination of extract of nux vomica gr., $\frac{1}{4}$, ext. sumbul, gr. j; ext. valerian, gr. j; asafoetida, gr. iij, given in a capsule four times daily. The pain is frequently overcome by salol and phenacetin or aspirin combined with some of the other coal tar products. Kelly has obtained splendid results by administering forty grains of sodium bromide in one pint of hot salt solution by the rectum. Montgomery has had like success by giving stypticin gr. 1, four times daily for a few days before and during the first two days of the flow. One of the most satisfying agents has been the employment of the fluid extract of gelsemium, giving five drops three times daily, starting a week before the period and continuing the first few days of the flow. The hot water bag applied over the abdomen frequently affords comfort to the patient, but I have frequently seen the pain almost instantly disappear by the simple application of an ice bag over the sacrum, and I prefer this to any other local application.

Local Medical Treatment—Several measures were recommended for the local med-

ical treatment of dysmenorrhea. Hot vaginal irrigation, counter irritation of the cervix and vault of the vagina by Churchill's tincture of iodine and medicated tampons are undoubtedly of value and frequently afford relief. I have seen the introduction of the hard rubber pessary in dysmenorrhea due to retrodisplacements prove highly effectual. Electricity is another measure that has proved successful, and it is unfortunate that this method is so little employed. Many men have found the application of the mild galvanic or faradic current to the uterus of decided value, and report cases of complete cure. Bier's hyperemic treatment is also being used with uncertain results.

Surgical Treatment—The surgical treatment of dysmenorrhea should only be applied in cases where definite pathologic conditions are recognized in the pelvic structures. It is obvious if the menstrual pain is caused by the presence of a fibroid tumor, pathologic displacement or inflammatory disease of the tubes and ovaries, these conditions should be corrected by appropriate surgical measures. Dysmenorrhea due to inflammatory conditions of the endometrium and uterine wall is best relieved surgically by dilating and curetting the uterus, and dilatation does occasionally relieve those cases of dysmenorrhea not associated with organic lesions. It accomplishes this perhaps by the impression it makes upon the nervous system. About one-third of this type of patients obtain partial and sometimes complete relief, so even with this treatment the percentage of cures is small. Dilatation and curettement then, even in the functional types of menstruation, should not be performed without informing the patient of its shortcomings and only after medical measures fail. Too many patients are subjected to dilatation and curettement for dysmenorrhea without the cause of the condition first being determined. It is not infrequent to see patients operated upon repeatedly for this condition without obtaining permanent relief, and occasionally the condition is aggravated and in some instances serious injury inflicted. A high degree of dilatation has been recommended in cases of dysmenorrhea in young women, and this is best accomplished by the introduction of laminaria tents or by spe-

cial forms of dilators. The Wylie drain has been given special prominence by some authors as a curative agent for dysmenorrhea, and the best results from the use of this instrument are obtained by dilatation and curettement as a preliminary to its use. Dysmenorrhea said to be due to chronic oophoritis or perioophoritis is frequently referred to in the literature, and the treatment advised for this malady is the excision of an elliptical shaped section from the surface of the ovary. I do not believe that resection of a cirrhotic ovary affords the patient comfort, and moreover, I cannot conceive how it can do more than aggravate the chronic lesion in the ovary itself; it is adding insult to injury.

Conclusions—1. Dysmenorrhea must always be regarded as a symptom and not as a morbid process.

2. Painful menstruation does not always indicate the existence of pathologic conditions in the pelvis.

3. Dysmenorrhea is perhaps most frequently caused by disturbances in the vital systems of the body.

4. Dysmenorrhea should never be treated until a thorough investigation as to the cause is made.

5. In the medical treatment of dysmenorrhea, opium and the various forms of alcohol should never be used, or only by the physician, and then in exceptional cases.

6. Dilatation and curettement is of value in but a very small percentage of the functional cases of dysmenorrhea.

7. Organic cases of dysmenorrhea are as a rule overcome by the removal of the cause.—*Journal New Jersey Medical Society.*

1729 Pine Street.

PUERPERAL FEVER.

Prophylaxis.—Whenever irrigation of vagina with boiled water through speculum yields a yellowish fluid, one should irrigate once daily for at least ten days with a 1:200 solution of lactic acid. Morbidity thereby reduced from 28.6 to 7.6 per cent. Full baths to be avoided before delivery.—Zweifel.

Treatment.—Intravenous injections of distilled water given in 142 cases of puerperal fever. Of 62 patients with pyemia and septicemia, 42 were cured. In an hour or hour and a half after an injection there is usually a chill, with rise in temperature. By evening or the following morning temperature will have fallen to normal, sweating usually accompanying the drop.—Ilkewitsch.—*Cycloped. of Prac. Med.*—S. L. J.

The West Virginia Medical Journal

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Editorial

The State Board of Health, with the very valuable aid of Surgeon Clark of the United States Public Health Service, has prepared a new public health bill for submission to the next Legislature. It has been submitted to the governor, who is satisfied with the principal features of the bill. We suggest that no other bill be introduced, lest a division of sentiment be caused, with the result that no advanced health legislation that the State so badly needs will be secured.

FEDERAL MEDICAL LICENSURE.

This subject has from time to time attracted considerable attention, and has been discussed in the journals and at the meetings of the Federation of State Medical Examining Boards, which now holds an annual session. At the meeting of this Board held in February last in Chicago a paper on this subject was read by Lieut.-Col. Kean of the Medical Corps of the United States Army, with the title "The Use of the Government Medical Services

in Raising the Standard of Medical Education." The writer referred to the Medical Reserve Corps, proposed by the Surgeon General of the Army in 1903 and created by law in 1908, admission to which corps was supposed to be by examination, and the understanding is that all members of the Corps, like those of the Army, Navy and U. S. Public Health Service, are exempted from the provisions of the State laws requiring an examination before they are entitled to the practice of medicine. Col. Kean suggests in his paper that a "Board be appointed by the President of the United States for the examination of officers of the Medical Reserve Corps, of a composition which would insure a high standard of requirement, and the State Boards will agree to accept and license, without examination, the holders of Reserve Corps Commissions, as is now done by many states for medical officers of the government service." If this be done, the Colonel concludes, "the thing is accomplished."

Recently *The Medical Council* has devoted several editorials to the discussion of this topic, in one of which the editor tells that Representative Reilly of Connecticut introduced into Congress, by request of a medical friend, "a bill to create the United States Medical Licensing Board," which was referred to the Committee on Military Affairs, where it will probably find an everlasting resting place. The constitutional question has always stood as a hindrance to Federal legislation with the suggested purpose in view.

M. M. Clapper, writing in a recent journal, after a study of the question, concludes that such legislation is not unconstitutional, and arrives at "the unavoidable conclusion that the States and Congress have concurrent powers to legislate relative to the practice of medicine;" and he notes that the recent trend of congressional action is away from the strict construction which curtailed the powers of Congress and exalted the powers of the State.

The able editor of *The Medical Council* after a visit to Washington, an examination of authorities, and consultation with officials in that city, comes to the same conclusion, or at least thinks that the constitutional objection can be easily over-

come. We note that those states that were once great sticklers for so-called "reserved rights" are, without contest, indeed with great alacrity, yielding to the United States Government in its efforts through the Public Health Service to stamp out epidemic disease. West Virginia has great reason to be very grateful to this model department of our government for recent efforts in the investigation of trachoma in the southern part of the state, and for making an intensive sanitary survey of Berkeley county, occasioned by the widespread prevalence of typhoid fever in that county during 1913. But such valuable work is done only by the request of the State Boards of Health. It is not so easy to overcome objection to national legislation intended to confer licensure upon medical practitioners, when every State has its own laws defining the manner in which a certificate to practice medicine is to be secured.

Not all physicians will agree that Federal licensure is desirable. Its chief purpose, of course, is to raise the standard of qualification in those applying for license. All must admit that the present methods of conferring licensure are far superior to those of a few years ago. The organization of State Examining Boards was a mighty step forward. The efforts of the Council on Medical Education of the American Medical Association in raising the standard of our medical schools has been another mighty lever in elevating the average grade of graduates, but this must have failed in its purpose but for the sympathetic co-operation of the State Examining Boards. It may be contended that some of these Boards are still too lax in their provisions, and there is considerable difference in their requirements. Some do not even require a preliminary education the equivalent of a high school graduation. Others require only this, while a number require one year of college work, and several require a college education. Local conditions have something to do with these requirements. In the newer states, where educational advantages are not so advanced as in the older, there is a natural sympathy with struggling young men with limited means, which causes medical examining boards to move more slowly in their requirements for advanced

preliminary education; and this feeling cannot be too suddenly suppressed. The medical colleges are more to blame than are the Boards for the defective quality of some of the young graduates. While advertising that they have certain fixed standards of preliminary education, the Boards before which the graduates appear for examination soon learn that there are a number whose education is so defective as to demonstrate that the medical schools from which they have received their degree have violated their own entrance requirements. In time all these defects will be regulated, even without the aid of Federal law, and we are not at present greatly in favor of seeking aid from that quarter.

But our readers may be interested in hearing the plan proposed by *The Medical Council*, which is, in brief, that provision be made by national legislation for the creation by the Public Health Service of "a grade of non-commissioned officers to be known as sanitary inspectors," whose qualifications are to be determined by that Service, and that such men will, by reason of such qualifications, be entitled to licensure in any State. The editor's idea is that the plan would not interfere with State Boards, and it would simply provide an additional means of licensure of a higher grade. He thinks that most new graduates and active practitioners would naturally want to secure the Federal license, which would entitle them to locate in any State or move from one to another without annoyance in securing a new license at every move.

The Council editor thus concludes his consideration of his proposition:

The adoption of some plan along the general lines that we propose would do these things also:

It would federalize medicine, a thing much needed in America.

It would strengthen our medical societies, making of them clearing houses for information, plans and co-operative work.

It would solve the difficult problem how to make the rank and file of physicians practically interested in public hygiene and sanitation in general, not merely as involves the individual patient.

It would put the medical profession in a strong position before the public.

It would strengthen our state health

boards and departments, making friendly co-operation between them and the private physician all but universal.

It would do more to abolish quackery than any other one thing.

It would promote research along practical field lines.

It would rehabilitate the general practice of medicine.

It would elevate medical standards.

It would all but eliminate politics from medical practice and from our work in public sanitation.

It would cost the government little and yet would improve the financial status of the profession at large, and it would make correct medical ethics pay.

Greatest of all, it would bring incalculable benefits to the people. S. L. J.

State News

STATE BOARD OF HEALTH.

An examination for licensure was held at Clarksburg by a committee of the Board October 13th, 14th and 15th. The examiners were Drs. Golden, Lind and Jepson. The questions printed below were submitted. There were twelve applicants, ten regular physicians and two osteopaths. Of these two, one regular and one osteopath, failed to make the required grade of 80%. The examination was written, oral and practical, the last in Kessler Hospital, by the courtesy of Dr. S. M. Mason, Superintendent. The next examination will be held in Charleston, April 13th, 14th and 15th. The State Board on the 27th of October held a School of Instruction for Health Officers, as required by the law. The following program was carried out:

"The Legal and Moral Duties of a Health Officer"—Attorney D. A. Cronin and Dr. S. L. Jepson.

"The Law and Sanitary Administration"—Attorney H. F. Smith, Parkersburg.

"Typhoid Fever—What West Virginia Can Do to Eliminate It"—Dr. J. L. Pyle, Chester.

"How to Secure the Benefits of the Hygienic Laboratory"—Prof. Aaron Arkin, Morgantown.

"Public Health Problems and Their Solution"—Dr. E. F. McCampbell, Secretary Ohio State Board of Health.

"The Hook Worm and Our Special Interest in It, With Demonstration"—Prof. W. H. Schultz, Morgantown.

"How to Discuss Our Public Health Situation With the Public"—Dr. W. W. Golden, Elkins.

There were fifty-one present at this conference, which was pronounced the best that has been held.

The following received licenses at the recent meeting of the State Board:

William P. Black, Rupert, W. Va.

R. H. Cather, Flemington, W. Va.

Joseph U. Rohr, Catonsville, Md.

Ivy G. Shirkey, Sissonville, W. Va.

Charles A. Young, Rio, W. Va.

W. J. Judy, Glen Falls, W. Va.

O. R. Kackley, Pleasant City, Ohio.

E. A. Teets, Buckhannon, W. Va.

R. K. Sell, Hanover, Pa.

Mabel S. Boyes, Osteopath, Woodsfield, O.

QUESTIONS.

Chemistry and Medical Jurisprudence.

1. Define atomic weight.
2. Name three causes of chemical change.
3. Give chemical names and formulas for each of the following: (a) Common salt, (b) red iron rust, (c) calomel, (d) water, (e) baking soda, (f) quick lime.
4. Give the important physical and chemical properties of oxygen.
5. Give the chemical definition of a salt.
6. Give one test for sugar in the urine.
7. If called as a witness in court, what evidence could you give to prove the fact that a man found dead had been drowned?
8. How prove that a recently born child found dead was alive at birth?
9. What steps would you take to have a person committed for insanity?
10. What evidence can you produce in court to show that an abortion has been performed?

G. D. LIND.

Anatomy and Embryology.

1. Describe the lateral sinuses.
2. Describe and give articulation of the astragalus.
3. Describe the elbow joint and knee joint.
4. Locate the principal groups of lymphatic glands.
5. Mention the muscles attached to the great trochanter of femur.
6. What arteries, muscles and nerves will be severed in a cross-section at the middle of the humerus?
7. Give location and describe structure of the kidneys.
8. Describe the course of the female ureters.
9. Describe the internal abdominal ring.
10. Give a general description of the peritoneum. What are the important organs to which it is attached?

W. L. DAVIDSON.

Physiology and Histology.

1. Large intestine: describe it and give function.
2. Heart sounds: describe them and give cause.
3. Seventh or facial nerve: give origin, distribution and function.
4. Discuss the composition, formation and circulation of lymph.
5. Classify and give function of white blood corpuscles.
6. "Pupils react to light and accommodation." Give the physiology.
7. Name three ductless glands and describe their function.

9. Describe the structure of the lobule of the liver.

10. Describe histology of kidneys.
H. M. RYMER, M.D.

Materia Medica and Therapeutics.

1. Aspirin—give origin, dose and action.
2. Chloroform—give preparation, doses and action.
3. Camphor—give preparations and action.
4. Caffein—give source, dose and action.
5. Cascara sagrada—give source, preparations, doses and action.
6. Name three heart tonics, describe action.
7. Phenol—Give therapy.
8. Opium—Give therapy.
9. Vaccines and serums (name three)—Give therapy.
10. Bismuth, subnitrate and subgallate—Give therapy.
J. E. ROBINS.

Practice of Medicine.

1. Variola, symptoms, differential diagnosis and treatment.
2. The plague, prophylaxis and treatment.
3. Dysentery, symptoms, hygiene and treatment.
4. Ankylostomiasis, prophylaxis and treatment.
5. Tapeworm, prophylaxis and treatment.
6. Acute nephritis in child 4 years, hygiene and treatment.
7. Chorea in child 6 years, hygiene and treatment.
8. Rhus poisoning, symptoms and treatment.
8. Directions for the care of the nursing bottle and nipple.
10. Mycotic stomatitis, symptoms and treatment.
H. A. BARBEE, M.D.

Bacteriology and Hygiene.

1. What are the essential conditions of bacterial growth?
2. Name the parts of a compound microscope.
3. Describe each step in the diagnosis of diphtheria by means of the microscope.
4. How would you differentiate the bacillus typhosus from the bacillus coli communis?
5. Of what use is bacteriology in the early diagnosis of tuberculosis? Illustrate.
6. What hygienic measures would you prescribe for the guidance of the nurse in a case of cholera infantum?
7. What is meant by "crowd poisoning"? What are its effects?
8. Name three efficient chemical disinfectants. Give comparative merits of each.
9. What are the essential measures necessary for the prevention of the ill effects of the industries upon health?
10. What are the physical characteristics of good drinking water? Of a dangerous drinking water?
H. A. BRANDBURY, M.D.

Surgery.

1. Give the local and general microscopic phenomena of infection.
2. What is the usual position of the foot in relation to the leg in Pott's fracture before re-

duction, and in what position should it be placed after reduction?

3. Describe in detail the operation for resection of a rib for empyema.

4. A man giving a history of having had "stomach trouble" for some time is suddenly taken with a sharp and severe pain in the upper right quadrant of the abdomen. What two conditions will you suspect and how will you differentiate between them without an exploratory operation?

5. Tell very briefly all you know about hemorrhoids.

6. On the third day of an acute attack of appendicitis the patient informs you that his pain has ceased. What might be the significance of this?

7. Give the early diagnosis of osteomyelitis of the tibia.

8. Name the two most common methods of amputation of the extremities and describe one of them.

9. What is the proper treatment for a gunshot wound of the lung?

10. What is your opinion in reference to the division of fees between surgeons and physicians, and give your reasons for your opinions.

W. W. GOLDEN, M.D.

Obstetrics and Gynecology.

1. Give the etiology of metrorrhagia.
2. Give the effects of oophorectomy.
3. Name the conditions that cause sterility in the female.
4. Classify tumors of the uterus.
5. Give the contraindications for curettage.
6. Discuss in general the principal drugs used to hasten labor.
7. What are the indications for and against the use of forceps?
8. Give etiology, prevention and treatment of subinvolution of the uterus.
9. How would you diagnose the death of the fetus in utero?
10. What shall be done in the management of face presentation?
J. H. SHIPPER, M.D.

Special Medicine.

1. Diagnosis and treatment of trachoma.
2. Treatment of gonorrheal conjunctivitis.
3. Treatment of obstruction of the lachrymal duct.
4. Etiology and treatment of acne rosacea.
5. Give your method of removal of foreign bodies from the nose. From ear.
6. Give the diagnosis and treatment of adenoids.
7. Give indications for the removal of tonsils.
8. How determine normal hearing.
9. Etiology and symptoms of locomotor ataxia.
10. Define idiocy, imbecility and insanity.
J. A. RUSMISELL, M.D.

Miss Mary E. Reid, one of Charleston's veteran trained nurses, has recently sent out an interesting little sketch concerning the trained nurses' movement in Charleston. She says she

instituted the first nurses' training school in Charleston at the Charleston General Hospital, October 1, 1898. Previous to that time there were only three trained nurses to supply Charleston and the entire Kanawha Valley. In 1898 seventeen patients, volunteers for the Spanish-American war, were brought to the Charleston General Hospital, and this circumstance brought about the idea of establishing a nurses' training school. At present there are 73 graduate nurses in Charleston. The Charleston General Hospital has 20 pupil nurses in training, the Barber Hospital 10, the McMillan Hospital 7, and the St. Francis Hospital 5. For the past several years Miss Reid has conducted a graduate nurses' home and registry.

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Dr. A. P. Butt, Secretary of the State Medical Society, has recently been in Philadelphia doing some post-graduate work.

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Dr. C. B. Crute of Charleston was recently operated on for acute appendicitis at the Charleston General Hospital. He has made a recovery and is recuperating at the home of his father, Judge J. N. Crute, of Farmville, Va.

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The editor of the "Journal" made a recent visit to Charleston on official business and had the pleasure of meeting several Charleston physicians at the hotel, but was so rushed that he had no time for calls.

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Dr. W. W. Golden, President of the State Board of Health, who has been for some time actively interested in the preparation of new legislation, spent Friday in Charleston in the interest of this legislation in conference with the governor, Dr. T. Clark of the United States Public Health Service, the Secretary of the State Board, and Dr. MacQueen, Chairman of the Legislative Committee of the State Medical Association.

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Dr. J. M. Barr of Wicrton is spending a few weeks at "The Pines" in Asheville, N. C., on account of a little break-down in health occasioned by overwork and forgetfulness of his own physical condition.

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Dr. Atley Mairs of Charleston is spending his vacation in Philadelphia and New York.

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Dr. G. C. Schoolfield of Charleston has returned from a recent visit to Chicago.

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Dr. M. I. Mendeloff of Charleston has returned from a visit to Baltimore.

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Removals—Dr. D. E. Musgrave from Wright, Raleigh county, to Standard, Kanawha county; Dr. O. B. Lynch from Lime to Alvy; Dr. F. O. Marple from Rowlesburg to 1159 Adams avenue, Huntington; Dr. S. P. Walker from Oceana to 826 Sixteenth street, Huntington; Dr. E. F. Raphael from Keyser to Cumberland, Md.

Society Proceedings

TRANSACTIONS AMERICAN PROCTOLOGIC ASSOCIATION.

Coccygodynia—A New Method of Treatment by Injections of Alcohol—By Frank C. Yeomans, A.B., M.D., of New York City, N. Y.

The diagnosis is established by a thorough examination, both general and local. Local examination is made by inserting the index finger into the rectum and palpating the coccyx between it and the thumb outside. The soft parts intervening between the coccyx and anus are now compressed and the point of maximum tenderness is thus located, usually just beyond the tip of the coccyx. Proctoscopy rules out rectitis.

The prognosis hitherto has been better in the traumatic cases than in those of frank neuralgia or neuritis. The writer confidently predicts that the treatment proposed will render the latter equally amenable to treatment.

The writer proposes a treatment based on the suggestion of Schlosser in 1907 of injecting 70 to 80 per cent alcohol in sensory nerves, thereby causing their degeneration as practiced with marked success in trifacial neuralgia.

The technique is simple and can be carried out in the office under strict aseptic precautions. The patient with empty bowel is placed on a table in the Sims position and the skin about the coccyx painted with tincture of iodine. A 2 c.c. Luer or similar syringe is filled with 80 per cent alcohol and armed with a two-inch needle. The right index finger is now inserted into the rectum and the point of maximum tenderness is determined by counter pressure with the thumb outside. Maintaining the finger in the rectum to guard against puncture and as a guide, the needle is introduced through the mid-line directly to the painful spot and 10 to 20 minims of solution are injected slowly.

The needle is withdrawn and its puncture sealed with collodion. The pain from the injection lasts a few minutes and is followed by a dull ache which may last a day or two. From three to five injections are usually required at intervals of about one week.

The writer reports seven cases, all women, treated from two months to four years ago. They required three, four or five injections each at intervals of about one week. Relief was prompt and complete and all the patients have remained well.

The Technique of the Perineal Operation for Cancer of the Rectum—By J. A. MacMillan, M.D., Detroit, Mich.

In every case a preliminary colostomy must be considered imperative. The colostomy provides the only means of discovering whether a radical operation is justifiable or not, supplies physiologic rest for the affected part and later provides for aseptic conditions in the surgical field.

After thorough divulsion a circular incision is made at the muco-cutaneous line and carried

up to the lower surface of the levator ani. Most of the dissection can be done by the fingers. It is not necessary to destroy the external sphincter. This step of the operation exposes a circular area of the levator ani about an inch and one-half wide. Before proceeding further the hemorrhage should be controlled and the location of affected glands determined.

The next step of the operation includes the division of the levator ani and the removal of lymphatic glands.

The peritoneum may be entered anteriorly and separated laterally, which will leave the mesosigmoid as the only attachment of the bowel. This should be divided as far from its colonic attachment as possible in order to secure the retention of a good vascular supply for the proximal end of the bowel after the excision.

When the gut can be drawn down sufficiently to permit the excision of the affected portion and the attachment of the lower edge of the mucous membrane to the skin, excision is done and the sutures placed. Free drainage is necessary.

The colostomy is not closed until the patient has been up and about for several weeks.

Myasthenia Gastro-Intestinalis—By V. Lee Fitzgerald, M.D., of Providence, R. I.

By the term "myasthenia gastro-intestinalis" is understood a weakness of the muscles of the abdomen, stomach, intestines and their supporting ligaments, with a consequent downward displacement of any or all of the viscera.

Many patients suffering from myasthenia in its different forms are in danger of having suspensory or other operations performed upon them, whereas the intestinal stasis can be entirely removed by medical measures and the baneful effects of the underlying ptosis entirely removed.

The general aim in the treatment is the relief of the stasis and the restoration of the pro-lapsed viscera to as near their normal position as possible.

The success in the treatment of these patients depends not only upon the relief of stasis, but also upon the patient's active and persistent co-operation.

For the past two years the writer has been treating cases of myasthenia as follows: The patient is given a thorough examination, including that of the gastric contents, urine and feces. In case of myasthenia of the stomach with dilatation and prolapse the patient is put to bed and fed through a duodenal tube six or seven times a day, depending on the amount of food needed to nourish the patient. This gives the stomach a complete rest, and it comes up into normal, or nearly normal, position in from ten days to two weeks.

Further Observations on Pruritus Ani: Its Probable Etiological Factor; Results of Treatment—A Fourth Report, based on results of original research, by Dwight H. Murray, M.D., Syracuse, N. Y.

In this report on the fourth year's work of

original research on pruritus ani the author finds there is not much more to give to the profession beyond the confirmation of the work of previous years. He has yet no reason to doubt his claims for the infection theory of pruritus ani.

Twenty new cases have been examined during the past year. In all but two of these streptococcus fecalis has been demonstrated.

It has been found that occasionally the bacterial growth seems to be so lacking in strength that it is difficult to obtain an autogenous vaccine. It is not known why this is so unless it is owing to the very low grade inflammation produced by germs not so active as those found in many other infections.

During this year two cases were treated by other physicians who tried to follow his technique, but in neither case was improvement manifest, notwithstanding that streptococci were found present by the author's bacteriologist and although the same quality of vaccines were used. With the consent of their physician the author took up the treatment. Improvement was marked. The only point of difference in the technique that he could discover was that the others injected the vaccine deep into the muscle instead of directly into the skin or immediately beneath it.

During the past year the author has had additional proof that the itching does not extend appreciably above the white line of Hilton. He has also had continued confirmation of his previous statement that the moisture found upon the parts is not a discharge from the rectum.

This past year's work again shows that other rectal diseases are not present regularly with pruritus ani, and the belief is confirmed that they are coincidental instead of etiological.

No unfavorable sequelae arose from the vaccine injections. There is now no hesitation in running the dose to two billion or more dead bacteria. One injection resulted in formation of a jelly-like material in the tissue, but this was absorbed. Some time ago a similar swelling was opened and found to be sterile, and no trouble has resulted.

Book Reviews

The Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago. Volume III. Number III and IV. Octavo of 215 pages, 54 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Published bimonthly. Price per year: Paper, \$8.00. Cloth, \$12.00.

These numbers of the Clinics are of special interest in that exceptional space has been allotted to the paramount question of diagnosis. In number three one-third of its pages has been devoted to the subject of surgical and general diagnosis, and in number four one-fifth to the discussion of ileus, with reference to diagnosis chiefly. The author's distinctive method of teaching the diagnostic art is clearly made manifest in these particular clinics.

Murphy is without a peer in the profession at home or abroad as a clinical teacher, and he

excels in diagnosis. These numbers disclose in large measure the secret of his skill, which, together with the extreme importance of the themes considered, make them invaluable.

R. J. R.

Manual of Biological Therapeutics—This is a book of great interest and value to physicians, just issued from the press of Parke, Davis & Co. The book is handsomely printed in large, clear type, on heavy enameled paper and bound in cloth. It contains 174 pages of text, upwards of thirty full-page plates in color and a number of half-tone illustrations in black and white, together with a comprehensive index. As its title suggests, it is a concise and practical treatise on biological therapeutics, and so replete with useful information that no practitioner should miss the opportunity to secure a copy, especially in view of the fact that the publishers announce that the entire edition is to be distributed gratuitously to members of the medical profession on individual application.

The subjects treated are: Biology, Bacteria, Immunity, The Preparation and Uses of Sera, Antidiphtheritic Serum, Concentrated Diphtheria Antitoxin, Allergic Reactions, Antitetanic Serum and Globulins, Antigonococccic Serum, Antimeningitic Serum, Antistreptococccic Serum, Bacterial Vaccines or Bacterins, The Oposonic Index and description of method of taking it, When Serums should be used and when Bacterial Vaccines are to be preferred, The various Bacterins and their Indications and many others.

The Tonsils—Faucial, Lingual and Pharyngeal—With Some Account of the Posterior and Lateral Pharyngeal Nodules—By Harry A. Barnes, M.D., instructor in Laryngology, Harvard Medical School, Surgeon for Diseases of Nose and Throat, Boston Dispensary, Assistant Laryngologist Massachusetts General Hospital, etc. Illustrated. St. Louis: C. V. Mosby Company, 1914. Price, \$3.00.

This book is divided into ten chapters, in which are presented a full discussion of lymphoid tissue, the development of the tonsil, its anatomy, histology, function, general pathology and bacteriology. All of the diseases of the tonsils are presented, some of which are rarely met with. A chapter is devoted to adenoids. The last two chapters consider the surgery of the tonsils, with their complications and sequelae. The author is conservative as to surgery and says: "The tonsils are important physiological tissues during childhood; they should never be removed without adequate cause, but when such cause exists their function is either permanently impaired or is easily taken up by other lymphoid tissues. There should, therefore, be no hesitation in totally removing diseased tonsils." The book contains 39 illustrations, all original. The last pictures the application of Mitchell's clamps to control tonsillar hemorrhage.

The Midwife in England—A study of the working of the English Midwives Act of 1902. By Carolyn C. VanBlarcom, R.N., Secretary of the Committee for the Prevention of Blindness, State of New York, etc.

Any one who realizes the evils, we may say the disasters, attending or following the practice of midwifery in this state, and indeed throughout the country, by women not only totally ignorant of the first principles of the art, but generally even ignorant of the art of cleanliness, or any proper care of the sick, will welcome any light on the subject that promises improved conditions. This report contains a brief survey of the midwife problem in this country and a description of a possible solution of the difficulty. We hope to notice this publication more fully editorially soon.

The Treatment of Rheumatic Infections—This is issued by Parke, Davis & Co. and is a description of phylacogens, theory of action, preparation, culture and safety tests, stability, potency, etc. Statistics of results are also presented; technic of administration, therapeutic indications and much other information of value to those desiring to administer these preparations. The book also contains many reports of cases in which phylacogens have been used.

The James Way—A book showing how to build and equip a practical up-to-date dairy barn. Published by the James Mfg. Co., Ft. Atkinson, Wis.

This is a finely illustrated book of 250 pages, giving plans for the proper construction of a modern sanitary barn. Every farmer and dairyman should possess a copy of the book, study it carefully and follow its directions. It not only tells of barn construction, but has much other information of value to those who desire to produce and market clean milk.

Progressive Medicine

INTERNAL MEDICINE.

Dr. John N. Simpson.

Treatment of the Opium Habit—M. A. Hays, M.D., New York City.—1. Isolate the patient, make certain that he gets no more of the drug. Never trust the patient while under treatment.

2. Gradually withdraw the drug. Ascertain the usual amount the patient has been using daily. Continue this for two days, then gradually reduce the amount till none is given. He mixes the morphine with extract of glycyrrhiza, so that the bulk of the dose is the same each day. The patient has no means of telling how much he is getting. Nervous symptoms are controlled by sodium bromide, 10 to 20 grains.

3. Regulate the bowels with initial dose of a saline cathartic; then a teaspoonful of cascara sagrada each night at 9 o'clock. Gradually reduce.

4. Daily warm bath, using friction with a coarse towel to promote the activity of skin.

Daily administration of 2 to 4 quarts of water to keep kidneys active.

5. Good nourishing food is given in as large quantities as patient can assimilate.

6. General tonic treatment is needed to improve appetite and general tone. Tincture of *nux vomica* is the best.

7. Secure the confidence of the patient and try to convince him that he can and will be cured. When the drug has been completely withdrawn give daily outdoor exercise, which should include a fair amount of actual manual labor.

Give no opportunity for patient to go back to his old habits. Do not discharge the patient from your institution until his usual will power has been regained, his physical health restored, and every indication of his desire for the drug banished.

Liquid Paraffin in the Treatment of Intestinal Stasis—R. Murphy Leslie (New York Medical Journal), October 3, 1914.

Dr. Leslie thinks that liquid paraffin, petroleum oil, is by far the most valuable remedy available for intestinal stasis. In the majority of early cases its judicious use, along with modifications of diet, hygienic measures, and in some cases supporting belts, affords permanent relief. It acts both as a lubricant and a protective to the mucous membrane of the intestine. Full doses may shorten by one-half the time of passage of the food from the stomach to the rectum. The protective action is exerted over any slight breaches in the continuity of the mucous membrane of the intestines, and thus to prevent systemic bacterial invasion as well as septic absorption.

Most patients experience no difficulty in taking pure liquid paraffin. If desired the oil may be flavored with lemon, peppermint, wintergreen, etc., or the remedy may be given in capsule. It is best given two or three times a day in small doses, rather than one large dose at bedtime. Begin with one or two teaspoonfuls before or after meals, then often increase the dose to one or two tablespoonfuls. The full lubricant effect is not obtained till after several days, and it is therefore not advisable to increase the dose till after four or five days.

When the bowels have begun to act regularly the dose may be gradually diminished and the minimum effective amount continued indefinitely. In children the teaspoonful dose usually suffices, in infants half teaspoonful doses. Some children dislike the remedy, but this can be overcome by the addition of milk, sugar or peppermint.

The use of liquid paraffin in constipation in children, particularly those suffering with digestive disturbances and colicky spasms, will prevent the onset of many an acute or chronic bacterial infection. The author uses it in preference to all other aperients for children, even castor oil, which may cause harmful irritation in certain congested conditions of the intestinal mucous membrane. He has also had gratifying results in mucous colitis in adults.

In cases where the stasis is due to kinks or

adhesions paraffin oil will not remedy the condition, but it should have surgical interference, short circuiting the ileum with the pelvic colon as recommended by Sir Arbuthnot Lane.

The mineral oils are not absorbed, and so have no nutritional value. Our bodies are not capable of utilizing mineral oils.

SURGERY.

Dr. F. L. Hupp.

Caesarean Section—Thomas F. Greene, Chief of the Obstetrical Clinic of St. Elizabeth's Hospital, Boston, Mass. (Boston Medical and Surgical Journal, July 30, 1914).

A historical review with an analysis of sixty cases is presented. Modern surgery with its asepsis and constantly improving technic has definitely placed the operation of Caesarean Section on a basis to be accepted by surgeons, mindful of the mothers of the race and their unborn babes. Regarding the indications, the last word has not been spoken. When to operate and why to operate are questions that need repeated emphasis and discussion, and it is only by the contribution of each operator's experience that a final result may be reached.

The failures of the past are reviewed by the writer, and he quotes freely from a paper published by Harris in January, 1881 (American Journal of Obstetrics, Vol. XIV, page 112).

Defects in technic, however, could not be blamed for all the failures. Harris, who continually pleaded for the timely operation, pointed out by his exhaustive analysis of the old cases many lessons that are still valuable today. "Every surgeon in our land," said he, "should make himself fully acquainted with the steps of and improvements in the Caesarean operation, and especially with the value of operating as early in the labor as practicable, after he is called in; and every obstetrician should learn the comparative dangers between craniotomy in contracted pelvis and a timely delivery by gastro-hysterotomy, as applied to American women." It is this need of operating timely that must be impressed upon us as much as ever today, for if it is to be successful in the highest degree the Caesarean must be an operation of election and not one to fall back upon after the patient is exhausted and started on the road to infection.

In the old records this fatal delay is much in evidence, just as it is today. Writing in 1879, Harris sadly commented on the fact that instead of progressing towards success, as all other varieties of abdominal surgery are, Caesarean section was retrograding under the teaching of those who condemned it as an operation of election or who passed it by entirely for the destructive operations. Looking over the record of this country prior to 1880 we are struck by the remarkable fact that the ten years from 1868 to 1878 showed an increasing mortality. From 1838 to 1848 we had eight sections with four live women and five children. Three of these operations were timely. From 1848 to 1858 we had twenty-seven operations, with a saving of 13 women and 15 children. Here 8

were timely. From 1858 to 1868 we record 23 operations, with 13 women and 8 children saved. Of these 5 were timely. From 1868 to 1878 Caesarean operations numbered 27, and we can boast of but 4 women and 13 children saved. In this last group only five of the operations were timely. Of the cases that died we find two, three, four, seven and fifteen days recorded as the time of labor, and there were three of these cases in the fifteen-day period. The manner of death as recorded is indicative of the effect of long delay, i. e., peritonitis 8, exhaustion 8, hemorrhage and exhaustion 2, septicemia 2, etc. The conclusion is evident. The profession was not ready to accept the fact that in early operation lies the hope of both mother and child, and that the chances of either rapidly diminish as labor advances.

Criticism of the general practitioner for his lack of faith in the Caesarean would be unjust, because he was only following the opinion of the leaders. Playfair, in his book of Midwifery, published in 1878, stated emphatically that great as are the dangers attending craniotomy in extreme difficulty, there can be no doubt that we must perform it whenever practicable and only resort to Caesarean section when no other means of delivery are possible. Little wonder the slaughter of infants and often mothers, too, three decades ago, when such advice came from the English master.

Greene's own series of 60 cases, out of which one mother died. There was no fetal mortality.

Of the mothers, 4 were under twenty years of age; 13 from twenty to twenty-five, inclusive; 13 from twenty-six to thirty, inclusive; 14 from thirty-one to thirty-five, inclusive, and 16 from thirty-six to forty, inclusive. There were 34 first pregnancies, 16 second, 1 third, 5 fourth and 4 fifth pregnancies. Of the sections 51 were first, 8 were second, and 1 was the third section. The following list sums up briefly the various indications:

Eclampsia with varying degrees of justo minor pelvis.....	7
Eclampsia with large baby (9 pounds) in primipara.....	1
Malposition of uterus after Alexander operation.....	1
Old tubercular ankylosed hip with deformed pelvis.....	2
Placenta previa complete in primipara with justo minor pelvis.....	1
Chronic heart with general edema plus pelvic deformity.....	1
Primiparous twin pregnancy with breech presenting in flat pelvis.....	1
Flat pelvis.....	17
Varying degrees of justo minor pelvis.....	29

Artificial Pneumothorax for Tuberculosis—

In a recent issue of the New York Medical Record the following editorial comment regarding artificial pneumothorax in pulmonary tuberculosis is interesting:

In spite of all the work that has been done there remain many questions that are far from

satisfactory solution. Some authors agree with Murphy that the earlier the treatment can be instituted the better, while others would reserve the operation for the late stage, with distinct abscess formation, hemoptysis, etc. Practically all agree that nitrogen is the proper agent. Most Americans and most of the workers in this field abroad, even in Germany, prefer the puncture technique of Forlanini and Murphy to that of Brauer, who advocates incision part way through the wall and then the insertion of a blunt cannula. Then again some would employ the method where there is frank involvement of one side only while others see no harm in using it in the presence of bilateral conditions; for it is an observed fact that in many cases where both lungs have been impaired and the pneumothorax has been induced on the side most affected improvement has been noted on both. The results obtained by the majority of workers have been encouraging, but it is evident that the exact value, the indications and the limitations of this therapeutic resource still remain obscure, and that the observation of a very large number of cases will be necessary before final judgment can be passed.

Surgical Conservation of the Ovary—C. W. Hibbitt (American Journal of Surgery, October, 1914).

Some of the advantages to the individual to be gained by rational conservation are:

1. Future pregnancy is rendered possible, provided even part of an ovary and normal tube be left in situ, whether upon the same or the opposite side.

2. Continuation of menstruation is the rule provided one ovary or functioning portion of an ovary, together with all or part of the uterus, be left in situ. Menstruation has an important bearing upon the mental equilibrium of the individual, especially if she be young and anxious to bear children, and its enforced cessation by double oophorectomy may induce grave mental disturbances, melancholia, etc., as already stated. For the same reason it is desirable to maintain ovulation and menstruation wherever practicable, even if there be no possibility of future pregnancy.

3. Provided the whole or even a portion of functioning ovary be left in situ the internal secretion and consequent trophic ovarian influences are maintained. Nearly every surgeon has doubtless practiced conservatism with both favorable and unfavorable results. While in some cases which were considered most favorable failure has occurred, this should not be permitted to unduly influence any one against the practice, since success can only be attained by (a) studying the pathology when the abdomen is opened, (b) having a thorough knowledge of the requisite operative technic, (c) understanding the limitations and contraindications to successful conservatism, and (d) in being able to follow the future of the patient. If these principles are adopted many years of comfortable life may be given to the individual.

PEDIATRICS.

Massacre of the Tonsil—Coolidge and Garland, in the Boston Medical and Surgical Journal, lay down the following excellent rules, which they believe should be followed in practically all cases:

Tonsils should be removed if serious symptoms can be logically attributed to them. The more serious the symptoms and the more direct the connection, the more imperative is the operation.

They should be removed for recurring peritonsillar abscess.

They should be removed for recurring and persistent cervical adenitis that cannot be accounted for by a focus in the teeth, vestibule, scalp, nose, naso-pharynx or ears.

They should be removed for recurring subacute tonsillitis. This does not include those acute infections of the mucous membrane of the upper respiratory tract so often accompanied by sore throat, which do not start in and only incidentally involve the tonsillar ring.

They should be removed if it is believed, or even seriously suspected, that they are the entering point of constitutional infection. While few dispute this, its practical application in individual cases must be often influenced by different opinions. The tonsils are only one of several avenues through which infection may enter. As it is often the easiest one to close, an experimental operation in serious cases may be justifiable. It is perhaps better to sacrifice many innocent tonsils rather than to allow one guilty one to escape, but it is also true that every unnecessary operation does a little harm to medical science. It is unfortunate that we can never be sure by its appearance that a tonsil is innocent and not very often that it is guilty.

Very large tonsils should be removed, as experience proves that persons are better off without them. But we have found that in children the number of cases in which the tonsils are markedly larger than normal and need removal on that account is small. In our series there were thirteen such cases, with an average weight of 51 grains.

Tonsils which are wholly exposed may be obstructive and require removal on that account, irrespective of size. S. L. J.

"Better Babies" Contests—As a means of arousing popular interest in the subject of healthy babies the "Better Babies" contest has met with immediate success. The method of carrying on these contests has varied extremely in different places from a mere show with the awarding of prizes to babies adjudged most nearly perfect on a very unscientific basis, without any attempt at following up or doing any constructive work in the community where they are held, to a carefully arranged program carried out during several weeks and combining scientific medical examination with home follow-up work by nurses and subsequent contests to show the improvement of babies. There is no question that the baby health contests in one or other of its forms is a most

valuable weapon in the infant welfare movement. It is no less true that improperly managed and planned it is absolutely useless and little short of a Roman holiday. The American Medical Association has undertaken to prepare a score card for these contests based on scientific principles, and the committee having charge of this scientific card are also preparing instructions as to the method of conducting them. Hundreds of these contests have already been held in the United States from one end of the country to the other. It is too soon to draw any definite conclusions as to their real value.—Van Ingen, in *American Journal Diseases of Children*. S. L. J.

EYE, EAR, NOSE AND THROAT.

Drs. H. R. Johnson and P. A. Haley.
Latent and Tertiary Syphilis of the Nose and Throat—By Charles R. C. Booden, Boston, *Journal American Medical Association*, Vol. LXII, No. 18.

Syphilitic lesions of the nose and throat demand early recognition, for when permitted to advance to the tertiary stage they are rapidly destructive.

In virulent forms the irreparable destruction of nose, throat and larynx becomes often but a matter of hours.

All destructive manifestations of syphilis in the nose and throat are tertiary in character regardless of the time of their appearance after the initial lesion.

The moment an initial or secondary lesion becomes destructive to any serious degree, that lesion is tertiary.

The so-called secondary lesion of the cartilaginous septum so commonly observed and so rapidly destructive in action are not secondary at all, but are just as truly tertiary as a gumma of the brain and should be so treated.

From a purely scientific standpoint latent syphilis does not exist.

If the spirochetæ are present, he has lues, if absent, he is free from syphilis, but syphilis does exist without the usual manifestations, and for want of a more exact term is called latent.

Latent syphilis is particularly important clinically to the rhinologist and laryngologist, inasmuch as operations undertaken in this field under such conditions may rapidly change a latent into a very active luetic process.

This has been the experience of nearly all operators in this field, and often proves to be a very serious error.

It has the same effect as the provocative test, but, unlike that procedure, it has no power to control the mischief it has liberated. The author puts himself on record as recommending that no operation of any magnitude should be attempted on the nose or throat until a Wasserman has been made, and if doubt still exists the provocative test should be employed.

Young children with either inherited or acquired syphilis should receive the same attention.

The value of the Wasserman depends on the

stage in which it is taken. It is of no value in the primary stage. It may be negative in both the secondary and tertiary stage if the patient has been subjected to a prolonged and systematic course of mercury and still be syphilitic.

The situation is still further complicated because in the late tertiary stage bone lesions have a strong tendency to yield negative Wasserman, even when untreated. This is very important to the rhinologist, many of whose cases have bone lesions. Expert syphilographers claim that not more than one in three cases of bone syphilis yields a positive Wasserman. The author reports a number of cases giving a negative reaction, yielding quickly to salvarsan.

In those cases where clinical evidence is vague and the Wassermann negative another important resource is the provocative test.

This consists of giving a small dose of salvarsan and then making a Wasserman, the theory being that salvarsan breaks down the walled-off process and liberates the spirochetæ into the general circulation. Bone lesions respond readily to this test, making it an important factor in the diagnosis of syphilis of the nose and throat. In the Boston City Hospital Clinic a number of sinus cases refused to clear up after operation and, notwithstanding a negative Wasserman, healing was rapid, complete and permanent after the administration of salvarsan.

Warning is given after operation on syphilitic children for adenoids and tonsils, and quotes Abner Post as saying that many children with hereditary syphilis are thus operated on with very injurious results. Inflammation following nose and throat operations is the occasional experience of all engaged in this field of practice. Doubtless many of these were not due to the post-operative infection, but to unrecognized syphilis. Here arises another phase of the situation. In very destructive lesions the causal agent is not the spirochetæ alone, but the activity of pus producing organisms, giving rise to a mixed infection. The spirochetæ attack the structures to the extent of greatly impairing their vitality.

Into this fertile field come the germs of other infection and a destructive inflammation results. In chronic cases such as chronic sinus inflammation both the spirochetæ and low organisms of the pus producing variety work together, as the inflammation is too great to be entirely luetic and too sluggish for organisms of the streptococcus variety. H. R. J.

GENITO-URINARY and DERMATOLOGY.

Dr. A. P. Butt.

Urinary Antiseptics—J. W. T. Walker (Int. Abst. of Surgery)—The author confirms the now accepted view that urotropin is of value as an internal antiseptic only when converted into formaldehyde, and that this conversion occurs as a simple chemical reaction in an acid medium and not by virtue of any particular cell activity on the part of the body. The only possible therapeutic application of the drug, therefore, is as a urinary antiseptic.

Walker makes some very practical and valuable observations for urotropin therapy. He says it is seldom difficult to render an acid urine alkaline or moderately so. Potassium citrate and acetate and sodium bicarbonate are in common use and usually effective. This alkaline treatment has been of wide use in pyelitis or cystitis because of a colon bacillus in which the urine has a pronounced acidity. In the pyelitis of childhood, due to the colon bacillus, it is now the settled practice to apply the alkaline treatment. The urine quickly becomes alkaline, and "when this has been accomplished the symptoms subside, the temperature falls to normal, the drowsiness and mental torpor vanish, the pain ceases, and the frequent micturition and scalding disappears." The improvement observed is attributed to the inhibition or death of the bacillus coli by the action of the alkalis. But, according to Walker, the colon bacillus will grow in a urine made many times more alkaline than can be done in the body, and there is no marked difference in the rate of growth, whether the urine is acid or alkaline. This observation is significant and leads Walker to conclude: "The action of alkalis in pyelitis appears to be a neutralization of the acid toxemia produced by the bacillus coli. The cures that are claimed clinically are not cures in the bacteriological sense, for the infection remains; only the symptoms which were due to the acids or acid endotoxins have disappeared. It is true that, in some cases, when the urine is finally examined the bacteria have disappeared, but in these cases, which are the exception, the destruction may be attributed to the natural resistance of the patient and not to the alkalis."

Walker suggests the following course of treatment of acute urinary infection due to the colon bacillus: First, keep the urine alkaline by a course of alkalis until some days after the symptoms have disappeared, and then omit the alkaline treatment and give a vigorous course of urinary antiseptics (urotropin), acidifying the urine if necessary by increasing doses of acid sodium phosphate or ammonium benzoate.

The treatment of urinary infections causing an alkaline urine is not so simple. Urotropin is not converted and is ineffectual. Therapy, therefore, should be directed toward rendering these alkaline urines acid. There are two types of alkaline urine. One is a faintly alkaline urine which deposits phosphates sometimes in large amounts, but which, apart from the change in reaction, is normal in other respects. The other is powerfully alkaline urine with ammoniacal decomposition, in which there is an abundant growth of bacteria (streptococcus, staphylococcus, etc.), together with other abnormal constituents, such as mucus, blood and pus. In order to make these urines acid Walker gives acid sodium phosphate, beginning with 20 grains three times a day, the reaction of the urine being watched and the dose increased every second day to 30, 40, 60, 90, 120 and, if necessary, to 150 grains before each meal. The decrease is limited by the effect on

the bowels, as the large doses may cause diarrhoea. In the same way ammonium benzoate may be given in increasing doses of 10, 15, 20 and 30 grains. It is useless to give urotropin before the urine is acid, and until this occurs Walker advises giving boric acid (10 to 15 grains three times a day), which he believes has no influence in acidifying the urine, but has a "distinct antiseptic influence." As soon as the urine is acid urotropin is substituted. Urotropin should never be given with the acid-producing drugs; the former is better given after meals when the acidity of the stomach is reduced, and the latter some time before meals.

A popular method in the treatment of cystitis and urinary infections has long been by diuretics and forced water. This cannot be wisely used in conjunction with urotropin therapy, as it lowers the acidity of the urine so that splitting of the urotropin does not take place. A choice of the two methods, powerful diuresis and urotropin therapy, must therefore be made.

The author emphasizes the importance of the systematic use of urinary antiseptics as prophylactic agents against urinary infection in all forms of instrumentation of the urethra and bladder and genito-urinary or pelvic operations.

FRANK HINMAN.

OBSTETRICS AND GYNECOLOGY.

Atropine in Dysmenorrhea—While investigating the causes of brady-cardia and arrhythmia in the puerperium J. Novak (Wien. klin. Woch., Dec. 11, 1913) found that the subjects of this condition, which he traced to increased excitability of the vagus, were frequently also the subjects of dysmenorrhea. It was therefore natural to suppose that this was due to excessive irritability of the involuntary nervous system and that atropine would accordingly be beneficial. It has lately been shown that this drug in small doses stimulates and in large doses paralyzes the movements of the uterus. This application of atropine is not altogether new, and Drenkhahn has lately injected a watery solution of atropine into the cervix or has inserted tampons soaked in a solution of atropine into the posterior vaginal fornix. The results were most encouraging. The author prefers to give atropine by the mouth or rectum, for, though the direct application of atropine to the uterus insures a more intensive action with a relatively small dose, yet the disadvantages of this method, particularly in unmarried women, are obvious. Out of thirty-eight cases of dysmenorrhea the pain was continuous during menstruation in two cases, and in one case the character of the pain was not defined by the patient. In the remaining thirty-five cases the pain was spasmodic, suggesting colic or labor pains. In thirty cases the atropine reduced the pain to a negligible quantity or cured completely. Backache and a sense of tension in the lower abdomen were scarcely affected by the drug. In seven cases it was in-

effective. Among these were the two cases in which the pain was continuous, not intermittent. Possibly some of the failures may have been due to an unsuitable dosage, for in small doses atropine has a stimulating effect on the involuntary nervous system. It is not surprising that the drug should fail in a certain percentage of cases of dysmenorrhea, for this name probably covers various conditions due to many different causes, such as neurasthenia, infantilism, mechanical stenosis and other anatomical changes in the uterus, hyperemia, spastic contraction and inflammatory changes of the uterus. It is not clear how atropine relieves the pain of menstruation. It may reduce the spasmodic contractions of the uterus, and it may also check spasm of the uterine vessels, to which some authorities attribute the pain in certain forms of dysmenorrhea.—British Medical Journal, March 7, 1914. S. L. J.

Significance of Pain in the Right Iliac Fossa in Young Women—Dr. Randolph Winslow of Baltimore (New York Medical Journal, May 2, 1914), believes that unless the symptoms of appendicitis in young women are frank and clear the condition is probably something else. Pain and tenderness in the right side, without rigidity, elevation of temperature and leucocytosis, was usually not appendicitis. Apparently severe and long continued pain in the right side in girls was more likely to be neurotic than appendicular. Pain might also be reflected from the pelvic organs or some of the other viscera, and the primary seat of the disturbance might be determined by a more careful examination. He thought we frequently operated too hastily after a diagnosis of appendicitis without considering sufficiently the other possibilities in a case. S. L. J.

Placenta Praevia—J. F. Baldwin, Columbus, Ohio (Journal American Medical Association, July 29), reports a case of placenta praevia in charge of a very competent physician where he was called in. It was decided to adopt the Braxton-Hicks procedure, and with no difficulty he brought down a leg, as he had done in many previous cases. Everything seemed to be going well and there had been very little apparent hemorrhage. An hour later he was called again, as the patient was in collapse, and a glance at the abdomen showed the uterine tumor much larger than before, so that the diagnosis of internal hemorrhage was obvious. The child was immediately delivered forcibly by pulling and pressure from above, and the birth was followed by the largest discharge of blood and clots he had ever seen, the patient dying a very few moments later. In spite of the very considerable literature on the subject of placenta praevia, he has failed to find any mention of the danger of concealed hemorrhage after the leg had been brought down by the Braxton-Hicks method. This case, however, showed that it is a possibility, though probably very rare. S. L. J.

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Original Articles

ABDERHALDEN'S SERODIAGNOSIS OF PREGNANCY AND ITS PRACTICAL APPLICATION.

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(Read before Ohio County Medical Society.)

In the year 1912 Prof. Abderhalden and his pupils published numerous articles describing in detail the methods for serodiagnosis of pregnancy. Abderhalden has proved that in the blood of pregnant women there is present a proteolytic ferment which causes cleavage of placental albumin and of placental peptone. This ferment is absent in the blood of non-pregnant women. The presence or absence of this enzyme is demonstrated either by the dialysation method or by the optic method.

According to the publication of these various investigations in over 300 cases examined there has not been one instance in which the reaction failed to diagnose an existing pregnancy, or in which serum taken from a non-pregnant individual gave a positive reaction. These 300 cases have been confirmed by foreign authors, as Veit of Halle, Petri of Munich, Frank and Heiman of Breslau. To this testimonial I may add the investigation carried out by the Department of Obstetrics of the Washington University Medical School. This school began this work last year, and after many trials and tribulations they managed to exclude

many sources of error and are obtaining results confirming the claims of Abderhalden.

The reaction is positive from the middle of the second month of pregnancy on—that is to say, six weeks from the first day of the last menstruation—and disappears from 10 to 15 days after pregnancy terminates, irrespective of the time of such termination, whether it takes place at term or prematurely, and irrespective of the fact of nursing or not nursing the baby.

I will try to bring out the principles by which Abderhalden tried to evolve the biological test of pregnancy.

The test is based on the assumption that a protein that is foreign to the blood will cause the development in the body fluids of an enzyme capable of splitting such foreign protein. In pregnancy, according to Abderhalden's observation, the placenta, in its developing stage and period of growth in particular, discharges into the maternal circulation a foreign protein, in fact microscopic portions of chorionic villi. The nausea, vomiting and other signs of intoxication are probably concomitant with the entrance of these extraneous placental portions.

On their appearance in the circulation enzymes relatively specific against chorionic villi are mobilized by the body, and have the power to destroy such a foreign placenta protein. This could be shown by several methods, and I will attempt to describe briefly the one mostly used in laboratories. The technique as recommended by Abderhalden is as follows:

Preparation of the Placenta—The fresh placenta, after the removal of the membranes and cord, is cut into pieces the size

of a quarter. These are placed in a dish and washed with running water to remove as much blood as possible.

The placenta is then placed in two liters of water, to which two drops of acetic acid have been added, and is boiled for one minute. This water is then decanted or filtered, and the coagulated pieces of placenta are again placed in water containing acetic acid and boiled again for five minutes.

The water is tested for the biuret reaction. (To 10 c.c. of water add 5 c.c. of 33% Na OH, shake well and stratify with a 0.4% of CuSO_4 solution.)

The reaction should be negative—that is, free from all soluble protein—if all the instructions are properly carried out. If the reaction is positive the water must be changed again. After a negative reaction has been obtained chloroform and toluol are added to the water and placenta and the mixture is transferred to a wide-necked bottle, well stoppered. This material will keep indefinitely.

Preparation of Serum—The serum is obtained by venous puncture in the usual manner under aseptic precautions. It must be absolutely free from haemoglobin. Abderhalden states that two or three c.c. are sufficient, but in this investigation it has been found advisable for the purpose of adequate control tests to have at least five or six c.c.

Dialysis—The diffusion membranes of Schleicher and Shull are the most satisfactory. All membranes should first be tested as to the impermeability of each to egg albumen or blood serum and their permeability to peptones.

This is very important: In such a tested membrane place about 1 gm. of the finely divided coagulated placenta tissue. To this add $1\frac{1}{2}$ to 2 c.c. of serum. Wash the outside of the diffusion membrane with water to make sure it contains no particle of placenta tissue or blood serum. Place the membrane in a small beaker containing 20 c.c. of water. The level of the liquid outside the membrane should be about the same as that inside. Cover both with toluol and keep at a temperature of 37°C . for 16 to 24 hours. Control tests with serum alone and with placenta alone should always be made.

Color Reaction—If the biuret is to be used, a portion (10 c.c.) of the dialysate is placed in a test tube, and 5 c.c. sodium hydrate (33%) is added and a layer of 0.4%

cupric sulphate carefully superimposed. A violet to violet purple ring indicates a positive reaction.

If the *ninhydrin* test is employed the following steps are necessary. Take 10 c.c. of the dialysate and add 0.2 c.c. of a 1% water solution of ninhydrin, heat quickly and boil exactly one minute. If the reaction is negative the solution remains colorless or turns light yellow. In a positive reaction a deep blue color appears immediately or sometimes only after standing awhile.

There are many cases in which the serodiagnosis of early pregnancy finds suitable application, and the time will come when the test will be recognized by the courts as an absolute proof of the existence or the non-existence of pregnancy.

The following is a case in point: A girl, seventeen years old, was admitted to Washington University Hospital on April 8th, 1914, on account of moderate uterine hemorrhage. Her father stated that he suspected a certain man of having seduced the girl and that there might have been an attempt at criminal abortion. The girl protested her innocence and refused to be examined or treated. Rest in bed caused the bleeding to subside. On April 9th the girl submitted to an examination of her blood.

From the arm 10 c. cm. of blood were drawn into a sterile centrifuge tube and centrifuged. Of the clear, pale yellow serum 1.5 c. cm. were used for the test and another 1.5 c. cm. were inactivated by heating in the water bath to 60 C° for thirty minutes and were used for a control test. For further control 10 c. cm. of blood were taken from a woman thirty-eight weeks pregnant, and of the clear, pale serum obtained from it 1.5 c. cm. were used for a second test, and another 1.5 c. cm. were inactivated and used for a second control test.

The four dialyzers were placed in the incubator at 2 P. M.; on April 10th at 11 A. M., that is, after twenty-one hours, the experiment was interrupted and the dialysates were tested with ninhydrin.

The dialysate derived from the test with the serum of the pregnant woman gave the characteristic deep violet-blue color, while the dialysate from the control remained colorless.

The diagnosis of pregnancy was thereupon entered on the girl's record, together with the details of the test. The girl was told that she was pregnant and she changed

her attitude and admitted the fact. Her last menstruation had started March 1st; on April 7th, when ten days overdue, the attempt was made to open her womb; moderate hemorrhage followed and the girl entered the hospital.

Local examination showed the uterus ante-flected, movable, approximately of normal size. The left side of the cervix had a small wound from which the blood was oozing. After a few days of rest the girl was ready to be discharged, and through the social service department she was placed in the care of a suitable institution.

The question arises, what might have happened if the girl had left the hospital without making a confession? An abortion might have been induced, and after the removal of the evidence suit might have been brought against the hospital or against members of the obstetrical staff for libel and slander. In such an event would the records of the biological test have been accepted by the courts as positive proof of pregnancy? Eventually such will undoubtedly be the case, because, when all the precautions insisted upon by Abderhalden are observed, and when a sufficient number of control tests are employed, the test always gives positive reaction during pregnancy from the end of the second week after menstruation has been passed (on the twelfth day in the case here quoted) until the fourteenth day after pregnancy has ceased to exist. The test is always negative in the absence of pregnancy.

The studies of Williams and Pearce, teachers of research medicine, University of Pennsylvania, claim that the test has never been negative in a known pregnancy. McCord's Detroit observation is based on 240 tests under varied conditions and at different stages of pregnancy.

His findings lead him to conclude that the serodiagnosis of pregnancy is both reliable and practical.

The method has its limitations, and the technique requires great care. In the hands of the careful worker the method is of sufficient merit to prove of great value to the obstetrician and gynecologist.

Veit points out the importance of the reaction for the differential diagnosis of ectopic gestation, but I do not think that is very important. A positive reaction simply tells us that the patient is pregnant, but since the uterus in these cases is considerably en-

larged during the early weeks, a positive reaction can give us no information as to whether or not the ovum is inside of the uterus.

It often becomes desirable to ascertain whether or not a nursing mother, who has not menstruated since her baby was born and whose uterus is only moderately enlarged, is pregnant. At other times we are consulted on account of girls or women who have no right to be pregnant and in whom the amenorrhea may be due to change of climate or other causes. In the latter a pelvic examination is often undesirable, while the examination of the blood cannot offend the sensibility of any one. Medico-legally it may also be important to make a positive diagnosis as to the presence or absence of pregnancy or as to the condition of recent birth, for in the past the abdomen has now and then been opened because a pregnant uterus had been mistaken for a new formation.

In all these conditions the serodiagnosis of pregnancy will give us definite, reliable answers.

EPIDEMIC CEREBRO-SPINAL MENINGITIS.

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(Read before West Virginia Medical Association,
May, 1914.)

The mode of infection is obscure, but the organism is thought to gain access to the circulation through the mucous membrane of the nose and the conjunctiva, as the organism has been isolated from the mucous membrane of the nose, not only of those suffering from the disease, but from healthy persons who have been in contact with cases. Cerebro-spinal fever has an undoubted tendency to follow bad sanitary conditions and to prevail in damp, sunless houses. It is a disease of temperate climates, and the outbreaks usually take place in the spring of the year. The victims are mostly children and young adults, and Koplik states that few recoveries take place in children under two years of age.

The onset of symptoms is sudden, as contrasted with tubercular meningitis, in which the onset is gradual. The attack comes on sharply with intense headache, rigors and

vomiting. The pain soon localizes itself in the back of the neck and occiput, and may thence radiate down the spine, limbs and abdomen. The pain is soon followed by a characteristic symptom, namely, retraction of the head. The head is drawn back and rigidly fixed, the spine arched and the limbs drawn up, and muscular spasms may take place. There is general hyperesthesia, the slightest contact producing pain. More or less fever is present, but the temperature is not characteristic. The headache continues with great severity and restlessness and delirium supervene, or there may be long periods when the patient is comatose. Twitching of the limbs and general convulsions may occur and facial paralysis is frequent. Paralysis of the ocular nerves causing squint, dilatations and contractions of the pupil are common as in other varieties of meningitis. Some of the most striking symptoms are the rashes. These usually occur about the fourth day of the illness and vary widely in character, resembling erythema, urticaria, rose spots or purpuric spots. The rashes have usually no relation to the gravity of the disease, but severe cutaneous hemorrhages usually indicate a severe form of illness. Should the patient survive the first shock of the attack serious complications may arise; the eyes may be attacked by severe conjunctivitis, iritis or keratitis or inflammation of the deeper parts may take place, leading to detachment of the retina. More frequent even in diseases of the auditory apparatus and purulent otitis media or disease of the labyrinth may lead to permanent deafness. Serous effusion may take place into joints which are painful, red and swollen, as in acute rheumatism.

Certain forms of the disease are rapidly fatal. They are known as the fulminant type, and death may take place within twelve to twenty-four hours of the onset. Death usually occurs between the fifth and eighth days, but many cases drag on for weeks with rapid and progressive emaciation, and recovery is slow. The mortality has varied in different epidemics.

The changes found after death from cerebro-spinal fever are an acute inflammation of the pia-arachnoid membrane, both of the brain and spinal cord, with effusion of serum or pus into the ventricular and sub-arachnoid spaces. With such rapidity may the effusion become purulent that it may be

found purulent in a case where death took place within five hours from the apparent onset.

Lumbar puncture, too, has been found to be of eminent service in many cases, the withdrawal of from 30 to 50 c.c. of the spinal fluid serving to relieve pressure and at least temporarily ameliorate the symptoms.

Up to a few years ago it may be said that there was no effective treatment for cerebro-spinal fever but that of endeavoring to alleviate pain by the administration of opium, but with the recent introduction of serum therapy the future is full of hope. In the epidemic in New York (1900) the serum of Flexner and Jobling was used, and the most striking results were seen in young patients, the death rate where the serum was used sinking to 46.3%, as against 90% without. Like other serum treatments, to get the best results the serum must be administered early in the disease. When given subcutaneously, as in diphtheria, the serum has little or no effect, and to obtain good results it must be injected directly into the spinal canal after the removal of an equal amount of the spinal fluid. The injections are then continued daily as required, according to the severity of the case.

The following cases which I shall report, three were sporadic and nine epidemic, as the disease occurs epidemically or sporadically. The epidemic made its first appearance in this section of the State at Rainelle, about the first week in February, and they had about ten or twelve cases—am not definite on the exact number of cases, as I was depending on Dr. Wall for this part of my report. There were two deaths at Rainelle. One of the patients that died at Rainelle was taken to Russellville for burial, a distance of about 15 miles. On the 23d of February a case of cerebro-spinal meningitis developed at Russellville, and there were eight cases at that point in a radius of about one mile. In one home there were two cases, two other homes one case each and in the fourth home there were four cases. Dr. Walker treated these cases, and to him I am indebted for an accurate history of each case, as I saw them with him and administered serum. There were two deaths. One case did not have the serum on account of parental objections; the other case was given serum later, developed lobar pneumonia and died at the end of the third week.

The three cases of sporadic cerebro-spinal meningitis I saw with Drs. Musgrave and Jones, administered serum, two recovered without any complications in about two weeks.

First case. February 11th. Male. White. Age 24 years. Single. Had been sick eight days when I saw him and gave serum. The onset of disease was sudden, chill, vomiting, headache, pains in back of neck, photophobia, and on the second day blindness, with retraction of head and arching of spine. On the 12th serum repeated. After the third day all symptoms began to clear up. Patient recovered and was discharged with no bad results on February 26th.

Second case. March 17th. Female. White. Age 15 years. Developed the disease on February 23d, 1914, chill, vomiting, severe headache, pain in neck and back, very restless, photophobia, tinnitus, insomnia, loss of appetite, jerking and twitching of muscles. About the eighth day there was a remission of all symptoms, but the hearing was badly affected. On the 17th day of March gave serum. The twenty-second day of the disease all symptoms began to subside and patient improved slowly, and at present is in very good condition with the exception of her hearing. In fact, she is almost deaf.

Third case. Child. Age 20 months. Male. White. Brother of above case. First symptoms noted were peevishness, slight elevation of temperature, persistent vomiting, pulling at head, stupor lasting for four or five days. Administered serum on the seventh day of the disease. Child suffered for about 24 hours, after which all symptoms subsided and child made an uneventful recovery at the end of the second week.

Fourth case. C. L. D. White. Male. Age 25 years. Single. Developed the disease suddenly, chill, vomiting, delirium and stupor, erythema marked, complained very much of itching. Conjunctivitis developed at the end of the second week. I saw the case on March 17th, and at that time patient delirious and looked thoroughly septic. Serum not given, as there was objection on the part of his parents. Patient died on the twenty-eighth day of the disease, apparently from exhaustion.

Fifth case. Mrs. M. White. Age 35. Married. Mother of nine children. She developed the disease suddenly, ushered in with about the usual symptoms. In addition

had marked strabismus. I saw her at the end of the first week of the disease and administered serum. With the exception of some little impairment of her hearing all the symptoms subsided and she slowly improved. Deafness in this case is confined to the right ear.

Sixth case. W. L. M. Male. White. Age 16 years. Taken sick March 2d. The symptoms were about the same as the other cases, sudden. At the time I saw the patient March 17th, he was in stupor, marked retraction of head, emaciated. Administered serum, but no improvement could be noted. March 23d developed lobar pneumonia and died the 24th. (In this home there were four cases in the one room about twelve by fourteen feet. Very poor ventilation; in fact, none when the door was closed.)

Seventh case. C. M. Female. Age 14 years. White. Sister of the above case. Developed the disease on March 6th. After the initial symptoms subsided she lay in a stupor for about one week. I saw her on March 17th, and she seemed to be improving. No serum was given, and she made a good recovery; convalescence slow.

Eighth case. L. M. White. Male. Age 9 years. Developed the disease on March 6th with symptoms as described. On March 17th I gave serum. Severe pains in legs for about 24 hours after administration. Improvement began and he made good recovery with no bad results. Complained for two or three weeks of pains in legs.

Ninth case. Child. White. Female. Age 20 months. March 10th developed the disease with the usual symptoms. On March 17th administered serum—15 c.c. Suffered for about 24 hours, after which all symptoms abated and child made a good recovery at the end of second week.

Tenth case. G. E. White. Female. Age 19 years. Developed disease April 9th. Onset sudden headache, pains in back and limbs, temperature 102° F., retraction of head, delirium. I saw the case on April 13th with Dr. Musgrave and administered serum. Patient made an uneventful recovery in about two weeks. No bad results.

Eleventh case. Child. Age 2 months. Developed the disease April 1st. In this case the symptoms were not so marked. Child was in stupor part of the time. I saw the case with Dr. Musgrave on April 13th and gave serum. Improvement began

at once and in about two weeks child had recovered.

Twelfth case. Mrs. J. White. Age 32 years. Developed cerebro-spinal meningitis May 2d. Onset very sudden. Pains in head and in fact complaining of pains all over the entire body. Did not have any convulsion, but was delirious. I saw this case with Dr. Jones May 5th and did lumbar puncture, withdrew about 15 c.c. of spinal fluid, which was very cloudy and contained pus. Gave serum and repeated it on the 6th and 7th. She died on May 7th. In this case there was marked renal congestion with blood in the urine and inability to void.

ACUTE TUBOTYMPANIC CATARRH

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*(Read before West Virginia Medical Association,
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Many volumes were written on the anatomy and physiology of the ear, but the knowledge was superficial and incorrect, and the treatment of ear diseases purely empirical and irrational until the age of the three great anatomists of the sixteenth century—Vesalius, Eustachius and Fallopius—to whom belongs the honor of bringing light and order out of darkness and chaos. From their studies of the ear and its diseases the errors and empiricism of the dark ages of otology began to give way.

Valsalva, in the seventeenth century, by his remarkably clear description of the anatomy of the ear and the treatment of its diseases, did much to advance otology to its present high plane.

It is supposed that Aristotle knew of the Eustachian tube, but Eustachius was the first writer to give an exact description of it in 1563, and later writers who followed Eustachius up to Valsalvas' time based their work on what Eustachius, Vesalius and Fallopius had done. Toynebee in 1851 investigated anew the Eustachian tube, tympanic membrane and tympanum, and his papers on the pathological anatomy of the ear did much to place otology upon a sound basis. His statement that the Eustachian tube was usually closed and that muscular action was necessary to open it led Adam Politzer of Vienna in 1862 to promulgate his method of inflating the tube and middle ear. Wilde, the great reformer of otology,

wrote as late as 1853 that "the affections of the ear, whether functional or organic, are spoken of, lectured on, written of and described, not according to the laws of pathology, which regulate other diseases, but by a single symptom, that of deafness."

An important step in advance was to recognize the pharynx as the starting point of many diseases of the Eustachian tube and middle ear, and with it came a simple means of opening and treating the Eustachian tube and tympanic cavity.

Following close on these discoveries, and within the memory of some of us, came discoveries making it possible to separate and differentiate diseases of the perceptive apparatus from those of the parts devoted to the conduction of sound, giving otology rank with ophthalmology for exactness in diagnosis and prognosis.

In speaking of acute tubotympanic catarrh I shall refer to the milder or congestive tubal and middle ear affections and not to the more severe acute inflammatory conditions, due to a more active infection of the tympanic cavity and tube, by one of more kinds of bacteria, often terminating in acute suppurative otitis media.

The evil consequences of neglected colds in the head, adenoids, abnormal conditions of the intra-nasal cavity and naso-pharynx are not sufficiently appreciated even at this day by the medical profession, and as a result the hearing, especially in children, is greatly and permanently impaired. Nasopharyngitis, coryza and all conditions that are productive of colds in the head are causative agents of Eustachian and tympanic catarrh. The milder types of exanthemata are productive of nasopharyngeal conditions that are causative of catarrhal affections of the tube and middle ear, while the more severe cases of measles, scarlet fever, diphtheria and influenza are more likely to cause a severe inflammation and supuration of the middle ear. The proportionately large Eustachian cushion in the child and adenoids, when present in an obstructive degree, do more to injure the ears than any other condition. The growth of numerous pathogenic bacteria in the epipharynx is favored by the presence of adenoids, and covered by mucus, as the adenoids are, the suction and rarefaction of air in this space by each act of swallowing and the forcible efforts of the patient to clear the obstructed nasal

passages, is apt to drive the infection into the middle ear. In the acute process the inflammation may be limited to the Eustachian tube alone, or it may spread rapidly to the middle ear.

When the inflammation is limited to the tube there is generally obstruction, followed by hyperaemia and serous transudation into the tympanic cavity, but to rarefaction of the tympanic air, brought about by absorption of the air by the lining mucous membrane.

On account of these changes the balance of the drum membrane is destroyed and the drum and malleus are pushed in, making the short process more prominent and the malleus to appear foreshortened.

In cases of marked severity, and where the onset is sudden, vertigo may be a prominent symptom, the hearing suddenly diminished and a tinnitus aurium is established.

In the milder cases of acute tubotympanic catarrh, where no active inflammation is present, but little or no pain is complained of, but rather a soreness, which the patient refers to almost any part of the neck and throat, and a decided stiffness of the ears.

The appearance of the drum membrane is one of retraction, the folds are more distinct and the short process more prominent and whiter than normal.

On account of the new position of the manubrium the membrana tympani is divided into unequal parts, the antero-inferior portion appearing unusually broad, while the postero-superior is greatly narrowed. Unless an exudate has already taken place the appearance of the drum membrane, after inflation of the tympanic cavity, is completely changed, the normal position of the parts being restored.

Autophonia or a resonance of the patient's own voice in the affected ear is a distressing symptom in some cases, the patient describing the sound of his voice as resembling that heard "when talking in a barrel." Children suffering from tubotympanic disease, and who have in addition large nasopharyngeal adenoids, acquire the characteristic and expressionless countenance, which, with the open mouth and lack of attention because of the poor hearing, make up that condition which Guye has called aprosexia.

Mouth breathing is a symptom observed in most cases of tubotympanitis in children and young adults, due to adenoids and naso-

pharyngitis involving the lips of the Eustachian tube.

Frequent colds in the head, accompanied by nasal obstruction, blowing of the nose, hawking and spitting, are symptoms nearly always present.

The prognosis in acute tubotympanic catarrh depends upon the early and exact diagnosis of the affection and the prompt and proper treatment instituted for its relief.

It is evident that we are dealing with an extremely practical subject and one in which every family physician is, or should be, interested. The means at our disposal for the relief and cure of these affections are ample, and it is almost criminal negligence on the part of the physician to allow an acute catarrh of the middle ear to drift into the more severe and dangerous infection and suppuration, bringing incalculable mischief in this class of ear diseases. In neglected cases the exudate, with its accompanying symptoms of tinnitus, deafness, etc., may continue for months and years, the retained secretion finally organizing, forming bands of connective tissue and ankylosis of the ossicles, with permanent immobility of the membrana tympani.

In the early stage treatment consists in the removal of local predisposing causes of the disease and of restoring the patency of the tube. The Eustachian tube may be opened and the tympanic cavity inflated by means of the Politzer method or by the Eustachian catheter. The catheter may be employed in the majority of adult cases in whom the nose or nasopharynx is not greatly inflamed, but as a rule the Politzer bag is better suited for use in children and in patients where the nose and nasopharynx are hypersensitive.

When there is much swelling of the mucous lining of the Eustachian tube as a result of nasopharyngitis the catheter is preferable, but before its use the nasopharynx should be prepared by spraying with normal salt or mild alkaline solution, followed by an application of a 4% solution of cocaine to the inferior meatus, the lateral walls of the nasopharynx and the mouth of the Eustachian tube.

The operation should be repeated every day or two until there is marked improvement and then at longer intervals.

Judicious treatment, either surgical or

otherwise, of all new growths and inflammatory affections found in this region, is scarcely less important than inflation of the tympanic cavity.

If upon examination it is found that the disease process has gone on to the second stage and the tympanic cavity filled with an exudate to the point of bulging in some part of the drum membrane, the membrane should be freely incised and the secretion removed through the external auditory canal.

While energetic local treatment is being carried on the general system should be looked after. The local and constitutional treatment can be carried on together, but I would like to emphasize the fact that to neglect to treat the ear at the proper time may lead to irreparable damage not only to the health and happiness of the patient, but may destroy his life.

PURITY OF OUR STREAMS SHOULD BE PRESERVED

**Treatment of Sewage Waste by Scientific
Methods—Manufacturers Find It
Profitable to Treat Trade
Wastes.**

By **Scotland G. Highland, Secretary and
General Superintendent, Clarksburg
Water Works and Sewerage Board,
Clarksburg, West Virginia.**

Public health is purchasable. Within natural limitations any community can determine its own death rate. The incredible results of the systematic pollution of the rivers of West Virginia have been borne by the people of the state with exemplary toleration, while in other states innumerable measures have been taken to combat the problem of river pollution.

The objects of sewage purification may be shortly described as an attempt to preserve our rivers in their natural condition; to guard them against visible pollution and to prevent danger to the health of those living near them.

Prior to the general introduction of public water supplies the impression seems to have been that the use of rivers was to carry away sewage and refuse. However, as early as 1547 in the town of Bunslau,

Germany, began the treatment of its sewage by means of land irrigation.

The present day opinions have not always been held with regard to the purity of our rivers. Public opinion has developed step by step with the gradually increasing adoption of water-closets and water carriage systems of sewage.

In 1864 the English government appointed a royal commission to inquire into the pollution of rivers. One of the instructions which this commission received is specially worthy of note. It runs: "Although it may be taken as proved generally that there is a widespread and serious pollution of rivers, both from sewage and refuse from mines and manufactories and that town sewage may be turned into profitable account as a fertilizing agent, there is not sufficient evidence to show that any measure absolutely prohibiting the discharge of such refuse into rivers, or absolutely compelling town authorities to carry it onto lands, might not be remedying one evil at the cost of an evil more serious in the shape of injury to health and damage to manufactories."

It is interesting, however, to note that at the present day London treats all its sewage, amounting to approximately two hundred and fifty million gallons daily, from which it obtains ten thousand tons of sludge daily.

After years of experiments and discussion by eminent men all over the world intelligent and reasonable ideas have been developed showing that the question of sewage disposal is intimately bound up with that of spreading epidemics by means of polluted rivers.

Domestic or town sewage contains very large numbers of micro-organisms, seldom less than one million per cubic centimeter, and often as many as ten millions or more.

If guinea pigs are inoculated with only small doses of sewage they will become ill almost without exception and often die. The drinking of sewage must accordingly be regarded as not only unappetizing, but also as hurtful to health, and in cases of epidemic intestinal diseases as directly dangerous.

The most manifest nuisances which arise from present methods of sewage disposal are to be found in the formation of sludge deposits in the beds and on the banks of the rivers; in the turbidity and color of the

water of the streams; in the putrefactive changes which occur and give rise to bad smells and odors, and also in the putrefying sludge which sometimes rises to the surface of the streams and which may be floating about with other suspended matters. Such nuisances have attained dimensions so serious in some communities that for long distances it is impossible to dwell on the banks or in the neighborhood of the rivers or streams.

It is necessary for the citizens of the state to procure their public water supplies from the naturally pure and sparkling streams of West Virginia, and it should never be necessary to convert sewage-laden streams into drinking water. It is now accepted as reasonable to require every town sewerage on the water-carriage system to adopt measures to prevent the discharge of the coarser suspended solids in the sewage into the river.

The twenty-third report of the Massachusetts State Board of Health, published in 1892, describing its experiments, must be considered as epoch-making, since they gave rise to the so-called artificial biological processes later perfected abroad.

In view of the fact that in the case of artificial biological treatment an actual purification of the sewage is achieved, whereas, under the most favorable circumstances, earlier methods only produced clarification, the biological method must be considered as by far the superior process. It may now be regarded as a definite fact that this process has put us in possession of a method which is universally applicable, and which yields a product satisfying all sanitary requirements.

The results of the artificial biological method are not only satisfactory with regard to the protection of our rivers, but also with regard to the sludge-disposal problem, which receives a much more favorable solution than with earlier chemical precipitation or sedimentation, sub-soil or land irrigation.

It is practicable to produce by artificial processes alone, either from sewage or from certain mixtures of sewage and trade refuse, effluents which will not putrefy, which would be classed as good according to ordinary chemical standards, and which might be discharged into a stream without fear of creating a nuisance.

Undoubtedly the difficulties of sewage purification have been made an excuse for delay, not only by manufacturers, but also by many municipalities, in carrying out the requirements of supervising authorities. In some cases the supervising authorities have been too lenient, and it must be pleaded as their excuse that they have been patiently awaiting the perfection of methods of purification which it was hoped would yield better results at less cost to those who had the sewage to deal with.

Such hopes were raised about fourteen years ago by the introduction of artificial biological methods.

The technical side of sewage purification has now been so far developed that it is possible to preserve the natural appearance and purity of every stream, even the smallest, with a minimum expenditure of money.

Many of the manufacturers who have constructed purification works have found it profitable to do so. One paper manufacturer has effected a saving of \$4,500 a year; a blanket manufacturer \$10,000 a year, and a colliery proprietor similarly recovers three hundred tons of coal a fortnight which previously went into the river.

The general tendency of the large growing towns and of the flourishing industries to get rid of their yearly increasing quantities of rubbish, filth and sewage by discharging them into the rivers has imposed upon the State of West Virginia the duty of carefully guarding public water courses.

The far-reaching hygienic importance of keeping the rivers clean is faced by the fact that the towns and factories must be provided with the means of getting rid of all those matters for which the public water-course seems to provide the natural outlet. Often, indeed, no other method is available, and then permission must be granted, but with certain safeguards which preclude the possibility of danger to the public health.

No legislation should be passed which demands the performance of technical impossibilities.

It can be assumed that the State Board of Health will keep in touch with the technical development of sewage purification and will not require the adoption of measures which necessitate large expenditures without insuring reliable results.

GENERAL SUBCUTANEOUS EMPHYSEMA, WITH REPORT OF CASE.

H. W. Daniels, M.D., Elkins, W. Va.

(Read before West Virginia Medical Association, May, 1914.)

Emphysema (meaning the abnormal collection of air in the connective tissue of a part, causing swelling and crepitation) in its various forms, is a pathological condition about which we see very little written, hear very little said and get very little information from our various text books on the Practice of Medicine; at least, that has been my experience.

Gould names several forms of this condition, such as cutaneous, gangrenous, interlobular, pulmonary and surgical. I do not like this classification of the subject and think a much better and more practical division would be under two heads only, viz., pulmonary emphysema and subcutaneous or skin emphysema.

While emphysema in reality is not a disease, but a symptom only, yet I think it wise to make these two divisions of this important symptom because of the widely divergent nature of the morbid condition causing pulmonary and subcutaneous emphysema.

Pulmonary emphysema, along with its other many associated symptoms, is an indication of a condition with which you are all more or less familiar, viz., the chronic condition of the lungs in which there is a dilation of the alveoli with destruction of the alveolar walls, resulting in a loss of the normal elasticity of the lung tissue. With these few words, I shall dismiss it and take up subcutaneous emphysema. This consists of air or gas in the subcutaneous cellular tissue and tells you that these gases, or air as it may be, has gotten in there in one of three ways: either from without through a wound, from within by rupture traumatic or otherwise, of an air or gas containing organ, or from cellular tissue, infected by gas producing bacilli.

It has been my province since practicing medicine to see a great many cases in which skin emphysema existed, to see it in many different localities on the body, to see it due to many different causes, but in no case except the one which I shall now report, have I seen it exist over such

a large area of the body and to such a great degree.

I was called about twenty-five miles from the City of Elkins, November 24th, to see in consultation George S—, a child two years of age, living with his grandparents far out in the country. Upon entering the room in which the child lay, quite a sight met my gaze—a child enormously swollen from head to foot. From the attending physician I learned that the child had passed through a rather sharp attack of broncho-pneumonia, accompanied by severe attacks of coughing, and that about the end of two weeks from the beginning of his illness, as the symptoms of the pneumonia begun to subside, a swelling appeared on the anterior portion of his neck, just above the sternum, and rapidly extended, involving the entire surface of the body in about forty-eight hours. The attending physician frankly admitted that he did not know the cause of the phenomenon and that he had called an older doctor from a neighboring town in consultation and that he had pronounced it a dropsical condition, due to heart failure, and that they were treating him accordingly.

Upon examination of the child, I found the following: pulse, 96, regular, very good in force and volume; temperature, 99.2-5; respiration, 20, regular and not labored. Auscultation revealed nothing abnormal except a few bronchial rales, heart sounds clear and distinct, no murmurs. I examined a specimen of urine for albumen and found none. Inspection revealed the fact that the child was ballooned over its entire body, with the exception of the palms of the hands and the soles of the feet. The swelling was greatest about the face, neck and scrotum, entirely closing the eyes and obliterating the space from the point of the chin to the sternum. Upon palpation the swelling did not pit and seemed elastic and around the joint where there was not so much distention, I could elicit some crepitation. After completing the examination of the child, I made a diagnosis of general subcutaneous emphysema, due to the rupture of air-cells in the lungs from the greatly increased intra-pulmonary air pressure during a violent spasm of coughing, and the passage of the air from these ruptured cells, either under the visceral

pleura or through the interalveolar tissue into the mediastinum and thence to the connective tissue of the neck, from which locality it spread under the skin over the entire body.

Owing to the poor facilities for nursing the child and giving it the proper hygienic treatment, I advised that he be wrapped in blankets, placed in a closed carriage and conveyed to the nearest railway station, which was about twelve miles distant, and be brought to Elkins, where he could be under my personal supervision. This advice was heeded and that night he called for and partook of food, the first he had taken for three days. I placed the child on tonic treatment and kept him in the open air as much as possible. The swelling began to gradually disappear, and at the end of two weeks from the time I was called to see the child it was all gone except a small amount in the scrotum, at which place it was last to disappear. The little fellow made a complete recovery, regained his usual good health and is a strong, healthy boy today.

I report this case because I think it an unusual one, owing to the great extent and the enormous amount of the aerodermection, which would be liable to confuse one in making a diagnosis and with the hope that it may be the means of helping some other brother if he should encounter the same thing in his practice.

THE DIAGNOSIS AND TREATMENT OF MENINGITIS.

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(Read before West Virginia Medical Association,
May, 1914.)

A typical case of meningitis is one of the easiest diseases to recognize. We see cases of this kind during epidemics and occasionally sporadically. There is an initial chill, a rapid rise of temperature, pain and rigidity of the neck, marked and violent headache, hyperesthesia, and often a blotchy or petechial eruption scattered over the body. The blood shows a leucocytosis of from 20000 to 30000, the increase affecting the polynuclear cells mainly. The spinal fluid obtained by puncture is turbid with pus and meningococci.

It is surprising to note that it is the usual rule for the sporadic case of meningitis to be overlooked at first. This applies particularly to the tuberculous form. The fever, headache and prostration strongly suggest typhoid fever. When the prostration rapidly increases and leads to early death the mortality of typhoid goes up. More often the nature of the trouble becomes evident. It is for this reason that the process of watchful waiting is often resorted to. Most physicians have now learned that an intermittent fever that resists quinine is not malaria: it is their same duty to learn that cases of fever with *leucocytosis* are practically never typhoid. In meningitis of any form there is constantly a high leucocytosis with an increase in the polynuclear cells, ranging from 80 to 95 per cent. Given a case of obscure fever with headache and prostration, no process of diagnosis is reasonable that does not include the possibility of meningitis, and the only way to be sure of the presence of meningitis is to examine the spinal fluid obtained by lumbar puncture.

The early diagnosis of meningitis has taken on an added importance since the introduction by Flexner of antimeningitis serum. As with diphtheria antitoxin this serum is most beneficial when used early. In such cases the percentage of recovery has been 75 per cent. Since some strains of meningococci have been found which are unaffected by the serum there is every hope that this shortcoming will be remedied to the marked advantage of serum treatment.

That tuberculous meningitis is not entirely hopeless is shown by about eight recoveries of undoubted cases on record. This form of meningitis can be differentiated from others only by finding the tubercle bacillus in the spinal fluid. The easiest way to do this is to place the spinal fluid in the incubator for three to six hours. After that time a small veil-like cloud forms, made up of fibrin and lymphocytes. This is transferred to a slide by means of a platinum wire and stained by Babbet's method. The results are much better than when the fluid is centrifugalized.

In conclusion I wish to say that the purpose of the paper is to emphasize the value of the early diagnosis of meningitis.

If it is due to the meningococcus, most of the cases can be cured by the serum, provided it is given until the fluid is free from infection. At present all the benefit to be obtained from lumbar puncture in meningitis of other forms is a quick and reliable prognosis. The only way to diagnose meningitis early is to bear it in mind. If you do you will do a lumbar puncture to make sure.

VIEW POINT SANITARIUM FOR TUBERCULOSIS.

Thurman Gillespy, M.D.,
Wheeling, W. Va.

As one approaches View Point Sanitarium the natural beauty near and far, the well kept gardens, cement walks, green lawns disappearing in the maple woods please the eye, and when he catches a glimpse of the inviting wide porches of the cottages his dread and fear of contagion is charmed away and he wishes to tarry awhile to enjoy the beautiful view.

Located on the crest of a mountain overlooking the forks of Wheeling Creek seven miles from its mouth, elevated 700 feet from the creek level and 1,352 feet above sea level, with a southwestern exposure, reached by electric cars from Wheeling, it affords an ideal site of easy access for nine-tenths of the citizens of Ohio county.

The elevation and prevailing winds insure the minimum of fog and absence of excessive humidity in summer, and the dryness of air prevents the cold of winter being so distressing.

May 1, 1912, View Point Sanitarium, with 28 beds capacity, was opened for the treatment of curable cases of tuberculosis. The cottages, four in number, are of the Loomis sanitarium type, made architecturally attractive and with more conveniences for patients. Each cottage has a central recreation room, with private locker and dressing room in the rear for each patient, also bath and toilet. On each side of the recreation room are the roomy sleeping pavilions accommodating single beds and groups of 2, 4 and 6 beds, respectively, according to its size.

No expense has been spared to make View Point a model embracing the good points of other institutions, and other coun-

ties of our state can very profitably copy it.

With a visiting staff of 12 doctors, a resident registered nurse as superintendent and sufficient help to man the institution, the charitable citizens of our county have given us a means whereby we can combat and have successfully combated the great white plague.

At first we admitted a few well advanced cases of tuberculosis, and in several of them, to our surprise, the patients have had an arrest of all symptoms and physical signs, and in one case (No. 4) the patient has been following his laborious occupation for more than 15 months without any symptoms.

Below are a few cases that show what can be accomplished near home :

No.	Age.	Adm.	Wgt.	Temp.	D.	Wgt.	Temp.	Condition.
1	E. N. 41	5-14-12	119	99.8	8- 1-12	134	98.6	Improved.
2	B. W. 22	5-15-12	131	99	1- 1-13	143	98.6	Arrested cure.
3	Miss E. 50	6- 5-12	152	99.6	8- 6-12	189	98.6	Arrested cure.
4	H. J. F. 20	6- 1-12	113	101	11- 1-12	141	97.3	Arrested cure.
5	A. M. 28	8-10-12	122	98.8	5- 1-13	131	98.4	Arrested cure.
6	M. M. 21	11-27-13	105	99.4	12-15-13	125	98.4	Improved.
7	Miss E. B. 36	2-18-13	112	98	6- 1-13	143	98	Arrested.—Pregnancy since Death, 9-1-14.
8	J. B. 46	4- 5-13	150	98.2	6-1 -13	169	98.3	Much improved.
9	H. K. R. 11	4-12-13	72	98.7	7-20-13	81	98.7	Improved.
10	Miss A. 29	8-15-13	134	100	3- 1-14	154	97.4	Arrested cure.
11	H. B. 25	9- 1-13	97	101	10- 3-13	105	98	Improved.
12	C. W. L. 26	9-11-13	135	98.2	3-13-14	158	98.4	Arrested cure.
13	E. W. 14	4- 6-14	79	99.8	7-27-14	107	98.2	Much improved.
14	J. M. A. 23	4-11-14	127	98.2	7-27-14	138	98.6	Much improved.

In all 75 patients have been treated. Many of our patients first admitted were well advanced cases and appeared hopelessly in-

volved, but were improved or arrested cures upon discharge and have apparently completed their cure. No doubt as a result of following up cases by our visiting nurse they were prevented from lapsing into their former methods of living and are today alive and are useful citizens.

The aim has been to keep the patients from too much introspection while taking the "fresh air, rest, feeding" cure by supplying something else for them to occupy their hands and minds when temperature and pulse permit.

Vegetable and flower gardening, beautiful walks in the woods, croquet, various parlor and lawn games, music, a generous supply of magazines, poultry raising; and we have arranged so that when the weather does not permit outdoor recreation we can supply it under roof.

Our state sanitarium is much too small for the needs of 1,250,000 population, so the question should soon be discussed whether to enlarge the one institution or to aid counties or groups of counties to build and maintain local sanatoria close to large centers of population.

It is difficult enough to get early cases to go to a local sanitarium and almost impossible to get them to go any distance. So the more small institutions we build for early cases the more good we will accomplish. Advanced cases will travel if any hope be offered them, and it is best that they be separated, so let the central institution care for them.

Every advanced case isolated means four other cases prevented.

Correspondence

NOTES ON THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION MEETING.

J. E. Cannaday, M.D., Charleston, W. Va.

This old and well known medical association held its sessions at the Hotel Sinton in Cincinnati the last week in October. An attractive program had been arranged and the attendance was large. I attended the surgical and the joint medical and surgical sessions and made a few notes on topics I felt to be of interest.

There were opening addresses by the

president and others. Dr. Hecht said there was a possibility that some of us attended or were tempted to indulge in too many medical societies, until it became a sort of dissipation, as some acquire the dissipation of reading.

Dr. McMurtry called attention to the various points that contribute to success in surgical operation, such as the proper psychological attitude of the patient, time-saving and proper technique by team work in the modern well organized hospital. He deprecated the employment of untrained anesthetists.

I was glad to observe that the character of the papers read at this meeting was excellent and a great improvement over many read in this association a few years ago.

The advisability of prostatectomy was discussed. Broasch of Rochester said that a comparatively slight degree of urinary obstruction will often cause such symptoms as anorexia, headaches, etc. After a time the effects of back pressure and residual urine will cause renal insufficiency. In operating for the relief of enlarged prostate, like exophthalmic goitre, much depends on the proper time. We should select a period of well feeling and well being if we want to secure the best results. A considerable percentage of cases of enlarged prostate develop stone in the bladder, but few of them ever have stone in the kidney. This condition of stone is due to the decomposition of residual urine. These stones at times become partially encapsulated in bladder diverticuli and may be readily overlooked. Bladder calculi cause constant irritation and infection, and it takes the bladder condition some time to subside after they are removed.

Cord lesions often cause residual urine when there is no prostatic hypertrophy and may be wrongly diagnosed. Cystoscopic examination should be made in most cases and rectal palpation should be made in all. Carcinoma is indicated by hardening and nodulation. (The writer has recently operated on a case in which the base of the gland was adhered to the rectum, was carcinomatous and the intravesical ball-valve of the prostate was benign in character.)

Wishard says do not operate for the relief of slight symptoms. He thinks nearly all cases should have a considerable period of study, observation and preliminary treat-

ment. Certain kidney conditions prohibit operation, and the kidney function tests should be relied on. The obstruction is at times of a temporary nature and may subside. Neglect in emptying bladder and bowels tends to cause obstruction. He advises tapping the bladder when a catheter cannot be passed. He recommends using a special trocar and cannula and passes a catheter through the cannula and then leaves the drainage catheter in situ.

Dr. Carey of Chicago advised that in case of enlarged prostate, complicated by low kidney efficiency (as shown by appropriate tests), the bladder be drained for some time before removal of the prostate is undertaken.

Bransford Lewis emphasized the importance of pre-operative treatment in these cases. He said that many of the profession at large do not realize this as fully as they should. He considers the suprapubic operation far preferable in the average case to the perineal. (In my own work I use a local anesthetic whenever possible, do a two-stage operation, except in cases where the patient's condition is unusually good, the prostate small and easy of attack.)

Bernheim of Baltimore reported a fatal case of hemolysis following blood transfusion. He has collected reports of several other deaths from this same cause, and says he is quite sure there have been a number of unreported deaths due to this accident. In the performance of blood transfusion there is a great deal of danger of causing acute dilatation of the heart. This can be controlled by proper caution and the avoidance of undue haste. Bernheim believes, however, that in view of the very small mortality of transfusion we should by all means continue to make use of this life-saving method, even without blood tests, which require two hours or more, in emergency cases. One of the first manifestations of hemolysis is hemoglobinuria. The fatal cases exhibit a scant volume of chocolate urine. His case was a most severe one and developed a central pneumonia. There was also swelling of both parotids.

Embolus, sepsis and anaphylaxis are also possible complications of transfusion. Hemoglobinuria of varying severity follows two per cent. of all cases of transfusion, according to the statistics of twenty of the more prominent surgeons of the country. Out of 800 cases of blood transfusion collected

there were 12 cases of hemolysis of severity with urine recoveries and four deaths. Air embolism can be disregarded. This has also been my personal observation in regard to the administration of salvarsan. Shortness of breath and vomiting are symptoms of acute dilatation of the heart. Bernheim uses a two-piece metal canula, coated with vaselin, internally and externally, for transfusion, and sees no practical advantage in bringing the blood vessels of the donor and recipient into absolute contact. In this connection Dr. Bernheim said that Dr. J. Howard White of Baltimore, formerly of Charleston, W. Va., was doing a good deal of laboratory investigation along the line of hemolysis.

The younger Ransohoff reported some gratifying results from the use of radium in the treatment of inoperable carcinoma. He finds that it controls pain, discharge and hemorrhage in cancer of the uterus, but has no idea whether the results are permanent or not. The cancer cells are more susceptible to actinic rays than are the normal cells. All cases of inoperable growth should be rayed.

Kolishcher of Chicago spoke of the use of mesothorium, and stated that his best results have been in the treatment of superficial types of malignancy. He incidentally brought out the fact that a malignant sinus will not close.

Haynes of Cincinnati noted that the primary effects of radium were nothing short of marvelous. It clears up the sepsis and toxemia almost immediately. This method of treatment is on trial, and it is too early to speak of permanent cures.

Hugh Cabot of Boston commented on the frequency of kidney infection in the female, even in children. It was thought by many of the speakers that these kidney infections are hematogenous in character.

Dr. Ries of Chicago, in discussing the surgery of the ureter, said that ordinary ligation of the ureter usually resulted in a fistula as an end result, but that he had found that tying a knot in the ureter itself and then ligating the ureter below this knot would give the desired result and prevent the formation of a permanent fistula. He spoke of his experience with a case in which there were two ureters from the kidney.

Dr. Dowden of West Baden, from his experience with several hundred cases of gastric ulcer, concludes that most, if not all,

ulcers of the stomach and duodenum are due to some focus of infection somewhere in the body. He believes the best treatment for ulcer in the early stage is rest.

Dr. C. A. L. Reed of Cincinnati advanced the theory that chronic intestinal stasis is a common cause of ulcer.

Dr. J. Rilus Eastman of Indianapolis reviewed the latest operative procedures for the relief of intestinal stasis. He advocates typhlo-sigmoidostomy anastomosis of the cecum with the sigmoid or typhlo-proctostomy anastomosis of the cecum with the rectum; ileo-colostomy results in a reversed peristalsis and fecal accumulation. He recalled the methods of Lane as savoring too much of radical surgery. This last statement of his was the occasion of considerable clash of arms between the speaker and Dr. Bainbridge of New York, in which the latter came off second best.

Dr. C. A. L. Reed of Cincinnati made the claim that many cases of epilepsy were caused directly by intestinal stasis. This idea was scouted by Dr. Joseph Ransohoff of Cincinnati, who says that from epilepsy to colon stasis is a very far cry. (My opinion is that both of these gentlemen are right and both wrong. There are certainly border line cases, or people with strong epileptic tendencies, and these are readily affected by intestinal stasis. Add intestinal toxemia to their epileptic taint or predisposition and you may have frequent epileptic seizures. Remove the toxemia and the seizures will be far apart. The two conditions bear a direct ratio to each other.)

Dr. Pennington of Chicago said that pathologic conditions in the rectum cause constipation and stasis. A number of the speakers extolled the merits of Russian oil in the treatment of chronic intestinal stasis. (My personal observation is that by the use of Russian oil and powdered agar-agar internally, with a diet composed largely of whole wheat, coarsely ground, along with plenty of outdoor physical exercise, will suffice to relieve satisfactorily almost every case of chronic intestinal stasis.)

Case of Battle Creek exhibited a large number of magnificent X-ray plates of stomach and intestinal conditions. His exhibit illustrated many of the fallacies as well as the benefits of this method of diagnosis. A series of one dozen plates taken at intervals of a few minutes during an hour after the injection of the bismuth meal showed

startling discrepancies in the position of the viscera, due to peristalsis. He showed the ease and accuracy with which ulcerative and malignant conditions may be diagnosed by the skillful use of the X-ray. Many of these plates require as much skill and experience to read as to make, or even more.

Dr. Louis Frank of Louisville discussed the advantage of two-stage operation as applied to the gall tract, especially as regards the condition of stone in the common duct. He said if you drain the gall bladder first, then a few weeks later remove the obstruction, you can save a large percentage, but if you attempt to deal with the obstruction primarily your mortality will be high.

Dr. George W. Crile of Cleveland again emphasized his well known theories in regard to anoci-association. He showed changes that take place in the cortical cells of the brain during shock and hemorrhage. Every trauma to the tissue during an operation, even though the patient be unconscious, sends its impact against the brain, and the injury done there is most serious.

Dr. F. H. Albee of New York gave detailed illustrations of his methods of bone grafting as applied to ununited fractures, to Pott's disease, etc. His results have been most striking, and this operation is a great surgical advance. Ununited fractures are made to heal in the face of repeated failures by other methods. The hideous deformities in Pott's disease of the spine are absolutely arrested. The inlay bone graft of generous dimensions is preferred by Albee. The surgeon, in addition to scientific knowledge and surgical judgment, must be a high-class carpenter.

The discussion was lengthy and covered many phases of bone surgery. It was generally agreed that bone grafts are more successful when they have their periosteum attached; that bone can be kept satisfactorily for days in cold storage at a uniform temperature of 5 centigrade; that pain in fracture cases usually results from improper reduction or maintenance of reduction; that bone is regenerated from periosteum, probably by the aid of the osteogenetic cells remaining attached to its surface, after the bone proper has been removed; that the man in the jury box expects X-ray plates and mechanical results. Some advocate the use of bone pins to secure the ends of the graft. Those who advocated the use of Lane's bone plates were few and far be-

tween, and even they admitted that bone grafting is physiologic and far better. (Personally I have seen some very disastrous results follow the use of bone plates. One disadvantage of the grafting method is that it requires a good deal of mechanical equipment and technical training for its use.) In the treatment of Pott's disease of the spine Albee uses a large long graft and makes a number of cross cuts in it, so that it is easily bent to follow the curvature of the spine. It is firmly attached to the spinous processes of the vertebra, after they have been split to receive it. The patient is firmly secured to a rigid support and kept so until there has been ample time for healing. Albee includes not only periosteum, but also endosteum in his grafts. He uses a special motor-driven saw, having two small circular saws set on the same shaft, so that both sides of the graft can be cut at the same time. He places the graft laterally in cases of scoliosis and attaches it to the lateral spinous processes. Albee's results have been marvelous; all pain has ceased, and there has developed a strong spine, enabling the patient to dispense with the plaster casts and other supports. Inlay grafts are far superior to medullary grafts. In cases of ununited fractures three inlay grafts spaced at intervals so as to splint the fracture are used. Material for grafting can be easily kept by covering it with vaselin and keeping it in cold storage at a temperature varying from 4° to 5° centigrade. Albee says he has had bone grafts to take well even in the presence of mild infection; that Lane plates in themselves tend to cause non-union. He makes use of bone grafts in cases of fracture of the femur and in resection of the knee joint for tuberculosis.

Crile says the brain, liver and adrenals are each very vital links in the chain of life, and serious interference with any one of these links means the breaking of the chain and death. The liver prepares and stores glycogen, which is the gasoline of the human machine. The liver neutralizes the acids of the body; every thought, emotion, action or rise of temperature produces acid. A general anesthetic is bad for those cases in which the narrow margin of safety has been reduced. Do not starve such patients, but feed them and in every possible way conserve their strength. Keep a tranquil state of mind for both the patient and yourself. A number of the speakers advocated

gas anesthesia for liver cases. Dr. Crile spoke of his methods of supporting the common duct with two sutures before incising it so as to be in a position to close the opening after removal of the stone instead of draining it, as is the usual custom.

Dr. Hamberger suggested alcohol by drop method after operations on diabetic cases, with the idea that the alcohol would burn out acids of the body. There is one weak point in Dr. Crile's anoci-association method, and that is that we do have a good deal of post-operative pain, even after nerve blocking and local anesthesia.

Emerson, in speaking of nephritis, said that the average case of prenephritic condition is the cumulative result of perhaps 10,000 injuries to the kidney, not some great injury, but a vast number of slight injuries. He advocates a diet largely of milk and does not believe that the so-called light meats have any advantage over the dark ones. He thinks that many vegetables put a considerable burden on the kidney. Probably a great many of us have had albuminuria at times and have received a cure at the hands of nature. Albumin and casts are more often seen in the urine in the evening and after physical exercise. He thinks spices and extractives are objectionable. We should correct autointoxication and remove all foci of infection. If there is a cardiac problem to deal with the fluids of the body should be restricted. The salt-poor diet is undoubtedly of value in the restriction of edema. In cardiac-renal disease we have a low phthalein output. This test should be made at intervals. High blood pressure, polyuria and a hypertrophied heart go together.

Mitchel said that all acute infectious diseases are frequent causes of nephritis. Acute or chronic nephritis may be produced experimentally by the injection of large quantities of proteids into the organism. Syphilis is a frequent cause of nephritis, and high blood pressure is but a compensatory process and serves to drive the fluids through the defective kidney.

Dr. Williams of Chicago said that if cardiac compensation is broken or disturbed it can often be restored by rest in bed and the use of the digitalis bodies. Sahli's work shows digitalis does not increase the blood pressure. The venous congestion of the medulla keeps up the blood pressure. There

is a needless fear of digitalis. These cases often live for a long time.

Gerachty says cardio-renal is not a good term. He prefers the term cerebro-renal. Some of these patients die of cardiac conditions. There are, of course, cerebral, cardiac and renal deaths.

The functional tests give more accurate information about the living kidney than we can obtain in any other way. A number of substances, such as water, lactose, salts and iodides, can be used as tests, but phenol-phthalein is the best total function test. The question of tubular or vascular effectiveness is immaterial. Lactose serves to differentiate between a mild nephritis and a toxic albuminuria. In true pyelitis the renal function is practically normal. The functional tests will in a great many instances enable us to adopt a more intelligent line of treatment.

Fisher in the discussion called attention to the fact that with an increased water output the patient may yet suffer from defective elimination. He advocates the use of his (Fisher's) solution in the treatment of suppression of urine. He quoted Albarran as saying that if the kidney eliminates water properly it is all right. Give the patient half a liter of water and let the patient void immediately, then if he puts out that much urine in two or three hours, the kidney condition must be fair. The dye tests are, of course, better. One-fourth of the normal kidney tissue can, if it be necessary, do the work of the whole kidney. High blood pressure keeps these cases going for a long time. He says that if the kidneys are removed in animals there results no edema, but if you give them bichloride or one of the barium salts the edema is great. Dr. Koll of Chicago noted that in case of an obstructed ureter we may have an ascending infection. He thinks that most of the kidney infections are carried either by the lymphatics or by the blood stream.

Dr. Carstens of Detroit said with reference to eclampsia that pregnant women should have their blood pressure taken frequently as well as having their urine examined. He advocated slow delivery in very mild cases of eclampsia and rapid delivery by vaginal Caesarean section if prior to the seventh month of pregnancy. If at term or nearly so, and particularly in first

pregnancies, abdominal Caesarean section should be the treatment.

Dr. Lawrence of Columbus says the mortality of appendicitis depends on the following factors: The time at which a diagnosis is made and the promptness of action thereafter, the resistance of the patient and his surroundings. With reference to treatment, the ability, conscience and courage of the attending physician, the judgment and skill of the surgeon. The death rate is increased by delayed operations, which result in complications, abscess formation and faulty surgical technique with needless trauma. To the above I should like to add the common practice of giving purgatives to patients suffering from acute surgical abdominal condition.

Dr. Arthur Elliott of Chicago says that in cases of chronic nephritis everything possible should be done to keep up cardiac compensation. The digitalis bodies when indicated act quite as well in the presence of high blood pressure as when the pressure is normal. The diet and hygiene of these cases are of prime importance. Fluid and salt excretion tests should be performed in all cases.

Dr. Hugh Cabot of Boston, in his discussion of anuria, said that etiologically anuria was caused by neurosis, by destructive conditions of the kidney, and by obstructions in ureter or urethra. He illustrated his talk with numerous case reports. He said that an obstructive condition of the kidney on one side may reflexly prevent the flow of urine from the other side.

Capital City Bank Building.

Selections.

CHOLECYSTECTOMY VERSUS CHOLECYSTOSTOMY.

George W. Crile, M.D., Cleveland.

In reviewing operations on the biliary tract performed at the Lakeside Hospital and those performed by my associates, Dr. F. E. Bunts and Dr. W. E. Lower, we find that cholecystostomy presents rather too frequently a history like the following: For a time the wound remains quiescent, then there is some fever and pain—the old familiar pain—associated with a sense of pressure and burning at the scar, which

reddens, swells, becomes tender, raised, and after several days by opening allows the escape of muco-pus, perhaps bile. Immediately the symptoms disappear, and after a short period of drainage the opening closes. After an indefinite period this cycle repeats itself. It does not satisfy or content the victim of this cyclic gall-bladder to assure him that this is a safety valve; that no possible danger attends it, and that some day it may get well. He replies that he suffers keenly; that his work is broken into; that he is handicapped and wishes to be rid of the trouble. This means cholecystectomy, which uniformly gives relief.

Such cases present to us definite clinical problems: Can it be determined at the time of operation whether a given case will eventuate in this malevolent cycle? Will the mortality rate of cholecystectomy be greater than that of cholecystostomy in the cases that will be followed by the cycle of cholecystitis, eruption, quiescence? From the local conditions one can with considerable accuracy forecast the clinical behavior of the gall-bladder and the cystic duct. This prediction, however, is subject to modification on two principal accounts, the technique of the operation and the after-cure.

Conditions Which Point to the Cholecystitis Obstruction Cycle.

If the mucous membrane of the gall-bladder is gangrenous; if there is a stone embedded by ulceration in the cystic duct; if the wall of the gall-bladder is thickened by scar tissue as a reaction to infection, and if there is no bile in the gall-bladder—these conditions usually are followed by recurrent obstruction and infection. On the other hand, if the gall-bladder has approximately normal walls, and if the cystic duct is approximately normal, then no matter what the size or the number of stones, if the operation be performed with gentle manipulation, so as to avoid any unnecessary trauma, there will be no post-operative pathologic cycle. Too much stress cannot be laid upon the necessity of gentle manipulations in the performance of the operation. What would happen to the urethra if a clumsy hand attempted to guide into the bladder a metal catheter or sound which had become corrugated by age and neglect? Or what would be the result of forcibly

stuffing rough gauze into the urethra, so that copious bleeding would be caused? The urethra would swell, become infected, obstructed, and later, perhaps, strictured. The base of the gall-bladder and the cystic duct resent no less the bruising and wounding of the mucous membrane by gauze or by instruments. Following such needless injury there may be occlusion by stricture, for the normal cystic duct is very small and is easily closed by stricture. Finesse can accomplish a more certain exploration and a more difficult extraction than can rough manipulation.

The Comparative Risk of Cholecystectomy and Cholecystostomy.

In the cases in which cholecystectomy is indicated the pathologic conditions of the gall-bladder would make cholecystectomy safer than cholecystostomy, as the former obviates the necessity for prolonged drainage and limits the extent of infection, especially of infection of the incised wall. The mortality of cholecystectomy depends also on the technique. The gall-bladder should be exposed by an ample wound, so that there is free access to its base; the freeing and separation of tissue should be made by sharp dissection, care being taken not to cut into the liver, that bleeding and infection in that organ may be avoided. The entire gall-bladder should be freed from its attachment, so that ample opportunity may be given for determining the exact place where the gall-bladder ends and the cystic duct begins, this being the point at which the division should be made. This technique results in but little reaction.

It is well to emphasize further the necessity of most careful determination of the exact point at which the division should be made between the gall-bladder and the cystic duct. If the division be made too high, so that even a little part of the gall-bladder is left, there may result, as I have seen, the formation of a diminutive gall-bladder, with distinct cholecystitis, accompanied by pus formation and the formation of small stones. If, on the other hand, the cystic duct be divided so near its junction with the common duct that the lumen of the latter may be first narrowed by the pressure of the ligature, then totally occluded by swelling, this occlusion usually is relieved by the subsidence of the swelling. That there may

be a correct division, therefore, it is essential to have ample room for work, and to maintain a clear field.

In cases showing chronic infection without febrile reaction, the risk of cholecystectomy is less than that of cholecystostomy. In cases of acute cholecystitis with protective adhesions, however, in which the cystic duct is obstructed, cholecystectomy will give a higher mortality than will mere drainage of the gall-bladder, for the reason that during the excision of the viscus, even with the most careful technique, it is necessary to traumatize the surrounding tissues to such an extent that the local immunity of the tissues is impaired. In such cases it is probably wiser merely to drain the gall-bladder, interfering with the local tissues as little as possible. Later, if necessary, the gall-bladder may be excised.

The clinical results of cholecystectomy in many cases of pathologic gall-bladder are clinically as much better than cholecystostomy as nephrectomy of a pus-riddled kidney is better than a nephrostomy. The convalescence after cholecystectomy is usually as uneventful as is convalescence from a salpingectomy for chronic suppuration. I have never seen any adverse clinical results following excision of the gall-bladder. It has been argued that the surgeon would be at a great disadvantage should there later be a necessity of operating for stone in the common duct. To this objection one may reply that the common duct occupies a fixed position with definite landmarks, and if a bloodless anatomical field is maintained by a sharp dissection the duct is easily found, even though it be buried as deeply as possible under overlying adherent organs.

Conclusions.

From the evidence of my own cases I draw the following conclusions:

(1) Considering all the consequences of infection, cholecystectomy in the type of cases indicated shows a morbidity and a mortality lower than cholecystostomy. In these cases the clinical results of cholecystectomy are good, while in unsuitable cases cholecystostomy is followed by recurrent cholecystitis.

(2) I have seen no adverse effects from cholecystectomy, provided that the division is made at the beginning of the cystic duct; that no gall-bladder tissue is left, and that

the division does not at all encroach on the common duct. This technique can be readily carried out.

(3) If acute infection be present, then in most cases cholecystostomy should be first performed, followed if required by a later cholecystectomy.

(4) Finally, if the gall-bladder and the cystic duct are approximately normal, then the gall-bladder is left, cholecystostomy being the operation of choice. If the gall-bladder is thick, contains much scar tissue, is shrunken, shows chronic infection; if the musculature is much impaired; if the cystic duct is partially or completely strictured, or if a stone is impacted in the duct, then cholecystectomy is made.

CHRONIC ACETANILID POISONING A PERFECTLY DEFINITE SYMPTOM-COMPLEX.

Hermon C. Gordinier, M.D., Troy, N. Y.

It is not generally recognized by the profession that the ingestion of the aniline derivatives of the antipyretic group is capable of producing profound pathological changes in the blood vascular system, with the production of a perfectly definite symptom-complex, nor is it a well-recognized fact that one of these products, acetanilid, because of its cheapness and extreme toxicity, and of the fact that it is the chief constituent of many of the so-called headache or neuralgic powders or tablets commonly dispensed over the counter both by pharmacists and the ordinary country storekeepers to the laity, is not only responsible for most cases of poisoning by this group, but also for the production of a drug habit or addiction in every way comparable to that of opium or alcohol. If we stop, however, to consider the large number of secret nostrums on the market containing as their chief ingredient acetanilid which are dispensed without prescription for the cure of headache, neuralgia, neurasthenia and the like, the marvel is that chronic poisoning or acetanilid addiction is not an exceedingly common complaint rather than the rare condition that a study of the literature would lead us to suppose. The symptoms excited by the continued ingestion of acet-

anilid are so characteristic and highly suggestive of poisoning by this drug that it seems rather unusual to note that many of the cases of chronic acetanilid poisoning or addiction recorded in the literature have been entirely overlooked by competent observers, the condition being diagnosed as cardiac disease, tuberculosis, polycythemia, neurasthenia, mediastinal growths and the like. This error in diagnosis, I believe, is made possible, as in most instances of drug addiction, by the patient's deception.

A study of the cases recorded in the literature and those hereinafter to be reported proves that the ingestion over a considerable period of time of acetanilid or related coal tar products is productive of a definite symptom-complex which is highly suggestive, if not absolutely diagnostic, of poisoning by this group.

The subjective symptoms are great general weakness, nervous excitability, insomnia, loss of appetite, digestive disturbances, palpitation, dyspnea, numbness and weakness of the extremities, pain in the region of the liver and spleen and faint attacks.

The chief objective symptom is cyanosis, which is often extreme, but usually fluctuating in intensity, accompanied by marked pallor of the mucous surfaces and without clubbing of the fingers.

The blood-changes are quite characteristic and due to the destructive action of a hemolytic poison circulating in the blood stream, which produces a secondary anemia variable in degree. The erythrocytes are diminished in number; they often present nucleated forms, show granular stippling, stain poorly and are variable in size and form. There is usually a moderate leucocytosis of the polymorphonuclear variety, and there is often a relative increase of the lymphocytes. The appearance of the blood as it stands upon the finger-tip or the ear is very suggestive; it is either of a bluish-black color or chocolate in appearance. The coloration of the plasma renders the estimation of the hemoglobin quite difficult. Most observers state that the hemoglobin is diminished, which I believe is true, but I must confess with Stewart that it is almost impossible in these cases, owing to the coloration of the

plasma, to measure the hemoglobin accurately.

The spleen has been found enlarged in most of the well-observed cases, and it is usually tender both on palpation and percussion. The liver is slightly increased in size and is also tender on pressure.

The heart is usually found enlarged, the transverse diameter being increased and the apex beat displaced downward and outward. The heart sounds are feeble and adventitious murmurs are frequent. Systolic mitral and tricuspid murmurs are common, as are basic systolic murmurs. These murmurs are probably dynamic in origin and due to the loss of tonicity of the heart muscle, as they disappear *pari passu* with the diminution in size of the heart and improvement of the blood on the withdrawal of the acetanilid. The mitral and tricuspid murmurs are doubtless caused by relative leakage, while the basic murmurs are hemic in origin.

The urine is usually dark brown or black in color and gives the characteristic indophenol reaction. It may contain blood-pigments in the form of methemoglobin or hematoporphyrin. Biliburin is common, and glycuronates may be present. It is interesting to note that the ratio of the sulphates has been found reversed. In my first case the ratio was 16 to 1, only a comparatively few milligrams of the oxidized sulphur being eliminated in the form of inorganic sulphates. Dextrose was found in both of my cases, and probably exists in small amounts in most cases.

I have been unable to find any mention in the literature of trophic changes in the way of ulcerations of the skin, such as occurred in my first case. That these ulcerations were due to the effects of acetanilid seems probable, as most other causes could be excluded.

After detailing several cases, the author thus closes his interesting paper:

From this study the following conclusions may be drawn:

First—That the continuous ingestion of acetanilid or allied products creates a perfectly definite symptom-complex, characterized by cyanosis, enlargement of the heart, spleen and liver, a definite blood-picture and characteristic urinary findings.

Second—That the acetanilid habit or

addiction is a well-established one and its enslavement is comparable to that of opium or alcohol.

Third—That acetanilid is a most virulent hemolytic poison which produces definite changes in the blood vascular system.

ADRENAL THERAPY.

Dr. Sajous thus summarizes an interesting article on this subject in the Interstate Medical Journal:

Summary—The list of disorders in which adrenal preparations have been tried could be greatly extended, but I have limited myself to those in which their use has proven advantageous in the hands of a sufficiently large number of practitioners to warrant their being added to our trusted remedial agencies. Of these, a certain number may even be said, interpreted from my viewpoint, to exceed other means at our disposal in value. These are:

1. Addison's disease. In this affection adrenal preparations compensate for the deficiency of adrenal secretion, and therefore for deficient general oxidation, metabolism and nutrition. The dosage should be adjusted to the needs of each case. Beginning with 3 grains of the desiccated extract three times daily after meals, the dose should be gradually increased until the temperature and the blood pressure become normal, when the last dose should be maintained.

2. Surgical heart-failure, collapse from hemorrhage, shock, asphyxia and submersion. Here the adrenal active principle (suprarenalin, adrenalin, etc.), as a catalyser and a constituent of the haemoglobin, promotes energetically the intake of the oxygen and its utilization by the tissue-cells, including the muscular elements of the cardio-vascular system, and thus causes them to resume their vital activity. It should be very slowly administered intravenously, 5 minims of the 1/1000 solution to the pint of warm (105° F.) saline solution. In urgent cases 10 drops of suprarenalin or adrenalin in one drachm of saline solution can be used instead, and repeated at intervals until the heart responds. Artificial respiration hastens its effects.

3. The toxæmias, including bacterial infections, surgical septicaemias, etc.,

when collapse threatens, especially when a persistently low blood pressure, hypothermia and cyanosis are present. Besides enhancing pulmonary and tissue respiration, the adrenal principle, administered in the same way, enhances the efficiency of the immunizing process.

4. Capillary haemorrhage from the pharyngeal, oesophageal, gastric or intestinal mucous membrane. The mastication of tablets of adrenal substance, or the oral use of powdered adrenal substance in 5-grain capsules, arrests the flow by causing active metabolism in the muscular elements of the arterioles of the mucosa and constriction of these vessels.

I may add to these a series of disorders in which adrenal preparations will probably prove of great value when sufficient evidence will warrant a final conclusion. These are:

1. Sthenic cardiac disorders with dilatation of the right ventricle, dyspnoea and possibly cyanosis and oedema, owing to the direct action of the adrenal principle on the right ventricle and improved oxidation and metabolism in the cardio-vascular muscles and the tissues at large. Tablets of from ½ to 2 grains of the desiccated gland can be taken after meals.

2. Asthma, to arrest the paroxysms by augmenting the pulmonary and tissue intake of oxygen and the cardio-vascular propulsion of arterial blood. From five to ten minims of the 1/1000 solution of suprarenalin or adrenalin in one drachm of saline solution should be injected drop by drop into a superficial vein or hypodermically.

3. To prevent the recurrence of serious effusions in the pleura, the peritoneum, the tunica vaginalis, etc., after aspiration by reducing the permeability of the local capillaries and restoring the circulatory equilibrium. From eight minims to two drachms (according to the size of the cavity) of suprarenalin or adrenalin, in four times the quantity of saline solution, should be injected into the cavity.

4. In neuralgia or neuritis, applied to the cutaneous surface over the diseased area to produce ischaemia of the hyperaemic nerves and thus arrest the pain. One to two minims of a 1 to 1000 adrenalin ointment should be applied by inunction.

The doses advocated will appear small to many. I can only urge in explanation that the power of the adrenal principle, as shown by physiological chemists and my own investigations, is such that it should be used with the greatest circumspection. Several recently reported deaths from its use emphasize the need of precautions when employing the hypodermic, intramuscular and intravenous methods. Their oral use is at best unreliable. This does not apply to the gland itself, nor to the desiccated gland, one grain of which represents six grains of gland substance. These prove quite effective, though slowly in most instances, when the disorder or condition present actually involves the need of the adrenal principle to enhance either the oxidizing power of the blood or its immunizing properties.

THE DOCTOR AND THE LAW.

We have frequently pointed out, and we now reiterate, the importance of the general practitioner of medicine possessing at least what may be called a working knowledge of his relationships to the law. The fact is, the term "medical jurisprudence" is somewhat of a misnomer, since there is no distinct body of the law peculiar to medicine or to physicians. The law applicable to the physician is simply the old rules of equity and justice, grounded in the common law, but of course extended and interpreted to meet the new conditions which arise in the course of civilization.

The legal presumption is that every man is presumed to know the law, or, to state the obverse, ignorance of the law excuses no one. But how many physicians even know the rules of law which apply to their own calling? Yet there are peculiar reasons why the physician should be even better informed than his lay neighbors upon matters of this kind. Unlike the ordinary man of business, for instance, he cannot consult with his attorney upon such occasions as demands an extraordinary exercise of that "judgment and care" which the law exacts of him. And the cases are numerous where reputable practitioners, of unquestioned professional attainments, have been ensnared into a web of circumstantial evidence through noth-

ing in the world but ignorance of the legal significance of their perfectly innocent and justifiable acts. Guilty of nothing but ignorance of the law, that ignorance has cost them money and reputation, and not infrequently their future livelihood.

It is true, of course, that a large proportion of malpractice suits are not brought in good faith. No doubt the majority of them represent shrewd or bare-faced attempts at blackmail, and have their origin in the rapacity of some shyster lawyer. That is all the greater reason for the practitioner, who stands in hourly danger of such attempts, to be thoroughly equipped to avoid even the appearance of evil, upon which such suits may be predicated, or, if he cannot avoid the appearances, so that he may so safeguard all his steps as to come out of the trouble that is forced upon him with triumphant vindication. And it must be conceded that a certain percentage of malpractice suits are brought in good faith; hence the importance of the physician's having a clear understanding of what he may and may not do under given circumstances.

A physician's liabilities are either civil or criminal, and his duties are either legal or ethical. Legal duties are those imposed upon him by law, ethical duties those laid upon him by his medical society or his school of medicine. The law takes no cognizance of a breach of ethical duties, but leaves their enforcement to the bodies which created them. Indeed, it is not outside the bounds of possibility that these so-called ethical requirements may at times conflict with the requirements of the law, in which case, of course, the law would not recognize the ethical obligation as an excuse for breach of legal duties. The law cannot and will not interfere with the penalties inflicted upon the physician by these ethical bodies—for example, to reinstate a physician expelled from his society—unless the injury thereby inflicted upon him be such as to come within the range of his citizenship rights.

The criminal liability of the physician, like every other criminal liability, is fixed by statute. There is no such thing as a common-law crime. Every crime must be defined and the punishment of it definitely determined by statute. The civil liability of the physician, like all other civil liabil-

ity, rests wholly upon contract, either actual or implied. Immediately upon the establishment of a relation of physician and patient, there is set up an implied contract covering certain things to be done on both sides. These are the fundamentals upon which the legal relationships of the doctor rests. To go into detail is not the purpose of this editorial, but rather to urge upon our readers the importance of extreme care in all of their former dealings, especially in obstetrical cases, and of informing themselves of the statute law of the State and the municipal ordinances governing the practice of medicine in the city or town in which they follow their profession. This will take care of the criminal aspect of the liability. Further, we urge the importance of acquainting one's self with the warranties which are included in the implied contract set up between doctor and patient—which may best be done by consultation with a reputable attorney. This will secure the physician in the matter of civil or damage features of his liability. The quicker every practicing physician informs himself upon this side of his practice the better for all his interests.—Editorial in Medical Brief.

Compound Fractures—W. L. Estes, Bethlehem (Journal of the American Medical Association, June 13, 1914). Reviewed in American Journal of Surgery, September, 1914.

Estes bases his remarks on the subject of compound fractures of the extremities on the following postulates: "1. In civil practice a compound fracture is always not only a solution of the continuity of a bone, but also a lacerated wound of the soft tissues in continuity from the periosteum to and including the skin. 2. Violence necessary to produce a compound fracture of the bones of an extremity must be very great; hence the traumatism is extensive. Commonly the bone is comminuted and the laceration of the soft tissues very severe. 3. Compound fractures are practically always infected wounds. 4. The management of these injuries must include the treatment of a fractured bone and the treatment of a more or less extensive infected lacerated wound of the soft tissues of the same area." The general condition of the patient as well as the injury must be considered and the treatment should be adapted to the circumstances of each case. Stimulants, exclusive of alcohol, and analgesics are needed as well as the control of hemorrhage. Estes advises the avoidance of tourniquets if possible. Elastic constriction is better and if tourniquets are used it should be at some distance from the injury. The wound must be protected aseptically and great care used to prevent infection by handling, etc. No attempt

should be made to set the bone at this time. Careful fixation in the position assumed by the injured limb should be employed, unless it is clear that the ends of the fragments are so placed as to do damage. The first consideration of the surgeon should be what is best for the patient, taking into account what is best for his individuality, circumstances and occupation, and what treatment will insure the least disability and give the best functional result; the constitution and environment have very important bearings. A compound fracture is almost always an infected wound, and Estes emphasizes the value of iodine for disinfecting soiled skin. Iodine is effective only when on a dry skin, and hence it should be cleansed with benzine or ether and carefully dried. The nature of the required operation is first to be considered. Amputation is indicated if there is three-quarters of the periphery over the fracture damaged so that it is liable to slough and the muscular tissues below are badly lacerated or comminuted. If there has been a circular or annular pressure on the whole periphery of the limb, or if the bones are comminuted or loose or have lost their periosteum so that practically three inches of the shaft is destroyed, together with skin or muscle laceration, this also indicates amputation. The final condition of the limb is also important. Sometimes a limb can be saved which would be useless and often in the way, and the patient might prefer amputation. Conservation is sometimes more hazardous than sacrificing a part. If conservation is decided on, however, thorough cleansing and disinfection must be done, and an extension apparatus is often very useful for this purpose. As little direct manual manipulation as possible is advised. Direct fixation of the fragments is always best, and a rigid bone splint or plate is better than wiring. Certain metals are more or less bactericidal, and since 1886 Estes has used a Wessel silver plate and Wessel silver pegs to fasten the plate to the fragments. Vascular implantations and anastomoses are impracticable in these cases, but drainage is all important, and it should be done in such a way as to avoid all tension and harmful pressure in the wound. When all these things are provided for a masse dressing of dry sterile absorbent material should be applied and should be left on for several weeks, and over all a gypsum splint with flexible strips worked into it should be placed so as to give support and elasticity to the dressing. When the dressings are removed it is his custom to remove the pegs and the plate if the wound is open to permit it; otherwise it can be left, as it does not cause irritation. An analysis is given of fifty-one cases of compound fractures, and the results as regards disability, etc., are reported.

F. L. H.

In edema of the lungs of cardiac origin a small dose of morphine often does more good than all the stimulants. It may be the only treatment needed.—American Journal of Surgery.

The West Virginia Medical Journal

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Editorial

“Man am I grown, a man’s work must I do.
 Follow the deer? Follow the Christ, the
 King,
 Live pure, speak true;
 Right wrong, follow the King,—
 Else, wherefore born?”

LAUGHABLE OR PITIFUL, WHICH?

The latest of the many new frauds to appear among the drugless healers are the chiropractics. As yet not many have appeared in this fraud-cursed State, but they are on the increase. The definition of the “practice of medicine” in our law is so poorly given that the State Board of Health has not felt justified in attempting to prosecute these imposters lest the courts rule that these queer people are not practitioners of medicine within the meaning of the law; so they have been permitted to impose upon the people thus far unmolested. They are not satisfied with this immunity from just punishment for obtaining money under false pretenses, but have effected some sort of an

organization and purpose appearing before the legislature at its coming session and demanding legal recognition. It therefore seems not inappropriate to make some showing as to what preparation for the holy and responsible office of practitioner of medicine, or healers of the sick, if they prefer the term, these people have, when they take into their hands the responsibility for the health and life of the people. That they secure patients is well known. So does every imposter who sets himself up for medical practice. “The eternal gullible” exist in every community and need the counsel of those of more intelligence, that they may be protected from the frauds who are ever ready to filch from them their hard-earned money.

The recognized physician at the present day is compelled, first, to possess a liberal education before entering upon the study of medicine; second, to spend four years of study at a recognized medical school, where is abundant opportunity to study disease at the bedside; third, to appear before a State Board of Examiners and successfully pass an examination which is intended to prove whether or not the applicant has been faithful to his opportunities. And then, under our law as it exists at present, he locates for practice by the side of a “chiropractic” who perfects himself for the healing of the sick by a few weeks of correspondence with some fraudulent school, sees no patients, examines no hearts, lungs or other organs, finds all disease dependent on “nerve pressure,” spinal dislocation, etc., and—“what fools these mortals be”—actually reaps a golden harvest at the expense of the poor and ignorant chiefly. The world has had its Mesmers, its Perkinses, its Dowies, its Mrs. Eddys, but, like many who have “plunged” into oil wells and gold mines, the people are slow, so very slow, to learn even from their own experiences. But to the facts.

There recently came into our possession some advertising material from a “chiropractic university.” If good teaching can be had anywhere, it should be had at a university surely. Here is a proposition from the Dean himself:

“I want to tell you this, that I don’t care how exhaustively the subject is treated or how clearly it is explained or how scientifically it is handled, no book can begin to do justice to this marvelous science of removing the cause of disease by means of Spinal Adjusting, nor to the tremen-

dous possibilities the profession affords to earnest, ambitious men and women. * * I say to you with the positive conviction which can come only from absolute knowledge that chiropractic is today the most wonderful healing method the world has ever known. It stands alone as the *one sure* drugless method of restoring health to the sick *absolutely and positively.*"

What sick person would not eagerly grasp at such promises as these if he did not pause to reason, and not all the sick do this? But more from this distinguished authority. He offers to give for the sum of \$68.75—reduced from the usual price of \$100—his "full and complete instructions and all the advantages in the booklets and other literature" to be sent. "It is understood that the above price includes diploma, FREE upon graduation." The "graduate" agrees "to hold all instructions and information which he receives in absolute confidence and will not permit others to see the lessons or study the course."

Now how long will it take to become a "graduate" from this institution with a diploma? The Dean of this "university" says:

"Our University Extension Course in Chiropractic is the most complete, most *concise* and most *practical* ever prepared. * * It is prepared and conducted *especially* for home study instruction. * * In the quiet surroundings of one's home, devoting only spare time each day, this course can be mastered *in a few months' study.* The enormous expense of going away to school, paying tuition, books, board and room, car fare and incidentals, besides loss of time from daily work and consequent loss of income, are *all avoided* by studying our easily learned Correspondence Course at home."

Why should the young student spend a thousand or two dollars in acquiring a liberal education and then a hard-earned medical education, when he can so easily and in a few weeks equip himself for healing the sick and at the price of \$68.75? And "what shall the harvest" be? Hear the Dean on this point:

"Letters from graduates show that \$5,000 a year and more is a common average. Even beginners scarcely ever make less than \$10 a day. * * Yet the work is not the least bit hard or tedious. On the contrary it is exceedingly pleasant and fascinating. A single adjustment can be given in *less than one minute*, and a full adjusting in from 3 to 5 minutes. - - A patient comes to your office and tells you his or her trouble. You merely examine the backbone by feeling with your fingers. The knowledge which we impart to you enables you to tell where the trouble is and how to remove the cause of it. Always it is *in some nerve.* You quickly correct the trouble and relieve your patient. Nature brings about the cure and you POCKET THE MONEY. Simple, easy,

pleasant and wonderfully gratifying, and the comes just as easily, quickly and surely."

(Italics and capitals the Dean's.)

There you have it direct from the "university" and from the Dean of that institution. A money grab on a large scale. And yet these people, who are engaged in the business of perpetrating fraud on the gullible public, are actually just now making preparation to come before our State legislature for the purpose of asking that they be given the same legal status as is given to men who have spent years of time and many hundred dollars in preparing themselves for the healing of the sick, who have passed several severe tests as to their knowledge of the human body and its ailments, first before learned teachers in medical colleges of international fame, and then before State Boards of Health whose sole purpose is to prevent the people from being imposed on by the unlearned and ignorant. How preposterous! It will be a disgrace to our State such as it will take years to recover from if the demands of these queer people are not summarily dismissed from serious consideration. We have too much confidence in the men who have been chosen to guard the interests of our people to believe that any legal status will be granted to these chiropractics. Rather let us hope that "the practice of medicine" will by legal enactment be so well defined that these men can be promptly put out of business and the money and the health of our citizens be spared to them. The last legislature was so careful of the financial interests of our citizens that it enacted the "blue sky law" to protect them from loss by wildcat investments. How much more important to look after the lives and health of our people!

NOTE.—Since the above was written the writer has received a letter from another State inquiring whether or not West Virginia gives legal recognition to drugless healers. This man signs himself "A. C. T., Naturapath." So it goes. If the State recognizes one set of these fellows it will have a flood of them coming in to demand recognition. The only safe and sensible plan is to require every one seeking license to practice the healing art to pass an examination on all the branches of medicine, and if he is successful in passing such a test he may call himself by whatever name best suits his fancy. If he does not understand the foundation principles of the healing art, he

should have no right to impose upon the people. S. L. J.

NOTE.—We can save a few dollars for any of our readers who are expecting to attend a post-graduate school in New York soon. Write us.—EDITOR.

THE DOSAGE OF DIPHTHERIA ANTITOXIN.

If possible it is very desirable to ascertain the necessary dose of antitoxin in the interest not only of the patient's physical welfare, but of the parent's finances. Schick and others have been attempting to arrive at definite results that may be a guide in the administration of this very valuable remedy. From an editorial in the *Journal of the American Medical Association* we extract a few facts that may be of interest. It has long been known that the antitoxin brings better results when used very early in the disease. This cannot be too strongly pressed on the attention of practitioners. It is useless if given to dying patients, and casts a reflection on a valuable remedy. We recall one case seen in consultation where the remedy was administered two hours before death occurred—needless to say not by the advice of the consultant. Schick says that the injection should be intramuscularly. He attempts to regulate the dose according to the severity of the case and the weight of the patient. For the rather mild cases he thinks that a single dose of 100 units per kilogram (2.2 pounds) is sufficient. This would be 2,500 units for a child of 55 pounds weight. If given very early he thinks that the dose need not be repeated. In the severe cases he advises 500 units per kilogram, or 12,500 units for a child of the above weight. This seems a rather large dose, but since the remedy is generally absolutely free from danger, and since a repetition of dosage is not deemed necessary, such a dose does not bring added cost, a consideration that is of great importance in many families. Schick thinks that this large dose will be necessary in not more than 10% of the cases with which we meet. For a man of 132 pounds weight, in a severe case, the dose named is 30,000 units, and in like proportion for all ages.

For immunizing purposes 50 units per kilo. is advised, or 1,250 units, for a child of 55 pounds weight, which is rather more

than is generally used. One thousand units is the common dose used in children from five to ten years. In one case where this amount was injected by the writer in a child of three years the disease developed on the twenty-fourth day after. Immunity is not claimed for a longer period than three or four weeks.

We find that there is still considerable prejudice against this most valuable remedy, and for this reason its use should be made as pleasant and as economical as is consistent with the welfare of the patient and family. One injection may be in some cases permitted when several might be difficult to secure. For this reason the researches of Schick and others are worthy of careful consideration. S. L. J.

State News

We note with pleasure the election of Dr. A. Judson Quimby of New York to the presidency of the Greater New York Roentgen Ray Society. The doctor is a Wheeling boy, and "made good" before his call to the great city, where he now holds a chair in the Polyclinic Medical School.

Dr. N. A. Haning of Wheeling, recently quite ill, is again at work.

President Venning has recently suffered a bad infection of the leg, and went South to recuperate. We wish for a speedy recovery.

Dr. H. H. Young of Charleston has recently returned from six months' work in New York city, where he was pursuing the study of eye, ear, nose and throat work. He expects to open an office the first of April for the practice of this specialty. Success to him.

Dr. Craig of the east end of the State has gone to Richmond to do post-graduate work.

Dr. F. F. Farnsworth of Belleville, after a post-graduate course in New York, will locate at Frenchton.

Dr. H. C. Slaughter of Winifrede is taking a post-graduate course at Harvard and expects to locate in Charleston on his return.

Dr. Wright of Dartmoor is assisting Drs. Hoffman and Miller at Thomas.

Dr. J. E. Cannaday of Charleston has returned from Asheville, N. C., where he read a paper for the Southern Surgical and Gynecological Association.

Dr. Tappan of Pierce is expecting to locate in New Hampshire.

Dr. U. M. Carwell of Hendricks, who was shot in the ankle some months ago, the injury being

followed by tetanus, is able to be out again. Congratulations.

* * * *

Dr. G. C. Schoolfield of Charleston is spending a vacation in New Orleans.

* * * *

We note the marriage in September last of Dr. Marv Virginia McCune to Dr. Kismet Rossa. We regret to learn of the serious illness of the groom, who, however, is now convalescing.

* * * *

Congratulations to the genial Dr. John N. Simpson of Morgantown on the arrival of a daughter. May she live long and see none but happy days in a happy family.

* * * *

Removals—Dr. C. E. Wilkerson from Princeton to Richwood; Dr. O. S. Gribble from Mill Creek to Baltimore, Md.; Dr. E. L. Griffith of Huntington to Clifton Forge, Va.; Dr. J. N. Judy from Glen Falls to Belleville.

Society Proceedings

PROCEEDINGS AMERICAN PROCTOLOGICAL ASSOCIATION.

A Report of Cases of Pruritus Ani Treated With Carnotite.—By Samuel T. Earle, M.D., Baltimore, Md.

Carnotite, a radio-active mineral, was used in the treatment of eight cases of pruritus and was found to be a very satisfactory palliative remedy.

Treatment of Amebic Dysentery by Emetin Hydrochloride.—By Alfred J. Zobel, M.D., San Francisco, Cal.

The writer gives a brief culling from the literature on the emetine treatment of amebic dysentery and also a few words relative to the drug itself.

He states that in emetine hydrochloride we have a reliable, non-toxic drug possessing a definite specific action, which may be administered hypodermically, and yet which will permit of a sufficient dose being given without causing any depression, nausea, vomiting or local reaction.

He reports two interesting cases in which the disease was present in one individual for ten and in the other for fourteen years. Under the influence of emetine within two or three days amebae, blood mucus, froth and foul odor disappeared from the dejections and their number greatly decreased; the racking tenesmus, bearing down feeling in the rectum, the colic and the abdominal tension, discomfort and gurgling absolutely ceased.

Proctoscopic examinations revealed the favorable influence of the drug upon the amebic ulcerations. No amebicidal irrigations were employed.

He further reports other cases seen by him in consultation which demonstrate most forcibly the necessity for a proctoscopic examination of the bowel and a microscopic examination of the feces in every instance where a diarrhoea lasts longer than a week, even though the patient has never lived in nor visited a locality where the disease is known to exist.

He advises that emetine should be given for at

least three or four months at intervals before the patient should be considered free from the possibility of a recurrence, even though he is clinically cured and the amebae cannot be longer found in the stools.

Amebic Dysentery and Its Treatment—By Dr. Wm. M. Beach, Pittsburgh, Pa.

The writer of this paper states that (1) amebic dysentery in the early stages may be cured with emetine. (2) In cases somewhat advanced emetine is efficacious and at least clinically curative. (3) The use of the duodenal tube, through which to introduce solutions of emetine to any portion of the intestinal tract, should receive trial and consideration. (4) For rapid cure and control cecostomy or appendicostomy is the best measure in advanced and chronic cases. (5) Diet irrigation from above is superior to rectal injections, in that it is less painful and more thorough. (6) The appendix should be removed in most cases of amebic dysentery. (7) The so-called specific emetine can be easily applied in weak solutions.

The Pathologic Sigmoid Colon and Its Surgery—By L. J. Hirschman, M.D., Detroit, Mich.

Studies with the fluoroscope and the sigmoidoscope have shown that true prolapse and invagination of the sigmoid colon into the rectum is not an uncommon condition. The author advocates shortening the mesentery of the sigmoid by attaching the mesentery of the invaginated or prolapsed portion to the root of the mesentery of the descending colon.

In a number of cases of obstruction to normal defecation this obstruction will be found in women who give a history of a disturbed puerperium. Radiographic studies of these patients who give a history of chronic obstipation accompanied by pain and marked tenderness in the left lower abdominal quadrant and the region of the womb and broad ligaments, more often the left, show the presence of adhesions which angulate, displace or bind down the sigmoid. The cure of this condition involves the relieving of the adhesions and the covering of raw areas with omental, epiploic or mesenteric grafts or the excision or short-circuiting of the sigmoid. Another class of adhesions of the sigmoid seriously obstructing defecation is caused by adhesions to the abdominal wound following laparotomy.

Hypertrophy or redundancy of the sigmoid colon is another pathological condition which has not infrequently been met with. When the walls of the bowel contain a large proportion of unyielding fibrous tissue short-circuiting is insufficient and excision is insufficient and excision is indicated.

In malignant growths of the sigmoid colon excision with immediate anastomosis is the ideal indication.

When inoperable it is the author's practice to always make the colostomy in the median line. This is done for the following reasons: First, the median incision is the best for exploratory purposes; second, one has the choice of any part of the colon in the making of the colostomy; third, one gets just as good adhesion and union, with no more liability to hernia, as in the side; fourth, the patient is better able to cleanse and

dress the colostomy in the median line; fifth, it takes the colostomy opening away from the neighborhood of the iliac crests and allows of the better fitting of retention apparatus and colostomy shields; sixth, control of a median colostomy is just as satisfactory as the lateral.

The author has found no difficulty in securing colostomy control by using a small rubber catheter in the mesenteric opening beneath the spur and encircling the upper limb of the colostomy with this catheter, drawing it just snug enough that the mucous surfaces appose. The catheter is held in this position by a seraphine snap and is released by the patient when he wishes to defecate or expel flatus.

Myxorrhoea Coli—Myxorrhoea Membranacea and M. Colica (Membranous Enteritis—Mucous Colic).—By Dr. S. G. Grant, New York City.

The essayist explained that myxorrhoea coli was a symptom complex characterized by constipation, abdominal pain, uneasiness or soreness and the periodic evacuation of jelly-like strips or casts of tenacious mucus on the one hand or colic on the other, and suggested that all mucous discharges be designated as myxorrhoea coli, with which understanding the former is called myxorrhoea membranacea and the latter M. colica. The writer conceded that either type of myxorrhoea coli may be secondary to neurogenic disturbances, but strongly maintained that M. membranacea and M. colica are frequently produced by many other conditions and diseases, medical and surgical, several of which may be factors in the same case. He had often known these conditions to be caused by psychic, neurogenic, gastrogenic and enterogenic disturbances, adenoidism, thyroid disease, impaired metabolism, abnormal menstruation, affections of the heart, liver and pancreas, inflammatory and ulcerative lesions (colitis), helminths, foreign bodies, prolonged or irritating colonoclysis, various lesions which induce chronic intestinal obstruction and lead to coprostasis and auto-intoxication and other ailments which cause the hypersecretion or retention of mucus. The writer had observed patients who suffered at first from myxorrhoea membranacea and later M. colica where the mucus became inspissated, irritating excited enterospasm.

The writer maintained that the diagnosis was easy in uncomplicated cases and that myxorrhoea membranacea could be recognized by its symptom complex, obstinate constipation, uneasiness and soreness or pain in the lower left abdominal quadrant and the periodic discharge of strips, casts or jelly-like masses of mucus, and that where subsequent to these manifestations and in the absence of signs pointing to intestinal obstruction from other causes colic suddenly supervenes one is justified in making a diagnosis of myxorrhoea colica.

The essayist discountenanced a routine treatment in these cases and advised holding curative measures in abeyance until the acute symptoms subsided.

The removal or correction of kinks, twists, strictures, invaginations, adhesions, pericolic membranes and other lesions obstructing the bowel or causing stasis effected a cure in many of the writer's cases, and he rarely found the bowel sufficiently incapacitated to require resection, ex-

clusion or the establishment of an artificial anus.

In conclusion the writer stated that myxorrhoea membranacea and M. colica were common affections and more frequently responded to surgical treatment than the literature of the subject would indicate.

THE CABELL COUNTY SOCIETY.

HUNTINGTON, W. VA., Nov. 26, 1914.

EDITOR WEST VA. MEDICAL JOURNAL.

On October 8th the Cabell County Society met in the Hotel Frederick with a good turn-out. The program for the evening was a paper by Dr. A. K. Kessler on Gonorrhoea. The doctor's paper was a very excellent one and called forth quite a lengthy discussion by all the men present, as you will know this subject always does. The applications for membership of two physicians were presented to the society and referred to the Board of Censors.

November 12th the regular monthly meeting was held in the Hotel Frederick and the subject for the evening was "Menstrual Disturbances," by Dr. F. A. Fitch. The discussion was general, and I feel sure that many very valuable points were brought out.

Drs. R. Hardwick and G. H. Mason, both of Huntington, were elected to membership.

The subject for discussion at the next meeting is "Indications for Surgical Interference in Disorders of Menstruation." The discussion to be opened by Dr. J. A. Guthrie.

With my very kindest regards, I remain,

Sincerely and fraternally yours,

JAS. R. BLOSS, Secy.

FAYETTE COUNTY SOCIETY.

EDITOR WEST VA. MEDICAL JOURNAL.

The December meeting of the Society was held in the assembly room of the Dun Glen Hotel on the evening of the first.

A splendid attendance was one of the marked features of the meeting, which assisted materially in the carrying out of the program.

During the business session monthly meetings were instituted instead of the bi-monthly meetings of the last few years.

The following officers were elected for the ensuing year:

President—C. W. Lemon, Claremont.

First Vice-President—M. O. Hess, Longacre.

Second Vice-President—E. E. Jones, Mt. Hope.

Secy.—Treas.—H. C. Skaggs, Kay Moor, re-elected.

H. C. SKAGGS, Secy.—Treas.

HARRISON COUNTY SOCIETY.

CLARKSBURG, W. VA., Dec. 18, 1914.

EDITOR WEST VA. MEDICAL JOURNAL.

At a regular meeting of the Harrison County Medical Society held December 17th the following officers were elected for the coming year:

President—Dr. J. B. Winfield, Clarksburg.

Secretary—Dr. S. L. Cherry, Clarksburg.

Treasurer—Dr. A. T. Post, Clarksburg.

Vice-President—Dr. C. A. Willis, Industrial.

Board of Censors—Dr. H. E. Sloan, 3 years; Dr. C. N. Slater, 2 years

Delegates to State Meeting—Dr. H. E. Sloan,
Dr. C. R. Ogden, Dr. S. M. Mason.

S. L. CHERRY, *Secretary*.

MINGO COUNTY SOCIETY.

WILLIAMSON, W. VA., Dec. 20, 1914.

EDITOR WEST VA. MEDICAL JOURNAL.

The Mingo County Medical Society closed the year's work with a very enthusiastic meeting on the evening of December 8th. The following officers were elected for the ensuing year:

President—Dr. G. T. Conley, Williamson.

Vice-President—Dr. A. S. Richardson, O'Keeffe.

Secretary-Treasurer—Dr. Wm. H. Triplett, Matewan.

Censors—Dr. James Turner, Borderland; Dr. A. G. Rutherford, Thacker; Dr. W. H. Burgess, Williamson.

Following this meeting the seventh annual banquet of the Mingo County Medical Society was given at the Vaughan Hotel in Williamson.

The affair was one of the most delightful that ever took place in the city of Williamson, and was enjoyed to the fullest extent by all present.

The menu was all that could have been asked, and the toasts responded to by the members of the society in a most charming manner.

The following toasts were given and responded to by the following:

"Our Society"—Dr. Nunemaker.

"Doctors I Met Abroad"—Dr. Richardson.

"Automobiles, Their Advantages and Disadvantages"—Dr. Goings.

"The Modern Aesculapius"—Dr. Price.

"My Specialty"—Dr. Slayden.

"Loyalty"—Dr. Triplett.

Dr. G. R. White, toastmaster. The following were at the banquet table: Dr. and Mrs. William York, Dr. and Mrs. W. H. Burgess, Dr. Irvine, Miss Coozy Saunders, Dr. and Mrs. Tunis Nunemaker, Dr. and Mrs. James Turner, Dr. William Triplett, Dr. and Mrs. A. G. Rutherford, Dr. Thomas Slayden, Mrs. Stewart, Dr. Smith, Miss Vida Goode, Dr. Goe Conley and Mrs. Thomas, Dr. Heatherman, Dr. Parker, Dr. Salton, Dr. Dunn, Dr. and Mrs. Richardson and six guests from Devon.

Truly yours,

W. H. TRIPLETT, *Secretary*.

THE MARSHALL COUNTY SOCIETY

Will meet Tuesday, January 12th, 1915, at 4:15 P. M., at the Court House, Moundsville.

Every member is requested to be present and present a new name for membership.

W. P. BONAR, *Secretary*.

Book Reviews

The Cancer Problem—By Wm. Seaman Bainbridge, A.M., Sc.D., M.D., Professor of Surgery in New York Polyclinic, Surgeon New York Skin and Cancer Hospital, Consulting Surgeon Manhattan State Hospital, etc. The Macmillan Co., New York, publishers.

This is a work by a recognized authority on cancer. It contains over 500 pages and is well illustrated. It opens with a very interesting chapter on the history of cancer and the various efforts made to advance our knowledge of the disease.

That "the tumor is the starting place" of cancer is a dictum that ought to be impressed on every mind, lay and professional. The analogy between the tumor formations in the vegetable and animal kingdoms is drawn. The prevalence of cancer in the lower animals is shown. "It may occur in any multicellular organism," says the author. It has not been shown that climate, soil, diet or life habits exert much influence in cancer production. Though heredity may have some etiological influence, this is not marked. An increase in the disease, though apparent, is not demonstrated. Part of this is due to improved diagnostic methods, part to the longer average life of man, thus a greater number reaching the cancer age. The different theories of causation are studied and the conclusion reached that "the essential cause is yet to be discovered." A chapter on histopathology is full of valuable information, followed by a full resume of the world's work in cancer research.

Other chapters treat of diagnosis, prophylaxis, the various "cancer cures," the non-surgical treatment, the surgical treatment, the book closing with a chapter on a campaign of education, which is so necessary if we would hope to materially reduce the number of deaths from this dread disease.

The book is an intensely interesting one, and we hope to give it further attention in a future issue.

A Treatise on Clinical Medicine—By William Hanna Thomson, M.D., LL.D., formerly Professor of Practice of Medicine and of Diseases of the Nervous System in the New York University Medical College; ex-President of the New York Academy of Medicine, etc. Octavo volume of 667 pages. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$5.00. Half Morocco, \$6.50.

This book cannot claim to be a complete treatise on the practice of medicine, since not all diseases are here treated. It is in some respects unique. It opens with an effort to explain the meaning of some common symptoms, as a chill, pain, cramps, stretching pain, neuralgic pains, reflex pains, emaciation, cough, dyspnea, edema, vomiting, and very much information is conveyed by this chapter. Chapter 3 deals with certain remedies, as electricity, cold, heat and medicines. A short article on vaccines by Dr. J. E. Welch of New York follows. Part II treats of the infections, Part III of the diseases of special tissues or organs, under which head are treated many of the diseases acute and chronic usually met with in general practice. The author has positive opinions. He has "found a true specific against" influenza, viz., phenacetin, Dover's powder, quinin and ext. aconite. Leaving out the aconite, we also found the same and never prescribe anything else for this disease. In pneumonia the author insists on fresh air in abundance, perfect quiet of body, as a stimulant camphor in 7 grs. dose repeated in two hours if needed by hypodermic, one dose of morphia when pain is severe. He has faith in creosote carbonate in 15 grs. doses every two hours in emulsion.

This book is by a man of large experience, the articles are brief and pointed and very practical, but we fail to see why this is called a "clinical medicine."

The Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago. Volume III, Number V. Octavo of 190 pages, 61 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Published bi-monthly. Price per year: Paper, \$8.00. Cloth, \$12.00.

The December number of Murphy's Clinics is embellished by photographs of the author, his staff and their new offices. The building is of classic design and quite beautiful, the interior most complete and attractive. The readers of the Clinics and Dr. Murphy's host of friends will now find pleasure in seeing him with the mind's eye in his handsome new apartments. He will doubtless have their unanimous felicitations with very best wishes for the New Year, and for all the years that are to be his, which, it is to be hoped, will be very many. In these congratulations and good wishes the WEST VIRGINIA JOURNAL joins most heartily.

This number of the Clinics deals with many subjects of deep interest. The author's discussion of appendicitis, cholecystitis and pyelitis from a diagnostic standpoint is a leading feature. Dr. Mix on Hodgkin's disease and Dr. Kreischnor on autogenous vaccines add materially to the attractiveness and profit of this number. R. J. R.

Progressive Medicine

INTERNAL MEDICINE.

Dr. John N. Simpson.

Early Diagnosis of Tuberculosis—Dr. N. T. Emmett, Richmond, in Old Dominion Medical Journal, concludes:

1. Hemoptysis should be considered indicative of pulmonary tuberculosis unless subsequently proved to be otherwise.

2. Pleurisy in the majority of cases is of tubercular origin.

3. Before making a diagnosis of neurasthenia, pulmonary tuberculosis must be eliminated.

4. We are never justified in giving a negative opinion in suspected early cases, as a result of microscopical findings.

5. A well developed chest should not prevent us from diagnosing pulmonary tuberculosis.

6. "Absence of physical signs in the chest is no better proof that a patient has not pulmonary tuberculosis than absence of tubercle bacilli in the sputum."

7. The mere finding of physical signs in the chest of a man otherwise apparently well is of far less moment than the occurrence of symptoms, even without physical signs.

8. A negative diagnosis should never be made in the face of suspicious symptoms unless the patient has failed to react to the tuberculin test.

9. The last and main point I wish to make in this paper is that, so far as treatment is concerned, symptoms as revealed by a careful, searching clinical history are the most important thing in the diagnosis of early pulmonary tuberculosis.

S. L. J.

Sputum Diagnosis of Pneumonia—By August J. P. Pacini, Ph.C., M.D., Memphis, in Interstate Medical Journal.

The reaction to be described was observed per-

sistently present in pneumonic sputa during some research investigations concerning the nature, source and characters of sputum pigments relative to their diagnostic value.

After noting the usual physical characters of the specimen for examination, including, of course, the color, odor, consistence, etc., a portion of the sputum is mixed with distilled water in the proportion of one volume of sputum to ten volumes of water, and agitated in a suitable container for five minutes. The mixture is filtered through paper and preserved for the test.

A one per cent. aqueous solution of methyl violet constitutes the reagent necessary for this reaction, and should be prepared as stock and ready for use.

To a test tube containing 10 c.cm. of distilled water add 5 drops of methyl-violet solution and mix thoroughly. Then add, drop by drop, 10 drops of the filtrate obtained as above described.

In the event of a positive reaction the methyl violet assumes a distinct red color. Nothing short of a red color constitutes a reaction.

This reaction is present only in the sputum of those patients subject to the onset of pneumonia. It is due to a specific disintegrated blood pigment characteristically present in the sputa of such patients and precedes the expectoration of the classic "rusty sputum" by several days.

Applied to over 1,200 specimens, where the ultimate diagnosis was confirmed and established as pneumonia, an error of 2 per cent. existed.

Because of the combined accuracy and simplicity involved in the diagnostic method, it should prove useful to the practitioner who does not even attempt laboratory diagnosis because of time and training necessary for such work.

Further developments concerning the chemistry, physiology and pathology connected with this reaction will appear upon the completion of more detailed researches in this direction. S. L. J.

Pituitary Extract in the Treatment of Hemoptysis—The author tried intravenous injections of pituitrin in 12 cases of abundant—though not "fulminating"—hemoptysis, with excellent results. The dose used was 0.5 c.c., and the injections were made into a vein at the elbow. Whereas ice and morphine had proved ineffectual, the injection of the pituitary preparation was followed almost immediately by cessation of the hemorrhage in 10 out of 12 cases. The patients continued to expectorate blackish material for a few hours, but the flow of fresh blood was clearly arrested by the remedy. Where the hemorrhage recurred on succeeding days, the same prompt relief was obtained. In the eleventh case the first injection alone proved effectual, while in the twelfth the first injection, though soon successful in its results, at first caused sudden pallor, vertigo and a rise of blood-pressure from 80 to 95 mm. Hg, with primary increase in the amount of hemorrhage for two or three minutes. The author thinks such phenomena can be avoided in the future by diluting the remedy with a few cubic centimeters of saline solution and injecting very slowly.

In discussing the author's communication, another observer pointed out that in 1909, with Boye, he had shown that extracts of the posterior

pituitary lowered the coagulation time of the blood where this was increased. Livon soon after found the coagulant properties of the extracts were so intense that no blood-pressure tracings could be taken from the dogs experimented on, the blood at once clotting in the cannulae. He believed the results obtained to have been due rather to this coagulant action than to diminished blood-pressure in the pulmonary circulation.—(P. E. Weil.) E. Rist (*Bulletins et Memoires de la Societe medicale des Hopitaux de Paris*, April 24, 1913; *New York Medical Journal*, September 6, 1913). S. L. J.

The Modern Treatment of Pneumonia—The following rules issued by the Chicago Board of Health are worthy of republication as evidence of the remarkable changes which recent years have brought about in the treatment of pneumonia. Undoubtedly many practitioners are still treating pneumonia by the old method of excluding drafts and paying no attention to the destruction of the sputum. To these we commend the consideration of these rules:

"There is another and very good reason for reporting—pneumonia is a contagious disease. Usually it is far less contagious than scarlet fever and even less contagious than consumption, but at times it is much more contagious than consumption and nearly as contagious as scarlet fever. Occasionally it will spread a good deal in a hospital ward. It can be caught from those that are sick with it and also those that have had it. So, then, if a person has pneumonia:

"1. Report it to the Department of Health, giving the name, address, disease and other information asked for on the contagious disease card.

"2. Put the patient's bed where plenty of fresh air can blow over the patient, just as you do for a consumptive. A good draft is good medicine.

"3. Get rid of the rugs and curtains and other things which encumber the room.

"4. Receive all of the spit on cloths, then burn the cloths.

"5. Keep the patient's mouth, nose, throat and teeth clean.

"6. Keep all unnecessary people away from the patient.

"7. As the patient gets well keep cleaning the teeth, mouth and nose and burning all the spit.

"8. The recovered patient must always thereafter refrain from spitting recklessly; from overdrinking; from breathing bad air and from neglecting his 'colds'—for pneumonia once helps toward pneumonia twice. Then, in thinking of pneumonia, remember that it comes to those who do not keep themselves right and also that those who have it pass it on to others."—*Illinois Medical Journal*. S. L. J.

Strophanthin—The April number of Merck's *Archives* comments editorially on strophanthin in heart disease. True cases of cardiac insufficiency where all preparations of digitalis given by mouth will fail are not common. The oral administration of the drug is very unsatisfactory in chronic insufficiencies accompanied by swelling of the liver and with but slight or no edema. In these cases the liver, stomach and intestines are in such

condition that the absorption of the glucosides is difficult. In such cases the intravenous use of heart tonics is in place and may be truly life saving. Albert Fraenkel has extensively employed the amorphous strophanthin and has obtained excellent results where digitalis by oral administration could not be resorted to. The glucoside is indicated in acute cardiac weakness where digitalis by mouth would act too slowly; in the hepatic type of chronic insufficiency where digitalis by mouth would probably be vomited or ineffective; in all cases of chronic insufficiency where it is desirable to improve more rapidly some distressing symptom, as severe dyspnea. If the improvement after the first injection is slight a full effect will generally be obtained after the second. Even where there is no pronounced objective improvement the patients will usually experience a decided benefit in that one or more distressing symptoms are ameliorated. The initial dose should be 0.5 milligram (1/30 grain). If this is well tolerated the same amount may be given in twenty-four hours. The dose is increased cautiously to 0.75 and 1.0 milligram (1/80 and 1/60 grain). The interval between the injections should never be less than twenty-four to thirty-six hours. In the beginning of the treatment three to four injections per week will be necessary; later one to two every eight days will generally suffice. If used in this cautious manner the drug is not dangerous and no after effects will be noticed. In the few cases reported where the drug proved dangerous digitalis had been given by the mouth before intravenous therapy was resorted to and a cumulative effect was obtained. In treating a new case it is, therefore, of the greatest importance to determine what the previous medication has been. The interval between injections should never be less than twenty-four hours, particularly if the effect of strophanthin is still evident in a bigeminal pulse. Chronic nephritis and uremia are no contraindications, but with excessively high arterial pressure only small doses should be employed. In the severest cases of cardiac insufficiency only small doses should be employed, and it is advisable to begin with 0.25 milligram (1/240 grain). Small doses should also be given to the aged or in advanced arteriosclerosis. As a cardiac stimulant strophanthin is undoubtedly superior to caffeine, camphor and all other drugs, with the possible exception of epinephrin, which have heretofore been the last resort in circulatory failure, and the effect is also more lasting. The advantages to be gained from the use of the glucoside intravenously are the rapidity of action, the certainty of the effects and the absence of intestinal disturbance in most cases. Among antidotes are mentioned straphisagrין, atropin, camphor, picrotoxin and mustard plasters. Robert A. Hatcher states that atropin in small doses and mustard plasters may possibly do some good, but that picrotoxin and staphisagrין would be likely to add to the danger. S. L. J.

Self-Treatment of Sciatica—Dannehl (*Journal American Medical Association*) has the patient sit in a hot bath with the foot braced against the end wall of the tub, which he grasps above with both hands and pulls his trunk forward and over.

thus stretching the nerve in the hip as he repeats the procedure. It is supplemented by light massage of the nerve trunk. The relaxation in the hot water facilitates both the stretching and the massage, and the patient's sensations are the best guide as to the intensity and duration of the procedures. They take thirty or forty minutes in all, and the water should be kept at about the same temperature, 38 C. (100.4 F.). At the close cooler water may be poured over the body, avoiding the affected limb. The sound leg should not be braced. These baths should be taken every day or second day for months if necessary, supplemented by general hygienic measures. Dannehl has thus cured himself by this means of sciatica which had proved refractory for three years to all other measures, and the cure has been complete during the two years since. S. L. J.

Myasthenia Gravis—F. W. Acker, Denver (*Journal American Medical Association*, May 27), reports a case of this disorder and summarizes its chief characters. It seems to be unknown to many physicians, and his case was only recognized by a consultant, Dr. Hall. The majority of those who have written on it seem to support the theory of a toxin as its cause. The pathologic changes are mainly in the muscles, the nervous system being apparently normal in most cases. A lymphorrhagia consisting of small lymphoid cells occurs between the muscle fibers. His patient, a healthy girl, after sudden exposure to cold air, after being in a heated condition at a dance and riding home several miles in thin clothing, was taken with sudden muscular weakness involving nearly all the muscles and progressive in character. She died from dyspnea and cardiac failure the same day the diagnosis was made, nine months after the first appearance of the symptoms. As regards treatment, he advises the following, though the prognosis is as a general rule unfavorable: "1. All infections and toxic agents should be removed. 2. The patient should take rest. 3. Special attention should be paid to elimination. 4. Tonics, such as strychnin and arsenic, should be administered. 5. The diet should be of the highest concentration and easy of digestion, as the patient cannot chew and swallow well." S. L. J.

SURGERY.

Dr. Frank L. Hupp.

The Training for Surgery—To become a useful surgeon the candidate, after graduation, should spend at least eighteen months as an interne in a hospital having a well-trained and organized attending staff. The hospital training should cover general medicine and surgery, including their sub-divisions, and a course in anesthetics must not be neglected. The hospital training forms the nucleus for the further development in either medicine or surgery or the specialties. After completing the internship one should serve as assistant to a surgeon of known ability, devoting a reasonable amount of time assisting at operations. Assisting more than three hours daily in actual operative work deprives the assistant of too much energy, for

he must devote study to the patient, case histories, reviewing the surgical literature and devoting not less than two hours each day to laboratory anatomy and pathology. Six hours weekly should be given to experimental surgery upon animals.—H. W. Wightman in the *Medical Record*.

Are Worms, Especially the Oxyuris, the Direct or Indirect Cause of Appendicitis?—L. Aschoff, Freiberg (*Berliner Klinische Wochenschrift*, August 10, 1914). Reviewed in *American Journal of Surgery*, October, 1914.

This paper is a polemic against Rheindorf, who recently claimed that oxyuris is the direct cause of some cases of acute appendicitis. Aschoff claims, on the other hand, that although oxyuris within the appendix may cause symptoms simulating appendicitis (pseudoappendicitis), an acute inflammation is never the result. Pseudoappendicitis is never accompanied by fever. Therefore patients, especially children, who present certain signs and symptoms of appendicitis without the accompanying fever, should be examined with the view of excluding intestinal worms, especially oxyuris. The fissures in the mucosa which Rheindorf describes as caused by the oxyuris are regarded by Aschoff as artefacts.

Appendicular Grafting—N. Braham, *British Medical Journal*, July 11, 1914 (reviewed in *American Journal of Surgery*, October, 1914).

A boy, aged 11, received an extensive injury of the perineum, resulting in urinary extravasation and extensive sloughing of the perineal urethra. Complete obliteration of the urethra resulted, so that all the urine passed out through a suprapubic opening which was made at the time of the first operation. After a number of unsuccessful efforts to create a new urethral channel Braham removed the appendix and sewed this organ between the severed ends of the urethra. The appendix healed in nicely and the functional result is perfect.

Radiotherapy in Gynecology—(*Strahlentherapie in der Gynakologie*).—H. Martin, *Jahreskurse für Ärztliche Fortbildung*, July, 1914. (*American Journal of Surgery*, October, 1914).

A. Martin reviews the most recent advances in radiotherapy of carcinoma of the uterus. He states that in view of his own recent experience and that of the most eminent gynecologists as reported in recent literature he is no longer skeptical as to the value of radiotherapy in cancer of the uterus. There is no doubt, he asserts, that every variety of cancer tissue in the uterus yields to the curative influence of the ray in the course of three to five weeks, some showing a quick and others a slower reaction. Injurious effects from the ray action are becoming, thanks to the improved technic, more and more reduced. Their importance when compared to the absolute danger of the underlying disease is not to be seriously considered. In operable cases radiotherapy is fully justified as an alternative to the radical extirpation. Further experience will teach us the

best form of irradiation to adopt in the cure of cancer, whether the X-rays or the radium or mesothorium.

Coccygodynia—A New Method of Treatment by Injecting Alcohol—Yeomans, in *New York Medical Record*, August 22, 1914. Reviewed in *American Journal of Surgery*, October, 1914.

To the many surgeons who have patiently dissected out the coccyx for the distressing and apparently unrelievable pain of nervous women this simple suggestion will be received with pleasure.

Yeomans reviews the general features of this malady and then submits a report of seven cases in which the injection of alcohol has effected a cure. Briefly, his method is the following: The needle of the syringe is inserted to the point of maximum tenderness over the coccyx; this is usually just below the tip of the bone, in the midline or slightly lateral to it. About 10 to 20 minims of 80 per cent. alcohol are then injected. As a rule three to five injections suffice at intervals of five to ten days, and they are to be made at the most tender point. In none of the author's cases has recurrence taken place.

Thyroid Implantation—Voronoff (*Gaz. des Hop.*, No. 75, 1914).

At a recent meeting of the *Academie de Medecine*, Voronoff reported the case of a child, 14 years old, who had become myxedematous at the age of eight years, following an attack of measles. In every way, physical and psychic, the case was a typical one, with the characteristic imbecile facies. Into the cervical region of this child he implanted the right lobe of the thyroid (together with its parathyroids) of a large baboon. The operation was followed by most happy results, the child's condition improving steadily. Little by little his face regained its normal color, the nose and lips became thinner, the body became longer and more slender. From being apathetic and almost somnolent he became lively and even mischievous. At school he surprised everyone by the rapidity of his progress.

Voronoff ascribes the outcome of this, the first successful implantation of a monkey's thyroid into a human being, to the special technique employed. The essential features of the latter were as follows:

1. The most rigorous asepsis.
2. The briefness of the interval, not more than a few minutes, that was allowed to elapse between the removal of the gland from the animal and its implantation into the child.
3. The choice of a very vascular region for the implantation.
4. The creation of multiple adhesions, by means of sutures, between the graft and the tissues of the neck. In this manner new blood vessels were enabled to penetrate the foreign tissue with unusual rapidity.

If the foreign thyroid persists in this case and the child continues normal, this operation may mark a new era in the treatment of myxedema and allied conditions.—Reviewed in *Interstate Medical Journal*, October, 1914.

The Elastic Ligature in the Non-Operative

Treatment of Fistula-in-Ano—An elastic ligature is very efficacious as a non-operative treatment in complete fistula, provided there are no ramifications. An ordinary probe with an eye at one end is passed through the fistula and an elastic band is then threaded through the eye of the instrument. The elastic is then drawn through the fistula and the two ends tied loosely over the skin. In a week to ten days the elastic cuts through the roof of the fistula, leaving an open wound that is treated as one made with a scalpel. The patient suffers no pain except a slight "sticking" when the bowels moved.—*Int. Journal of Surgery*.

OBSTETRICS AND GYNECOLOGY.

Dr. R. E. Venning.

"Gestational Therapeutics"—The editor of the "*Red Back*" has this to say on the above subject, his own way of putting it:

"We recognize the importance of fresh air in oxidizing the impurities of the blood and the necessity of nourishment to meet the demands of metabolism and to provide food for the growing embryonic tissues. We realize how necessary the kidneys are in eliminating poisonous substances; the liver in destroying the products of embryonic digestion; how the womb must be healthy to furnish proper soil for the development of the placenta. And more than this, we also know how psychic influences affect the functions of the organs and how certain racial poisons, so-called, even affect the character (quality) of the germinal cells, modeling their character so that the child so born may be said to have a vitiated constitution. This involves the right of the mother who is not physically strong and whose environment is such as not to afford the best opportunity for motherhood to give birth to a child, and an added duty on the physician to medicinally treat every woman affected with disease during the period of gestation." G. D. L.

Puerperal Infection—Dr. C. W. Moots, in *Ohio Medical Journal*.

The author read a paper on "Puerperal Infection," in which the history, etiology, modes of transmission, symptom, diagnosis and treatment were presented.

Concerning the treatment, the author brought with him the plea of conservatism, urging that the diseases should be prevented rather than cured; that strict asepsis, together with the avoidance of unnecessary examinations and meddling, some interference, would in most cases prevent it.

While in a large majority of cases the infecting agent is the streptococcus, yet, as a rule, the infection was probably of a mixed origin, and presented considerable difficulty to isolate, owing to our inability at the present time to grow the organisms by the cultural method; and owing to this inability to isolate the infecting organism in many cases scientific vaccine treatment was somewhat difficult and should be taken up with considerable conservatism for the present.

When infection is already present the best results are obtained by general support of the patient, keeping her resistance as high as possible,

and if local treatment is used at all it should be selected with exceeding great care and conservatism, as more harm was apt to be brought to the patient than good.

The curette was condemned in no uncertain terms by the author, who advised that the human family would be better off if it were never used except as a diagnostic agent. S. L. J.

Uterine Bleeding—The more important points of an instructive article on uterine bleeding by E. Novak, Baltimore (*Journal American Medical Association*, Aug. 22, 1914), in which he reviews the relations of the ductless glands and the nervous system to uterine hemorrhage, are given by him as follows: "1. The proper basis for the study of uterine bleeding is the study of normal menstruation, along physiologic as well as anatomic lines. 2. The factors concerned in normal menstruation are (a) an ultimate cause, residing in the ductless gland chain; (b) a nervous mechanism, essentially vaso-motor in character; (c) the uterus, and especially the endometrium. 3. The causes of uterine bleeding may therefore be grouped as (a) fundamental, involving disturbances of the internal secretions; (b) nervous, exerting their effect mainly through the vasomotor nerves; (c) anatomic, in which structural changes are present in the uterus or other pelvic organs. 4. Most frequently the exciting cause of uterine hemorrhage is anatomic, the lesion being in the uterus, tubes, ovaries, blood vessels or even the blood itself. 5. In a not inconsiderable number of instances bleeding is due to fundamental or nervous causes, especially at the two extremes of menstrual life, puberty and the menopause. 6. There is good reason to believe that much light will be thrown on the role of the fundamental causes, and perhaps even of the nervous causes, by clinical methods of study which are based on the relation known to exist between the ductless gland apparatus and the vegetative nerve system." S. L. J.

Puerperal Fever—Drs. B. C. Hirst, Philadelphia; R. L. Dickinson, Brooklyn, and J. B. DeLee, Chicago, constituting the committee appointed by the American Medical Association to investigate the subject of the treatment of puerperal fever, publish their report (*Journal American Medical Association*, October 25). They sent out a series of questions to surgeons and gynecologists in this country and abroad, covering the principal exigencies liable to be encountered in puerperal infection, the answers to which are summarized and discussed in the report. These replies to the questionnaire give a definite idea of the practice of the respondents and fairly represent the best prevailing views obtainable, and in forming their conclusions due weight was given them. The conclusions deduced from the inquiry are given as follows:

"The majority of accoucheurs and surgeons clean out the septic uterus at once, but a not negligible majority believe it is safe to trust the expulsion of the infected uterine contents to the powers of nature, some assisting the same

by mild measures, such as antiseptic douches and packing. From this it is fair to infer that, in the majority of cases, it has been found safe to invade the infected uterus with finger and curet, and this is borne out by experience. There are, however, many cases in which the infection is of such a nature, or the resistance of the patient of so poor a quality, that the sudden introduction into the system of so large an amount of bacteria and toxins as is always made by curettage, turns the scale against the patient. She cannot stand the inoculation with autogenous vaccines. The experience of the minority has proved that ovarian remnants, even though infected in the uterus, do not create such dangerous conditions as we formerly believed, demanding instant removal, but that it is safe to wait for nature to erect her own barrier against the progress of the infections, and that temporizing measures or mildly stimulating ones often suffice for cure. We all feel the need of some method by which it would be possible to distinguish benign from virulent bacteria living in the genitalia, but as yet no such method exists. When it does become possible, our practice will become more definite. At present one-half of the authorities do not try to make the distinction, holding it impractical. One point that was almost invariably emphasized was that after the uterus was once emptied it should not again be invaded by either finger or curet. Few would permit antiseptic douches. This is a very grateful change from the time when repeated curettages were performed on the puerperal uterus—a procedure which was as rational as curetting the throat in diphtheria. Another interesting fact that has developed is that quite generally the tampon is used to stop the bleeding in infected cases. Evidently there is not much fear of damming back the infection and permitting greater absorption." S. L. J.

The Abderhalden Test for Pregnancy—Stoner and Steel have tried this in 150 cases and close a report in the *Cleveland Medical Journal* as follows:

Eleven cases were syphilitic and gave a positive Wassermann, but the Abderhalden was negative. Eclampsia and threatened eclampsia cases showed positive reactions, with usual

Conclusions—1. That the test is delicate and will require the skill of one especially acquainted with serological work and great care in ruling out possible sources of error.

2. That, barring a few clinical conditions that may give the reaction such as malignancy, fibroid tumors and inflammatory processes, the test is as reliable as the Wassermann reaction for the determination of syphilis.

3. That the greatest diagnostic value will be in that type of case where clinically it is difficult to differentiate between a pregnant and non-pregnant condition and in which the test reacts negatively, barring out the likelihood of pregnancy. S. L. J.

PEDIATRICS.

AUTOGENIC VACCINE IN FURUNCULOSIS IN INFANTS.

Harrichausen reports seven cases which illustrate the peculiar advantages of autovaccine therapy in rebellious cases of furunculosis in infants. He declares that the technic is extremely simple and takes very little time, while the method is absolutely free from danger and there are no contra-indications. The charts of his cases show that no new furuncles developed after the second or third injection, while the pre-existing furuncles all retrogressed simultaneously. The larger the single dose, the longer the interval should be; the first dose for adults should be about fifty million and for children about twenty million, and for infants ten million at five-day intervals, the dosage guided by the temperature, pulse, weight, appetite, general complaints and focal reactions. There are two contra-indications for adults, the menstrual period and severe diabetes. In the cases reported the infants were all much debilitated and the furunculosis had long resisted all other measures. The dosage and intervals and the underlying disease differed in the various cases, but the excellent ultimate outcome was alike in all.—*Journal American Medical Association.*

The Education and Training of Feeble-Minded Children in the Public Schools—Dr. A. W. Edson, in the *New York Medical Journal*, submits the following propositions:

1. In every city there are sub-normal children. They can be found if the school authorities and the doctors will only recognize them.
2. In each city there should be a psychological clinic connected, if possible, with the city hospital and controlled by the board of education. This clinic should determine scientifically the degree of mental dullness of sub-normal children. Full clinical records of the patients should be kept, and these patients should be assigned to a particular school or a particular task, or else to a state institution.
3. There should be suitably equipped class rooms for such children in school buildings. They should be large, sunny and accessible to the street, the play ground and the toilet rooms.
4. The number in the classes should not exceed twelve to fifteen, in order that individual or group attention may be given, as may be indicated.
5. Specially qualified teachers must be chosen for this work, for it requires patience, tact, sympathy and resourcefulness. Such teachers must keep abreast with the progress which is being made in this line of work.
6. There must be love and sympathy in the management, and no nagging, threatening or punishments.
7. The course of study must emphasize the essentials; it must be flexible and lead directly to a vocation. Teachers must have a free hand in adapting the course of study to the needs of the classes.

8. The instruction must be personal and emphasizing physical and manual training, nature study and illustrative material.

9. The skilled teacher and the skilled physician must labor side by side in this work. Physical defects must be remedied as speedily as possible, the training must be corrective and curative, both along physical and intellectual lines.

10. If school authorities fail in their duty to these unfortunates, if there is lack of funds or of interest, private individuals should be appealed to for the performance of the work; a leader with a well matured and workable plan is indispensable. This is an interesting problem which cannot be dodged; it must be worked out. These children are with us whether we desire them or not, and it is certainly better economy to fit them for usefulness than to let them grow up a hopeless burden to the community for their entire life. S. L. J.

Immunity in Measles—Charles S. Woods, Iowa City, Iowa (*Journal American Medical Association*, September 5, 1914), calls attention to the apparent result of Hektoen's experiment in producing experimental measles as indicating beyond a doubt that measles may be transmitted by injecting the blood of a person having measles into another person in normal health. He relates an instance in which a woman in the eighth month of pregnancy contracted measles. The child, while in utero, must have had an ideal opportunity to acquire immunity against this disease. The child, however, now 7 years old, had an attack of measles this spring. This emphasizes the great difficulty of securing immunity and the power of the virus of measles to invade the human organism. S. L. J.

Infant Feeding—Eustace Smith, in *British Medical Journal*, gives three rules for the artificial feeding of infants: 1.—Bathe the infant as quickly as possible in hot water. Never let the feet or legs get cold. 2.—The infant should get a sufficient variety of flavor in its food. A baby is apt to resent the monotony of his food when artificial. Variety in diet is an aid to digestion. 3.—The apparatus used in feeding should be absolutely clean, the food fresh and the sanitary arrangements perfect.

Milk should be kept outside the living room; cream is only to be used when quite fresh; foods are not to be allowed to stand for hours after being mixed; and highly perishable articles, such as whey, barley water, etc., must be made fresh as required. At any rate, whey is not to be depended upon after four hours, nor barley water after six.

These rules, as already stated, are nothing more than reasonable precautions, and any thoughtful person might frame them for himself. Eustace Smith believes the neglect of them—and that the first two are continually neglected no practical physician would venture to deny—is due to the attention of the family medical adviser being too entirely engrossed with the conflicting claims of the le-

gion of foods, digestives and modified milks which are pressed upon his notice, and also, and perhaps chiefly, to his feeling that the nursery arrangements are none of his business and must be left to the attention of the person who is responsible for them. Experience has, however, shown us that this is leaning upon a very feeble support, too apt to fail us at our need.

S. L. J.

EYE, EAR, NOSE AND THROAT.

Drs. H. R. Johnson and P. A. Haley.

Operation on the Maxillary Sinus—R. H. Skillern, Philadelphia (*Laryngoscope*, Vol. XXIV, No. 11).

The writer, in presenting this operation, states that its claim for recognition is based on the fact that it permits free access to the antral cavity either for inspection or the removal of neoplasms or degenerated mucosa right up to the anterior angle, and it is free from the objections of the Canfield operation in that it does not sacrifice the inferior turbinate, and from those of the Denker operation in that it does not involve communication with the oral cavity. It is also claimed to give results equally as satisfactory as the foregoing operations, while far less radical than either.

His technic is briefly as follows: The lateral nasal wall above and below the anterior attachment of the inferior turbinate is anesthetized by painting with 20% solution of cocaine to which one-fifth its volume of adrenalin chlorid solution is added.

A 1% solution novocaine in 1/10000 adrenalin chloride in normal salt solution is injected beneath the mucosa on the nasal side of the pyriform aperture and beneath the periostium on the facial side. This will desensitize the region around the inferior turbinate and the canine fossa. Five to six c.c. will be all that is required. After waiting ten minutes a perpendicular incision is made in front of and above the anterior attachment of the inferior turbinate, extending down into the floor of the nose. A second incision, beginning at the upper end of the first, is carried down back of this, joining the lower end of the primary incision. This leaves a spindle-shaped piece of mucous membrane, which is removed.

After controlling hemorrhage with adrenalin tampons elevate the periostium from the crystalliformis externally toward the canine fossa and on the nasal side toward the inferior turbinate, continuing the elevation until sufficient area of bone is denuded.

With a concave chisel an opening is made into the antrum through the pyriform angle. Then with chisels, forceps, or preferably with burrs, the opening is enlarged to the desired extent and the edges smoothed off with a curved rasp. Flush out the sinus, dry the cavity and pack with cocaine and adrenalin gauze for a few minutes. With an ordinary ear speculum introduced through the opening a naso-pharyngoscope can be passed and all parts of the cavity thoroughly inspected. With a curette all diseased mucosa may be removed under direct inspection.

Irrigate, dry and pack loosely with iodoform

paste. The after treatment is simple. If the packing is moist it is removed in 48 to 72 hours. If it remains dry it may be permitted to remain a week. After the removal of the packing the cavity is irrigated, dried and again loosely packed as before. This is repeated every second or third day for a period of two to three weeks, then permanently discontinued. Irrigations and insufflations are continued at lengthened intervals until discharge ceases and the opening heals.

Advantages claimed by the author for this operation are:

1. That it is simple and easy to perform under local anesthesia.

2. It can always be inspected by direct vision and conditions noted.

3. That the drainage is at the lowest and most accessible portion of the nose.

4. Local applications may be made to diseased areas under direct vision.

5. Inferior turbinate is not sacrificed and no communication is made with the oral cavity, giving rise to reinfection.

6. The healing period is considerably shortened and the number of after treatments lessened.

H. R. J.

Intralaryngeal Operations by Direct Laryngoscopy—By Chevalier Jackson, Pittsburgh (Journal American Medical Association, Vol. LXIII, No. 22).

In a paper read before the section on rhinology and oto-laryngology of the American Medical Association, June, 1914, Dr. Jackson presents the advantages of the direct method of operating on the larynx. He explains that by this method the field of operation is seen by direct vision, and that all movements are made direct and require no orientation. There is no gauging of distances, as is required with the mirror, but the larynx is seen at its true depth. It is the only method by which a satisfactory view of the larynx in children can be obtained for diagnosis, treatment by local applications or surgical procedure.

In children the promptness and accuracy with which operations by direct laryngoscopy can be performed for the purpose of removing papillomata, subglottic oedema, post-tubal stenosis and other conditions places this procedure in a class by itself.

Jackson claims that while it requires practice to become proficient, it is not as difficult to acquire as skill in the use of the mirror. He cautions that great care must be exercised in all laryngeal operations to avoid impairment of motility as much as possible, as it is the tugging of the arytenoids on cicatricial tissue that plays the most important part in the production of adventitious vocal bands.

Local anesthesia is preferred for adults, using a 20% solution (in minute quantity) to the interior of the larynx. In a few cases general anesthesia will be required. In children he strongly advises against the use of any anesthetic in stenosis of the larynx from any cause, claiming that it is extremely dangerous, as respiratory arrest is punctually certain to follow when anesthesia is complete. This applies to both general and local anesthesia.

Especially does he warn against the combined use of morphine and chloroform in children.

The pain in intralaryngeal operations is so slight that anesthesia is a needless risk.

NOTE.—Although Dr. Jackson is very dogmatic in his denunciation of anesthesia in children, Dr. Levy of Denver (*Laryngoscope*, November, 1914) advises the use of chloroform for general anesthesia in children for these same operations.

H. R. J.

Dilatation of the Esophagus—An analysis of ninety-one cases of diffuse dilatation of the esophagus is given by H. S. Plummer, Rochester, Minn. (*Journal American Medical Association*, June 29). No anatomic stenosis could be detected in these cases and they were treated by dilating the cardia with the hydrostatic dilator. Four of the patients died since treatment, the known causes being pneumonia, tuberculosis and rupture of the esophagus, the cause being unknown in one case. Seventy-three were completely relieved from their dysphagia and eleven were not. The cures have lasted from one to six or seven years. A few at long intervals are still conscious of the food passing the cardia. In Plummer's earlier work the degree of pressure varied with the tolerance of the patient, but he does not now consider this a safe guide. The patient whose esophagus was ruptured did not complain of pain till after the dilator was withdrawn. The pressure of 675 mm. has invariably given marked relief and in the majority a complete cure. The routine practice has been to give two or three treatments and then let the patient return home, telling them to return if the dysphagia returns. It is remarkable that most patients with extreme inanition have needed but one treatment for a cure. In no case has it been given at frequent intervals for any length of time.

S. L. J.

Chronic Laryngitis—E. Mayer, New York (*Journal American Medical Association*, September 27), describes the symptoms and treatment of chronic laryngitis. First among the etiologic factors come the obstructive conditions of the nose, causing mouth-breathing and preventing properly warmed air entering the larynx. Chronic catarrhal conditions of the naso-pharynx may extend to the larynx, but one of the most frequent causes is either the elongated uvula or its papillomatous tip. Hypertrophied lingual tonsils may have to be treated first and follicular pharyngitis and pressure in the auditory canal may cause irritation and trouble. Constitutional, digestive and cardiac disturbances and pressure of new growths and enlarged glands may have to be relieved before a cure can be obtained, and dusty occupations or exposure to gases may be a cause. Alcoholics are specially susceptible, as are also males at the age of puberty. Continued use of tobacco often retards a cure. Sudden changes of temperature are very common causes. Improper use of the voice by actors, singers or public speakers produces some of the most difficult cases to treat. The condition is usual

local hypertrophy, the singer's node occurring at the point between the anterior one-third and the posterior two-thirds of the cord. After removal of the causal factor, the first order must be rest, the more complete the better. The directions are given for the use of sprays and local applications of tincture of iron, iodine, alum, etc. Medicated lozenges containing benzoic acid or krameria during the day are useful. Medicated steam inhalations of compound tincture of benzoin and camphor and iodine, etc., are recommended and formulas given. The patient should remain indoors fifteen or thirty minutes after each application. Tobacco should be prohibited and faulty methods of speaking corrected. Often a complete change of air and scenery is useful. Cold sponging of the upper part of the body, proper clothing, regularity as to meals and regulation of the bowels are measures recommended.

S. L. J.

GENITO-URINARY AND DERMATOLOGY.

Dr. A. P. Butt.

Autoserum Treatment of Obstinate Dermatoses—As far as the employment of the autoserum treatment was concerned, Fox was disappointed with it in eczema, but in herpetiform dermatitis the results were somewhat more encouraging, while in the psoriasis cases the results had been exceedingly gratifying.

The newest and best thing in dermatology this year was this treatment. He had found, however, that after the autoserum injections local treatment was essential. In psoriasis he had employed chrysarobin and in some instances had also covered the lesions with rubber cloth, but the final results were such as could not have been secured by the local treatment alone. He had given rather smaller doses of serum than Dr. Gotthel. From 50 c.c. of blood he had obtained from 20 to 25 c.c. of serum. The technic was absolutely simple to any one familiar with such injections as those made with salvarsan.

Dr. George M. McKee at the Manhattan Dermatological Society had shown its remarkable results in two severe cases of psoriasis. This success had led him to introduce the method at Dr. Fordyce's clinic. Fourteen cases had been treated. These cases were of psoriasis, pemphigus and dermatitis herpetiformis. In the psoriasis cases they had not been able to modify the disease by the serum treatment alone, but after the course of injections the lesions would commonly disappear rapidly under the use of extremely mild local measures. In the local treatment they had employed a recently introduced derivative of chrysarobin which had the advantage of not staining, and it was found that under the use of a half per cent ointment after the injections lesions would disappear which without the autoserum would not be affected by even 20 per cent ointments.

In two cases of dermatitis herpetiformis where the patient had been treated for from 12 to 14 years without benefit the skin had become entirely clear after six injections. Whether or not the result would be permanent remained to be seen. There had been only one case of pemphigus, and no satisfactory result could be reported. He had

been careful to avoid hemolysis, and he had not observed any serum sickness. The serum acted perhaps through some ferment evolved, but this was only an hypothesis.—*The Urologic and Cutaneous Review*.

Renal Infections from Bacteriologic Point of View—Dr. Irvin S. Knoll, Chicago.

The accepted three routes of infection are the lymphogenous, hematogenous and urogenous. Knowledge of the lymph channels draining from the intestinal tract into the kidney accounts for the frequency of infections of the kidney associated with acute and chronic gastro-intestinal disturbances. Infections through the ureter may be either extra or intraureteral. Of particular importance is the pyclitis associated with pregnancy, the frequency of which is estimated as high as 20 per cent. Of late the hematogenous route seems to have been neglected in the consideration of the carriage of bacteria to the kidney. The circulatory system is a carrier of bacteria of as great importance as the lymph stream.

Discussion—Dr. Hugh Cabot, Boston—The milder grades of infection of the kidney, commonly misnamed pyelitis, are extraordinarily more common in females than in males, even among children. This should not be regarded as accidental, and yet this has never been explained satisfactorily.

Dr. Edward C. Rosenow, Chicago—Primary pyelitis is rare. It is a pyelonephritis or nephritis infecting the pelvis of the kidney secondarily. The results I have had from the intravenous injections of streptococci make me feel strongly that given a case of acute pyelitis or pyelonephritis, no matter what organism is primarily, it is a hematogenous infection that primarily infects the capillaries and secondarily infects the pelvis of the kidney.

Dr. Emil Ries, Chicago—Cases of so-called pyelitis said to have been cured were really not cases of pyelitis at all, but cases of pyelonephritis. Cases of so-called pyelitis of pregnancy came under my observation rather frequently in years gone by. They were treated on the conservative plan, and the vast majority of the patients got well.

Dr. Bransford Lewis, St. Louis—Lavage, using a fluid that has certain medicaments incorporated in it that have germicidal properties, will cure infections of the renal pelvis.—*Journal American Medical Association*.

Advances in the Treatment of Gonorrhoea—S. W. Moorhead.

Moorhead advocates the use of the abortive treatment in cases seen early, as advocated by Ballenger—the sealing of a freshly prepared 5 per cent. solution of argyrol in the urethra by means of collodion. This is repeated daily for five days, when in a large percentage of cases the disease will be found cured. In chronic gonorrhoea the use of electrically heated sounds retained for thirty to sixty minutes at a temperature of 120° F. is recommended; also the use of the galvanic current to carry ions of silver, zinc or copper into the periurethral tissues. In cases seen too late to attempt the abortive treatment 5 per cent. argyrol or ½ per cent protargol hand

injections four times daily, to be retained for five minutes, are advised. After the gonococci have disappeared one per cent. zinc sulphate should be used.—*The Therapeutic Gazette*.

The Role of Mercury in the Management of Syphilis—Abraham says it would appear that mercury is regaining once more its old position as the main stand-by in the treatment of syphilis, and that the real progress of arsenotherapy lies not in the direction of complete cure, but rather in its rapid healing effects on the early, highly contagious forms of the disease.—*Urologic and Cutaneous Review*.

In the treatment of nocturnal enuresis in children let your first concern be toward the correction of any possible reflex irritation which can be determined. Then do everything you can to improve not only the physical strength of the little patient but his nervous state as well. After you have instituted a rigid hygienic and dietetic regime, then begin to think of belladonna.—*Urologic and Cutaneous Review*.

Cutaneous Manifestations of Tuberculosis—Ostrovsky's experience with two cases of tuberculosis of the skin in children in the Zurich clinic emphasizes the necessity for careful investigation of the skin of small children suspected of tuberculosis. Cutaneous tuberculids are a very important sign of tuberculosis, especially in breast-fed infants. He urges further the universal application of the Pirquet reaction in all children's homes and nurseries.—*American Medical Journal*.

Treatment of Acne—A writer in *Monde Medical* for November 13th advises that in acne rosacea one resort to criss-cross linear sacrifices, made very close together and partly in a direction perpendicular to the dilated vessels.

This treatment should be followed by spraying with sterile water and may be repeated at weekly intervals as long as seems necessary.—*New York Medical Journal*.

UNIVERSAL EPIDEMIC.

Roger W. Babson says that in looking up appendicitis cases he learned that in 17 per cent of the operations for that disease the post-mortem examinations showed that the appendix was in perfect condition.

"The whole subject," he adds, "reminds me of a true story I heard in London recently. In the hospitals there the ailment of the patient, when he is admitted, is denoted by certain letters, such as 'T. B.' for tuberculosis. An American doctor was examining these history slips when his curiosity was aroused by the number on which the letters 'G. O. K.' appeared. He said to the physician who was showing him around:

"There seems to be a severe epidemic of this G. O. K. in London. What is it, anyhow?"

"Oh, that means 'God only knows,'" replied the English physician.—*Open Door*.

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Original Articles.

MEDICAL EXPERIENCES IN THE BALKANS.

Major Clyde S. Ford, M.D.,
Medical Corps, U. S. Army.

*(Read before the Jackson County Medical Society,
Kansas City, Mo.)*

While some recent events in the Balkan Peninsula may be cited as providing occasion for the Turko-Balkan war of 1912, the causes, obscured by racial prejudices, religious traditions and political aspirations, are so confused with the early history of Eastern Europe, and even with that of Asia, that an understanding of the fundamental forces must involve a cursory survey extending at least beyond the time of the Moslem invasion of Christian Europe to the earlier period when the eastern flank of the Roman Empire met the barbaric hordes advancing from the north.

The city of Byzantium, founded by the Megarian Greeks in the sixth century B. C., after a well seasoned maturity of 1,000 years, was made the capital of the Roman Empire by Constantine the Great, and since has been known as Constantinople. Its glory and prosperity at once became the envy of the East and West. History did not have to wait until the eighteenth century for an appreciation like that of Peter the Great, who said: "Whoever shall reign there will be the true master of the world."

In the fourth century B. C. Philip of

Macedon laid a siege to Greek Byzantium. In the first ten centuries of the Christian Era, in succession, the Huns, the Slavs and the Bulgars successively overran the Balkan Peninsula from the Black to the Adriatic Sea, until the great sieges of Constantinople down to the present day are said to number about 30.

In the Middle Ages, as neighbors and rivals, there was first a Bulgarian Kingdom and then a Servian Empire. Each in turn attempted the capture of Constantinople, and alternately dominated one another, as their civilization and Christianity drove them to seek the "place in the sun." These Christian races did not have to wait for the coming of the Turk to start the "Eastern Question," for they had something of it well going long before Mr. Gladstone's "unspeakable Turk" arrived.

Once a Bulgarian Czar sent back to Constantinople the noses of his Greek prisoners as indication of their whereabouts; later an Orthodox Christian emperor in Constantinople, after a little change of luck, sent back to their Czar 15,000 Bulgarian prisoners, all blinded except one man in each hundred, who was left with one eye so that he might act as a guide. For all practical purposes it might well be said that "atrocities" are indigenous to the Near East and that they have always been known in Macedonia.

The Turks who had been established in Persia and Asia Minor since the eleventh century, crossed the Dardenelles in 1359 A. D. and, 30 years later, defeated the

Serbs and Bulgars at Kossovo. A few of the vanquished Serbs escaped into the Black Mountains on the Eastern Adriatic coast, and from that name of their refuge and new home they have been known ever since as Montenegrins—the only people in the Balkans that have never been submerged by the Turkish inundation of Eastern Europe. In 1453, when Columbus was yet a boy, the Turks crossed the Bosphorus and took Constantinople. In the seventeenth century the Ottoman Empire reached from the Persian Gulf to the walls of Vienna. From there, through the past 300 years, it has steadily receded toward the Bosphorus, and in its wake has been developed the "Eastern Question," which has been described as "the problem of filling up the vacuum created by the disappearance of the Turk from Europe."

The critical element in the solution of this problem, however, has always been the delimitation of the frontier between Slav and Teuton, whose boundaries have always closed together as the Turk retired. The Crimean war in 1854 was the result of this contact. It was concluded by the treaty of Paris in 1856, which "assured the integrity of the Ottoman Empire in Europe," but only just so long as there was no force great enough to break it. It was good and binding until the Russo-Turkish war in 1877, which was another result of the same cause. The Russian victory imposed upon the Turks the terms of the treaty of San Stephano in 1878, which provided for a Bulgarian state of about the same extent as the Bulgarian Empire of the middle ages. This new state would have solved the Macedonian problem by making coincident the ethnographic and geographic boundaries of this troubled region.

As the settlement was entirely dictated by the Slavs, the Teutons, supported by England, revised under threat of war these conditions in their own favor and established Bulgaria as a small Turkish principality and Eastern Roumelia as a Turkish province. Macedonia was wholly turned back to the Turks with a guarantee that certain reforms in government would be established. Two Turkish provinces, Bosnia and Herzegovina, were

turned over to Austrian administration. This was all established under the terms of the treaty of Berlin in 1878, which for 35 years has been the peace bond of Europe. The "constitutionality" of it now seems to be on trial before the Supreme Court of Europe sitting in two sections, one in Belgium and eastern France and the other in Poland.

In view of the "peace bond" and "scrap of paper" values respectively that have been given recently to treaties by two of America's first citizens, it may be interesting to quote the words of a current historian (Wm. Miller), who wrote in March, 1913, the last words of his "Ottoman Empire 1801-1913."

After specifying a number of instances in which "almost every signatory power and more than one small state had violated their solemn international agreement," he concludes: "But to regard the tattered Berlin treaty as an inviolable law of nature is to ignore the fact that, in the imperfect world of politics, international arrangements are only binding so long as the contracting parties choose to be bound by them or the populations are weak and disunited. When for the first time in history the 'little neighbors' of Turkey joined hands against her with double strength and enthusiasm and organization, the treaty of Berlin, like all artificial creatures, succumbed before the forces of nature."

The Austrian violation, the annexation of Bosnia and Herzegovina in October, 1908, and the Bulgarian violation, the declaration of independence from Turkey and the proclaiming of the Prince Ferdinand as "Czar of the Bulgarians," were both occasioned through fear of the changes a constitutional regime in Turkey might bring about.

The Macedonia reforms guaranteed by the Powers were never instituted by Turkey. In 1911 the Balkan League was formed. When Macedonian outrages recurred in 1912, Bulgaria, Serbia, Montenegro and Greece were in a position to deliver to Turkey an ultimatum demanding immediate reforms. Turkey, as was expected, suffered an outrage of her dignity and declared war on Bulgaria and Serbia; Greece then declared war on Tur-

key, and all of this 10 days after little Montenegro had begun to shoot. The Balkan people had thus proved themselves stronger than the artificial barriers erected by the Powers to protect the interests of Europe in their own interests; the inevitable had happened and the war was on.

It will be remembered that the war between the Balkan Allies and Turkey occupied two great fields in which the operations were of somewhat different character.

The principal theater was in Thrace, in which the stronger portion of the Bulgarian army attacked the Turkish army of the East. The other theater lay among the mountains of Macedonia, Epirus and Thessaly, where the well scattered divisions of the Turkish Army of the West were attacked by the Servians and Montenegrins from the north and west and by the Greeks from the south.

It was on the Thracian Plains that the hardest battles were fought and the issues of the war finally determined, and it was from that direction that Constantinople was invested and all but subdued. It was to this quarter that the attention of the Ottoman Empire was immediately and vitally directed and to which also my meagre observations were limited.

The Thracian campaign was concluded in two phases. The first occupied the two weeks of the war from the middle to the end of October, 1912, and resulted in the investment of Adrianople by the Bulgarians and the complete rout of the Turkish Army of the East and its disordered retreat to the Chatalja line and its outer defenses, some twenty miles west of Constantinople.

The second phase, much more prolonged by the operation of siege laid to Adrianople and the Chatalja line, and interrupted by a long armistice, lasted from December 3d to the end of May, and was terminated in the conclusion of the war by the treaty of London.

I arrived in Constantinople November 3d, 1912, or three days after the formation of the Chatalja lines following the defeat of the Turkish army in the field. About two weeks later the Bulgarian assault on the Chatalja line, which occu-

ried three days, was made and failed. By this successful defense Constantinople was saved.

The wounded from the field campaign were still coming to Constantinople at the time of my arrival, and an epidemic of cholera, which had begun its rage in the Turkish troops of the Chatalja lines, was acknowledged about this time in Constantinople. The victims of the disease were arriving in the outskirts of Constantinople at San Stephano at the rate of several hundred a day from the railhead of the defenses at Heydemkui. While the cholera camp that was established at San Stephano had become known to the world as a great pest-hole, and while thousands of sick were at first without shelter and were never well housed, two things must be said in extenuation of the harsh criticisms of the Turkish administration. First, the Ottoman Empire was in great peril and all the resources of transportation and supply were desperately needed and duly impressed in the service of strengthening the defenses of the capital; and, second, such expedients as were employed, though harsh and abrupt, were efficient in saving Constantinople from a cholera invasion. All trains carrying soldiers from the front, whether sick from any cause, or stragglers or deserters, were impounded together without shelter and treated alike. The sick were not separated from the well and all were sheltered as facilities became available. Later many cases were taken to the mosques in Constantinople, where a careful and efficient guard system kept all the soldiers separate from the civilian population and saved the latter from infection.

From my own experience, in charge of a cholera camp at San Stephano, there were about 600 soldiers under guard in a compound where all were sheltered in permanent buildings, sheds or tents and probably 200 were not infected. Of the remaining 400 all were undoubtedly cholera cases. Though 200 of them died the death rate diminished gradually from 50 per day to 1 per day in the first ten days of my service. This diminution in the death rate was in direct ratio to the progress of rough but substantial sanitary measures. At this time I will not pre-

sume to estimate accurately the number of cases of cholera in the Turkish army, and I am sure there can never be any reliable statistical data prepared, but there must have been 10,000 deaths. The mortality was about 50% in my cases, but I believe that the rate is only relative to the conditions under which the cases are treated. I believe that, with the same virulence of the infecting organism, the same resistance of the patients and the same conditions of shelter, sanitation and treatment, as are generally available in the treatment of typhoid fever, for instance, the mortality of cholera would be no greater than that of typhoid fever. In other words, if cholera were treated with the same care and under the same conditions as typhoid fever is treated to establish its best mortality statistics, the mortality in cholera would not be much greater than that in typhoid fever.

My service in Constantinople, in an improvised military hospital, covered a period of six months, with an admission of 500 surgical cases. I was acting there in the capacity of chief surgeon of the local chapter of the American Red Cross Society, which financed our establishment and which assumed complete charge of 120 beds which we found occupied by wounded. This provisional hospital, known as Tash Kishla, the last military hospital to be established, was filled with the sick and wounded last to arrive in Constantinople from the defeated army.

During the activities on the Chatalja line we received some new patients, and later, after hostilities were resumed, following the armistice on February 3, 1913, received some more patients. After that time all our patients were received by transfer from other and better hospitals where more active services were maintained. In fact Tash Kishla became the dumping ground or clearing house of the military hospital system of Constantinople, so that the cases we received in the last months were the class of old infections or convalescents which had lost their surgical interest and were transferred to us from other hospitals to make room for their more interesting cases. It may be observed in this connection that the Turkish medical service in Constanti-

nople was conducted with the same enterprise and surgical zeal that sometimes characterizes hospital administration in more enlightened countries.

It is naturally incumbent upon a surgeon with any pretension to professional efficiency or scientific accomplishment when he has completed a service of any kind to prepare a report in which statistics are compiled with an exactness and precision that extends into several decimal points, from which he may draw conclusions for the instruction of his colleagues. In the surgery of civil life such processes can only be commended, for they may be of some professional value and can hardly be fraught with any danger. The same may be said of the surgery of war, except that the conclusions drawn from an individual service, however active, may represent an experience confined to some local phase of military activity or administration to which the cause, character and frequency of wounds is peculiar.

I have seen reports of two eminent and distinguished surgeons, with the character of whose respective services I am personally familiar. These reports carry an accurate and interesting account of their special work, which no doubt will be of exceedingly great professional value and will find permanent place in medical annals. But I believe that the experience of any one operating surgeon in the course of any war is not sufficient to enable him to draw conclusions that will establish reliable statistics on the wounds of war, because such can only be prepared from the reports of all phases and conditions of the military activity of all the campaigns of the war. The character and cause of wounds received in the military hospitals must always be carefully considered in relation to the particular form of military activity from which they have resulted. In different actions there must be a variable preponderance of wounds from the different arms by which the wounds were inflicted, and the course of these wounds thus received must be determined largely by the nature of the campaign and by its successes or reverses, which determine the condition or neglect to which wounds

are subjected either at incidence or in subsequent course.

The relative proportions of rifle to shrapnel wounds has been largely discussed both by the lay and the medical press, as there is naturally much interest in the deductions which determine the relative effect of infantry and artillery fire.

One of the eminent contributors to which I have referred has drawn from a numerically limited experience the conclusion that the old ratio of rifle and shrapnel wounds have been reversed, and that, while in former years they were 10% shrapnel and 80% rifle wounds, in the war between the Turks and the Allies the ratio was reversed to 80% shrapnel and 10% rifle wounds. A large medical body was so impressed by the import of these statistics that resolutions were passed expressing the sentiment in favor of an international movement to prevent the use of shrapnel in future wars. It is needless to remark at this time, however, that this well-meant and humane expression has had an unappreciable influence on subsequent military activity.

With this preface and caution I will presume to give a brief numerical statement of my own experience at Tash Kishla hospital. In 317 gunshot wounds there were 101 shrapnel and 216 rifle wounds. This is practically 70% for rifle and 30% for shrapnel. In another group of 68 cases in the same hospital that came under my observation but without my administration there were 37% shrapnel wounds and 63% rifle wounds. These ratios, however, apply only to these particular groups of cases, which, from the circumstances of their collection at this particular place, will give a greater proportion of shrapnel wounds than occurred in the particular battle in which they were received, because many of them came to us for the reason that they were old infected cases and infection undoubtedly occurs with a great deal more frequency in shrapnel than in rifle wounds.

In Constantinople there is a military hospital in Stamboul known at Gulhani, which is under the direction of the German Professor Weiting Pasha, who has held his position as medical instructor in

the Turkish army for 12 years. This hospital enjoyed the advantage of location at the terminus of the line of railways which led into Constantinople, so that hospital trains could be stopped nearby to permit patients to be carried by litter directly into the hospital. The advantage of this location brought to this service at all the stages of the war the more seriously wounded cases, which were retained until convalescence was established, when they were transferred to make room for other serious cases. The service here was undoubtedly the most active in the city, with always a greater proportion of seriously wounded cases in the wards. The lighter cases were only admitted when the supply of serious cases had fallen below the capacity of the hospital. So it may be said that while the statistical reports of even this hospital will be of undoubted surgical value, they will not show the relative proportion of the wounds of war in respect to their gravity course and relative frequency of their causation.

I have here a table showing such statistics as Professor Wieting Pasha had prepared at Gulhani Hospital at the time of my departure from Constantinople, but he warned me that his statistics would not show the frequency, character and result of wounds as they occurred throughout the war.

Flesh wounds of the extremities.....	446
Rifle.	Shrapnel.
317	129
Perforating	291 (91.7%) 99 (76.7%)
Aseptic	81.8% 72.1%
Infected	18.2% 27.9%
Dead, in 446 cases, 6 or 1.3%. Causes—Gas bacillus, sepsis and tetanus.	
Joints involved.....	201
Rifle.	Shrapnel.
146	55
Aseptic	75.3% 69%
Infected	24.6% 30.9%
Died	7=4.7% 5=4.7%
Bones involved	349
Rifle.	Shrapnel.
254	95
Aseptic	68.5% 29.4%
Infected	31.5% 70.5%
Died	16=6.2% 11=13.6%
Total, 1,096 wounds (exclusive of head, thorax and abdomen).	
Rifle.	Shrapnel.
717=65%	379=35%
Infected	24% 42%
Dead—45=4 plus %.	

Typhus was endemic among the Turkish troops at all times. I visited a hospital on the Chatalja line where the cases were segregated, as many of them came from a certain portion of the line which this hospital served. An interesting story with some relation to the means of transmission of typhus was told me there. A medical officer from this hospital went to Constantinople and in the house of a friend discarded his underclothing in the process of personal renovation. These garments were appropriated and utilized by his indiscriminating friend, who died after several days from typhus without other cases occurring in the neighborhood.

At the beginning of the second war I went to Bulgaria for another season of professional activity. Time will not permit more than a reference to my field service there in the Evacuation Hospital of 700 beds capacity on the Macedonian frontier. All our cases came to us after a four day journey in bull carts. In my first day's service my division, conducted by an English speaking Bulgarian reserve medical officer and myself, which admitted half of the cases, received nearly 500 wounded which were treated in some sort of a way before they were passed into the wards. In four weeks my division admitted 2,000 patients, all wounded, which were only one-half of the total admitted. I was surprised to note the comparatively few major operations that were indicated in this number of 4,000 cases. There were not more than 20 cases taken to the operating room for anaesthesia and formal preparation. I am inclined to believe that something like this proportion of major operations will hold in a group of cases which include all of the casualties occurring in one military zone. Formal surgical interference should be delayed until a base hospital is reached, where the best skill and facilities are available and where the convalescence of the patient can be established or the autopsy performed.

There is likely to arise in a situation, in the advanced lines however, a spirit of professional ambition and activity which is to the detriment of the patient.

Abdominal cases were of two classes—

with and without peritonitis. The first uniformly succumbed to operation and the second needed no interference. I am confident that the military rule of non-interference in abdominal cases in the field is correct and should be applied.

Cranial wounds did not do well after operation, and I believe better results would have followed if they had all been sent back to the base without any formal operation in the field.

In our cases there seemed to be an unusual proportion of compound fractures of the thigh compared with the humerus. These cases all deserve the most conservative treatment and immediate transportation to the rear. Plaster dressings were used without rhyme or reason. I believe that any medical service in the field will not suffer if plaster of paris be not supplied.

The first aid dressing and its indication you know about, and its employment in our experience justified its reputation for keeping clean a great many wounds to which it was applied.

The therapeutic agents most indicated and most often employed were iodine, benzoin, alcohol, balsam of peru and a nascent oxygen preparation, Merck's "perhydrol," which has three times the strength of the official hydrogen peroxid and is therefore three times as efficient in the same bulk. Iodine has its uses and is the most valuable of all antiseptics in military surgery, but its recent rise to fame has so impressed the Bulgarian surgeons that their gunshot wounds often had a hard run for the terminal stages of convalescence against the persistent and heroic iodine treatment.

PENETRATING WOUNDS OF ABDOMEN AND THORAX.

A. P. Butt, M.D., Davis, W. Va.

(Read before West Virginia Medical Association, May, 1914.)

I shall refer only to gunshot and stab wounds, and of these only to those which do not involve the heart or pericardium.

This is a subject of considerable interest to us all. While the native born West Virginian is, I think, using his knife and

pistol somewhat less frequently than of yore, the foreigners, especially those coming from sunny Italy, are celebrating their advent to this land of liberty and license in a way that is a disgrace to our State. They feel, and rightly, that escape is practically sure. Of the very many shooting and cutting affrays in my neighborhood in which many have been killed and many more wounded, it has become exceedingly rare to catch the culprit and rarer still to punish him. Not one has suffered the death penalty.

When one of these tragedies occurs the nearest physician is summoned, be he ophthalmologist, obstetrician, general practitioner or surgeon. Therefore it behooves us all to have some general knowledge of the proper care of these wounds, especially first aid.

Should any of you deem this subject obsolete, as I admit it should be in most of its features, let him read the papers and note how many are improperly treated. Wounds probed, handled with dirty fingers, heart stimulants administered when they could scarcely fail to increase hemorrhage.

Thus I saw adrenalin given intravenously in a case of heart stab. The man looked to me to be in a very favorable condition for operation; in perhaps a minute his condition changed, he became excited, raved, arose, walked a few yards and fell dead. The mere fact that the public invariably asks if you have probed for or gotten the ball shows that this custom is only too prevalent.

In wounds of either thorax or abdomen in which no viscera protrude I should advise nothing being done as first aid except the administration of morphin, perfect quiet, painting the surrounding skin with iodine tincture and the application of an aseptic or antiseptic dressing. Should omentum or gut protrude from the wound one must be guided by circumstances and surroundings. Probably the best means of treatment is to surround the protruding part with warm, moist dressings until the patient can be operated.

In the great majority of thoracic wounds the measures outlined above will be all that is necessary. Sometimes strapping the chest may be of service. Un-

doubtedly some wounds of the lung will give rise to fatal hemorrhage, but they are few and far between. In those in which the blood escapes into the pleural cavity the bleeding tends automatically to cease. Should it not do so, it seems to me Murphy's method of artificial pneumothorax should be tried. As you no doubt remember, this consists of blunting the point of a hypodermic needle, inserting this into the pleural cavity, covering the opening with a bit of sterile cotton under the finger; with inspiration the finger is lifted, with expiration the opening is closed. Not infrequently sufficient air enters through the wound to cause a pneumothorax.

Should these measures prove inadequate, which I think will be exceedingly seldom, it will then be necessary to open the thorax, grasp the lung, pull it through the opening and tie the bleeding part.

Ransohoff¹ reports a case in which he resected a rib, pulled the wounded part outside, tied off the bleeding vessels and closed the wound in layers to make it air tight, using fascia to supplement the pleura. I confess never to have done this nor ever to have seen it done. I have had but one or two cases in which it was necessary even to consider it. Both recovered under expectant treatment. It seems hardly necessary to say that all these wounds should be carefully and constantly watched. Failure to do this has caused death. Matas tells of two cases of death following bleeding from intercostal vessels, due, as he states, to gross carelessness. Not infrequently wounds involving the pleura will become infected and the resulting empyema will require appropriate treatment.

Perhaps the most important thing to keep in mind in the treatment of thoracic wounds is the fact that many of them are also abdominal wounds. The course of a bullet wound reminds one of what St. John says of the wind: "The wind bloweth where it listeth, and thou hearest the sound thereof, but canst not tell whence it cometh and whither it goeth."

The X-ray will often be of invaluable service. Collections of blood and areas of collapsed lung should show up in the fluoroscope. Even the X-ray in bullet

wounds cannot always be relied on to the exclusion of other symptoms. Thus Keyes² reports the case of a boy shot by .32-calibre bullet. Wound of entrance midaxillary line, level of umbilicus, right side. X-ray showed the bullet to lie superficially over right inguinal ring. Operation showed 22 intestinal perforations. Such cases must be extremely rare.

To sum up—be guided by whether the symptoms are or are not progressive. If, after administering morphin, possibly strapping the chest, and putting the patient at rest, the symptoms grow rapidly worse, operation will be necessary; if the symptoms are not progressive do not operate. In other words, a course of "watchful waiting."

In abdominal wounds, instead of "watchful waiting," I favor "armed and immediate intervention."

Symptoms—In wounds that are even suspected to have penetrated the abdomen let us not regard symptoms at all, but operate at once. As the gunmen of frontier life were led by their experience to shoot first and investigate afterwards, so should our experience lead us to operate first and consider symptoms at our leisure. Crandon³ says: "I assume that all gunshot wounds of the abdomen shall have exploratory operation."

I am not unaware of the findings of military surgeons; thus Treves went so far as to say that in wounds of the upper abdomen it was impossible to operate owing to multiplicity of injuries, while wounds below the umbilicus got well without operation.

I have been informed that these statistics influenced a prominent Chicago surgeon sufficiently to induce him to try expectant treatment with most unfortunate results. While the statistics may be true (and they may not) of wounds made by Mauser bullets in actual warfare, they should not influence us in the least.

I am sure many of you have had large experience with these wounds, but I do not believe your combined experience could give you as many as 10 recoveries under expectant treatment after intestinal perforation.

In view of present conditions on our

frontier it may be well to remember that our latest army bullet is of a very different pattern from those formerly employed. It has a very slender point, making its center of gravity far back. This makes it easily deflected, causing it to crash sidewise through the tissues. According to experiments made at the Army Medical School,⁴ the skin of the abdomen or the soft bones of the ankle are sufficient to cause it to be deflected in this manner, thereby producing wide, ugly wounds with very extensive destruction of tissue. The symptoms as usually given are in reality symptoms of peritonitis. Unfortunately the abdomen is not infrequently penetrated when we could hardly expect it. The direction from which the bullet was fired will often be of service in its location, but not always. Kahn⁵ reports two cases to illustrate this. In one the shot was fired from the roof of a barn, entered seventh interspace in midaxillary line. Penetrated the abdomen. In the other the bullet was fired on level ground, the ball entered the middle third of thigh. Wound was supposed to be trivial, patient was not watched carefully, death ensued from peritonitis, the ball having been deflected and entered the abdomen. This case only emphasizes the fact that all wounds are serious. I remember some years ago to have lost a case of emphysematous gangrene following a gunshot wound of thigh.

While the question of operation does not, in my mind, admit of discussion, the extent of the operation does. A small incision, a slight scrutiny and the introduction of a sponge to the most dependent parts will almost always settle the question as to whether there are wounded viscera. In every case we should assume that the injuries are multiple, but I do not believe it advisable to eviscerate the patient without good reason for so doing.

While it is true that an occasional case might be lost by overlooking a wound, many more cases would be lost from shock due to trauma from evisceration and extensive handling. The all-important thing is the amount of time elapsing between the reception of the wound and operation. According to Seigel, within

the first four hours there is a mortality of 15%, after 12 hours 70%. In the treatment of the wounded vicera each case will have to be a law unto itself.

According to statistics gathered by Thevenot,⁶ gunshot wounds of the spleen will very often require splenectomy, while stab wounds will usually recover after suture. Wounds of the liver should usually be amenable to suture; if not it will be necessary to pack. As regards drainage, it seems to me that most of them will require it. In many cases bringing the wounded part to the peritoneum and the insertion of a rubber strip for a few hours may be all that is necessary. M. L. Harris of Chicago reports 17 cases of gunshot wounds involving the intestines, all drained, all recovered. Certainly an enviable record which not many of us will hope to reach.

Thornborough⁷ reports the case of a soldier who thrust the muzzle of his gun against his abdomen and fired with suicidal intent. There were many severe injuries to gut and mesentery, but no perforations. In one place two coats of gut were destroyed. He very ingeniously attached the omentum as a substitute for mesentery and a cover for gut. Recovery resulted.

In one of my cases the denuded area seemed too large to infold, and I cut off a piece of omentum and grafted it over the denuded part. The patient recovered, but whether omentum will always live under these circumstances I do not know.

Cases.

1. S. M. Italian. Aged 22. Shot in back, below right scapula. Spat blood for a few days; temperature never went above 102°; pulse 90; respiration 30. Morphine and ergot. Recovery.

2. A. B. American. Aged 40. Stab wound in left side, anterior axillary line, sixth interspace. Temperature, pulse and respiration hardly ever beyond normal. Recovery.

3. John Z. Austrian. Aged 18. Shot from in front; bullet could just be felt in muscles of back. Very troublesome cough; temperature 101°; pulse 110; respiration 36. Bullet removed on seventh day. Recovery.

4. Dom G. Italian. Aged 26. Immediately after being shot he started for the hospital, which was about half mile distant. Was found lying on the front porch. Bullet wound through fourth rib, 1 inch external to and ¾ inch below the right nipple. Coat contained a

hole about 1½ inches in diameter, which had been on fire. Evidently the muzzle had been almost or altogether against his body when fired.

Although this man was severely shocked, temperature 95°, extremities cold, sweating profusely, his pulse was but 84. Adrenalin, morphine, ergot, heat. On the fifth day 21 ounces of blood were withdrawn from pleural cavity, on the seventh day 10 ounces. Discharged on nineteenth day.

5. Tony P. Italian. Aged 30. Stab wound near the umbilicus. Omentum protruding. Spinal anesthesia. Two perforations of small intestines. Peritonitis as indicated by sleeplessness, hiccough, dark vomit and abdominal distension, made it necessary to perform enterostomy. The patient recovered nicely except that the enterostomy wound gave him much trouble. He insisted that I close the wound. This I refused to do. In the fourth week he left me, went to an Italian hospital in Philadelphia. They also refused to operate on him. He then went to another hospital, was operated and died from it.

6. W. R. Colored. Aged 24. Shot twice, once in abdomen over liver, once in thorax. Abdominal wound was opened and liver wound sutured.

After two aspirations of about one pint each of blood from pleural cavity empyema developed, a rib was resected. Recovery.

7. B. C. Aged 9. Accidentally shot by his father with .32-calibre bullet at close range. Ball entered right side, second intercostal space, ½ inch external to nipple. Could just be felt on deep palpation very close to vertebra. Extracted under cocaine anesthesia. Considerable cough and expectoration of bloody mucus were practically the only symptoms noted. Left hospital on tenth day.

8. M. T. American. Female. Aged 19. Shot with a .22 long rifle cartridge. Wound over cecum. Reached the hospital very much shocked, about 8 hours after accident. Pulse 140, respiration 34, temperature subnormal. She was immediately put on the table. After a mere whiff of chloroform the anesthetist said she was dying. I stepped into the hall to inform her relatives, but found they had gone. I proceeded to open the abdomen, found the cecum almost destroyed. Her condition made it impossible to do anything other than stitch the wounded gut to abdominal opening. She never regained consciousness, dying about 12 hours after entrance to hospital. Partial autopsy disclosed no other wounds.

9. A. V. Aged 21. American. Stabbed by an Italian in a street fight. Vomited blood upon entering hospital. Wound of entrance over appendiceal region. Operation disclosed a wound in cecum and stomach. Uneventful recovery. Stomach appeared to be normal in size and position. I will ever be at a loss to know how wounds of these two viscera could occur without associated injuries.

10. Mike B. Austrian. Aged 30. Three stab

wounds of chest, posterior. Other than a moderate dyspnea there were no unfavorable symptoms. Patient left hospital on seventh day.

11. John Y. Brought to hospital about 11 a. m. Stabbed seven times the night before, in both abdomen and thorax. Died before operation could be attempted. No autopsy.

12. Larry McDermott. Irish-American. Many of you have seen him, more of you will. Through my poor surgery he has made his living by exhibiting an immense hernia for many years past. He was brought to the hospital with three perforating wounds of the abdomen. A rather large abdominal incision was made and several intestinal perforations sewed up. Peritonitis developed, the wound completely broke down. After several weeks he recovered with an immense hernia which he absolutely refuses to have repaired.

Conclusions.

1. Do not operate in thoracic wounds unless they are progressively getting worse. By far the most of them will recover under expectant treatment.

2. Operate on all abdominal wounds.

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REPORT OF AN UNUSUAL CASE OF FRONTAL AND MAXILLARY SINUSITIS.

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My reason for reporting this case is to bring out by discussion, if possible, why we have had so many more cases of sinusitis the last winter and spring than in any previous year, and if possible aid the general practitioner and ourselves in the treatment of coryzas and influenzas in order to prevent so many of these complications arising in the future.

The unusual features of this special case were the well defined and clear cut symptoms of each sinus involvement as it took place, the circuit by which the infection traversed the sinuses, and the promptness with which each sinus cleared up under the ordinary treatment.

The only sinuses involved in this case

were the maxillary and frontal, and possibly the anterior ethmoid cells, but there were no special symptoms of such involvement, and surely the posterior ethmoid and sphenoid sinuses were not involved.

On the 15th of last October Mr. S. J. G. was very kindly referred to me by Drs. Stump and Alexander of Pocahontas, Virginia, with a diagnosis of maxillary sinusitis. The patient was a young man 25 years of age, a perfect physical specimen who had never been sick in his life, except that he had had the usual diseases incident to childhood. He gave a history of having had some slight catarrhal troubles in the nose and throat following cold for the previous three or four years, but nothing of any consequence, and had never had any treatments for this trouble.

About the first of October he contracted a severe coryza, and applied to his physician for treatment. He was given the ordinary physics, etc., and put to bed for a day or so. He got somewhat better, but still felt bad, was not able to do much work, but not sick enough to stay in bed nor even in the house. He went to the doctor's office several times, and different prescriptions were given him, but he did not recuperate as he should have done, and on the night of October 14th he was taken with severe pains in the head, especially in the right cheek bone, as he described it.

There was slight photophobia and lachrymation of the right eye and some tenderness over the right maxillary sinus. The pain was well localized in the right maxillary sinus, radiating over the temple, etc. There was considerable tenderness on tapping the first and second right upper molars. There was also some disturbance of the senses of taste and smell.

On examination I found as perfectly formed nose as I ever saw, but, of course, the mucous membrane was violently inflamed. Even with the mucous membrane inflamed as it was there was no contact of one turbinal body with the other, nor did they touch the septum, which was thin and perfectly straight. In other words, one could see no reason why drainage from any of the sinuses should be interfered with. There was, however, a

small amount of pus coming from beneath the anterior third of the right middle turbinal body.

I cleansed the nose with an alkaline spray and depleted the mucous membrane with a weak solution of cocaine sprayed into the nose. There was no pus coming from any other point in his nose. I then removed all of this pus with some cotton on an applicator and had the patient lower his head to his knees for a couple of minutes. On looking into his nose again I found a very considerable amount of pus coming from beneath the right turbinal body. By trans-illumination the right maxillary sinus showed up dark, with the right and left frontal and left maxillary sinuses perfectly clear, giving one of the most beautiful pictures of trans-illumination I ever saw.

I applied a solution of adrenalin chloride to the right inferior turbinal body and packed pledgets of cotton saturated with a 10% solution of cocain, beneath the anterior half of the inferior turbinal for a few minutes. I then passed a Krouse's trocar and canula through the external nasal wall near the floor of the antrum at a point opposite the middle of the inferior turbinal body. The withdrawal of the trocar was followed by a flow of characteristic smelling pus. The antrum was irrigated with a quart of warm normal saline solution, washing out a great quantity of pus, and the canula was withdrawn. A small amount of aristol and boric was blown into the nares, and the patient given an alkaline spray with adrenalin and allowed to return home without the nostril being packed.

The patient returned on the 17th, when the nose was cleansed and the sinuses illuminated. The frontal sinuses and the left maxillary were still perfectly clear, but the right maxillary was, of course, dark. I irrigated this sinus with a normal saline solution again, removed a considerable amount of pus, though not so much as the first time. I saw the patient on the day following, found the illumination the same, cleansed the nose with an alkaline spray, and used the aristol and boric acid again.

On the 19th the patient returned with a well marked involvement of the right

frontal sinus, every symptom being present. The pus was pouring from beneath the right middle turbinal, and both the right maxillary and right frontal sinuses showed up dark on trans-illumination, the left frontal and maxillary being clear. The pain was not very great. I depleted the middle turbinal with a straight 1/1000 solution of adrenalin chloride and gave the patient a rather strong solution of adrenalin and normal saline to spray into the nose every three hours when awake.

I saw the patient every day after that until the 24th. At that time all pain had subsided, the right maxillary and frontal sinuses were draining nicely and the maxillary sinus showed a marked improvement on trans-illumination.

The patient returned on the 25th, with a clear-cut involvement of the left frontal sinus, the left maxillary alone being clear. There was some slight bogginess of the left middle turbinal at this time, and I decided to remove the anterior portion, which was done with an Andrews turbinal chisel and cold wire snare. This relieved the obstruction and subsequently the pain.

All affected sinuses progressed nicely until November 2d, when the patient returned with all the symptoms and a clear-cut involvement of the left maxillary sinus. An operation similar to the one done on the right maxillary was done on this with the same results. The patient was seen at regular intervals, and on December 3d he was discharged, having made a complete recovery of all the sinuses.

MORPHIN HEREDITY.

J. W. Williams, M.D., Richmond, Va.

"I crossed some white fantails (pigeons) which breed very true; I also crossed a barb with a spot, which is a white bird with a red tail and red spot on the forehead and which notoriously breeds very true. The mongrels were dusky and mottled. I then crossed one of the mongrel barb-fantails with a mongrel barb-spot, and they produced a bird of as beautiful blue color with the white loins, double back wing, bar and barred

and white-edged tail feathers as any wild rock pigeon."—Darwin, *Origin of Species*, page 22. All pigeons are derived from the wild rock pigeon (*Columba livia*), and the blue color is characteristic. Mr. Darwin found difficulty in his improved breeds, for they would breed back to type in the third or fourth generation. He tells us: "We can understand these facts on the principle of reversion to ancestral characters"—back to the original pattern or type. The latest teachings of science affirm that, not only do all animal breeding revert to type in the third or fourth generation, but that all vegetable life follows the same law. Mendel's experiments in the vegetable kingdom are in harmony with all experiments in the animal world. His "dwarf" and "giant peas" cultivated the past year "produced dwarf and tall peas." He planted again and produced tall and dwarf peas "as 3 to 1." "The next year tall peas brought forth tall plants and dwarf peas dwarf plants." Here, as in every case, the reversion to type (or pattern) was complete in the third or fourth generation. See also Mr. Goddard's experiments with sheep.

Further, it may be that even impurity of the blood of all hereditary diseases is also limited to the third or fourth generation. And the apparently unjust statement of the Bible that "Jehovah visits the sins of the fathers upon their children to the third or fourth generation" (Ex. 20:5) instead of being in violation of every principle of justice, as we all once thought, may turn out to be a most merciful provision for preserving the race, characteristic of our kind Heavenly Father. For, if the taints and impurities of the blood were permitted to flow on and on for generations through the umbilical artery (the only channel of fetal nourishment) and not limited, and therefore no reversion of type possible, the human species would inevitably have long since become a race of degenerates, helpless and miserable, and the momentum downwards, ever downwards. "Prof. Nuttall of the University of Cambridge took up this subject and has so extended its application that a single drop of blood from any animal now suffices to show not only by its peculiar chemical reaction what animal it comes from, but also how near that ani-

mal is related by its blood to other animals. It now looks as if the whole classification of zoology might have to be rearranged according to these blood tests. Thus a drop of blood from a walrus shows no relation to whale's blood or the blood of any other cetacean, such as seals, porpoises, which, like the walrus, have taken to the sea."—Dr. W. H. Thompson. If the blood flowing through the umbilical artery and carried through the two internal carotids and the two vertebral arteries up into the microscopic blood vessels of the pia mater and thus brought into immediate contact with the cells of the brain; if such blood was pure, would not the child be free from all hereditary taint? The blood is the most hereditary thing known to us. Can any hereditary diseases exist in the presence of pure blood? The blood of Adam was absolutely pure and he lived one thousand years less seventy, and died seventy years before sundown on the same day he was created (2 Peter 3:8, Gene. 5:5). Yet the average life of his children is today 33½ years,* under the same sentence of death. Why is this? Yet further: "The life (*nephesh, psuche, anima-soul*) of the flesh (*of the human body*) is in the blood."—Levit 17:11. Cells are the physical basis of life. All cells are microscopic, and therefore all life in earth, air and sea, from the torula up to the patriarch of the forest that battles with the storm, and from the ameba up to man who crowns this summit of terrestrial life, must be microscopic in its beginning. Hence man at one time was a microscopic speck and had his beginning, his home, in a microscopic cell. The millions of cells of his future body must be developed from that single parent cell and every cell manufactured out of his blood—pure or impure. "Now a molecule of hemoglobin must contain the following number of different atoms in their due proportion, namely, of hydrogen atoms, 1/130; of carbon, 720; of nitrogen, 214; of oxygen, 245; of sulphur, 2; and of iron, 1. There are 2,304 atoms in all. Moreover, if that atom of iron, in its peculiar relation to the rest ("masked," as some physiologists say) is left out, the animal could

*This is much below the present average of life.—Editor.

neither absorb oxygen nor give off carbonic acid; it could not breathe."—Dr. Thompson. It could not live, and therefore

"The life of the flesh (of the body) is in the blood." Science confirms this statement of the great Hebrew law-giver. Now when morphin is poured into the blood daily, per os or by the hypodermic syringe, the poison is carried up to the cells of the brain through the two carotids and the two vertebral arteries, and the effect is felt in twenty minutes. If the habit is formed, the morphin habit becomes chronic, and the poor victim finds himself a slave in the hands of a master he cannot conquer. Not only does he suffer, but under the laws of heredity his child suffers for its father's sins. No man can escape the hereditary effects of his sowing, for whatever a man sows that shall he reap. I recently treated five cases of morphin and cocain poisoning at the same time—two ladies, two brothers and a doctor. I mention the case of one of the brothers: Mr. D., aged 50 years, commenced using the drug when he was sixteen years old; likewise also his brother. The predisposition was inherited from their father, who died of the poison at a sanitarium. When Mr. D. came to me he was daily taking from 30 to 35 grains of morphin and from 40 to 60 grains of cocain—worn out and too feeble to work. On the twenty-first day of treatment he took his last dose of morphin (the cocain had been stopped some ten days previously). As his statement would seem to challenge belief, he voluntarily went before a notary public and swore to it. **It follows:**

Richmond, Va., Oct. 29, 1914.

This certifies that I took two quarts of whiskey a day for two years. I afterwards took one pint of laudanum a day (½ pint morning and night in ½ pint of whiskey) for two years. I then switched off on morphin (but had taken it from my sixteenth year) and took from 30 to 35 grains daily for 22 years, and for the last two years I took, along with the morphin, from 40 to 60 grains of cocain.

State of Virginia, }
City of Richmond, } to-wit:

Subscribed and sworn to before me this 29th day of October, 1914.

G. PETER HOWLE,
Notary Public.

I withhold the address of Mr. D for reasons that all can appreciate. Two letters from Mr. D. bear witness to his free-

dom from the awful curse, and, unlike most addicts, he wants his redemption known to all men and courts investigation and will cheerfully answer all inquiries.

401 East Franklin St.

Abstract.

REMARKS ON INTRATHECAL INJECTIONS AS A FACTOR IN THE IMPROVEMENT OF TABETICS AFTER SALVARSAN.

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Both on clinical and laboratory grounds the adequacy of intravenous injections of salvarsan followed by mercury intravenously, intramuscularly or even by inunction is maintained. Of the author's cases two especially striking are reported.

A man tabetic for six years has been functionally well for two years, with a reduction of cell count from 38 to 9 after three courses of salvarsan and mercury, totalling six intravenous injections in all. A woman who had been treated for six years for rheumatism at Clifton Springs and other places showed great loss of weight and strength, marked ataxia, almost complete loss of pain, vibration and attitude sense. She was recommended salvarsan and mercury against the opposition of several physicians. Seen only a few weeks ago, this patient, although she has had only four periods of treatment of two salvarsans and from four to six weeks of mercurial injection in each, is of normal weight and perfectly well, save for the lost reflexes and a slight sensory loss in the tibial border of the feet, and can work with enjoyment again. As no arsenic is demonstratable in the serum used for intrathecal injections and arsenic is found in the serum after intravenous injection, and as no improvement has followed intrathecal injection unless intravenous injection is employed alone, it should be obvious enough that the intra-

venous injection is the more important procedure. The clinical facts of Sachs and the author show this. The anatomical facts should leave one to infer it; for the disease process, although a meningitis, is deep in the membrane and is chiefly around the vessels, which are nourished not only from the cerebrospinal fluid, but from the blood. Any benefit attributable to intrathecal injections must be due to their topical effect in causing hyperaemia. These considerations show that the method is not specific, and in view of the numerous relapses its superiority is doubtful.—The Alienist and Neurologist, November, 1914.

1705 N street.

TREATMENT OF INJURIES CAUSED BY ELECTRICITY.

Sir Oliver Lodge, in *The Lancet*, has an interesting article on this topic. He says that in the electrocuting of criminals not less than 1,450 volts has been insisted on, but that a lad has been killed by 200 volts, alternating current, which is considered more dangerous than the continuous. Good contact, dampness of skin and amount of current determine the result. Local destruction of tissue may result or sudden interruption of nerve connections may cause sudden death. Less powerful currents cause tetanic rigidity of muscles, causing an inability to let go. It is dangerous for any one to try to rescue a person so held unless protected with gloves. The injured may remain nervous a long time after or complain of headache or pains throughout the body, and these may be made worse by disturbed electrical conditions of the atmosphere.

Electrical burns are slow to heal owing to nerve injuries and extensive destruction of tissue. The extent of injury cannot be told until the victim is undressed. There may be extensive surface injury or severe damage with little surface signs, so the injured die at times when showing little evidence of injury. When the eyes are injured the lids may become red and swollen, with hyperemia of the conjunctiva, followed by muco-purulent infective discharge, and iritis. The retina may lose its transparency, the papilla become surrounded by cloudiness, the vessels appear

smaller than normal, a circumstance that differentiates the lesion from specific retinitis. No nerve atrophy follows this condition. There are photophobia and watering of the eyes, so that the patient cannot long look at an object. Neuralgic pains in the globe may be felt. The conjunctivitis does not readily yield to eye washes. The neuralgic pains yield to bromide better than to antipyrin or quinine. The trouble sometimes assumes the character of hystero-traumatism, where, although images are formed perfectly upon the retina, owing to a purely psychological derangement, they are not properly perceived.

As to the cause of death in electrical shock there are two main theories: 1. Inhibition of the medulla oblongata, leading to arrest of respiration, followed by cessation of the heart beat. 2. Death directly from the heart, without the intermediary of respiration. After death there is muscular rigidity, flaccidity of heart, especially of the right ventricle, which contains dark fluid blood. Left ventricle may be empty. Lungs normal or congested if artificial respiration has been used. Pupils dilated. Brain and cord congested. Abdominal vessels and viscera full of dark blood.

Treatment.—Slight shock requires no treatment. For burns boric acid compresses or charcoal poultices if there is much destruction of tissue. If no signs of life be present, place the body on the back and artificial respiration should be promptly resorted to and continued a long time. There is not always speedy response. Animals have been resuscitated whose heart and respiration had ceased several minutes. One man received 2,000 volts, and yet was restored by long continued artificial respiration, lasting over an hour.

Correspondence

THE NEW CINCINNATI HOSPITAL

J. E. Cannaday, M.D., Charleston, W. Va.

During the sessions of the Mississippi Valley Medical Association in Cincinnati the members and guests of the association were invited to a luncheon in the

new Cincinnati Hospital, where the afternoon sessions of that day were held. After the luncheon Dr. Christian R. Holmes, who has done so much for this new institution, piloted a number of us through the length and breadth of this enormous home for the city's sick poor. Dr. Holmes has all the force of a born enthusiast, and has the subject of hospital construction and management at his finger tips. Something about this great institution may be of interest to the profession in West Virginia, as it is located not far from many of our practitioners.

The new Cincinnati Hospital is in all probability the most complete in its appointments of any such institution in the world. This wonderful hospital was designed under the direction of Dr. Christian R. Holmes of Cincinnati, who spent several years studying the principal hospitals of Europe. A man of great individual genius and driving force, he has not only copied what was best, but has incorporated many excellent original ideas of his own.

In order to get the large appropriation necessary for the institution Dr. Holmes directed for months a campaign of public education. He harangued the casual crowds on street corners, in public squares and anywhere an audience could be gotten together. He followed the politicians and won.

This new home for the sick poor of Cincinnati is spread over a large part of a hospital reservation of sixty-five acres of land, situated near the heart of the city. This hospital has been built with a strict regard to the city's future needs and growth. Its plan is such that with additional wings that will fit in well, the normal growth of the city can be met for at least one hundred years to come.

This institution has cost to date four and one-half million dollars. It has been built on the pavilion plan, so as to have natural light and ventilation. The usual ward contains twenty-four beds. The ventilation is so arranged that the entering air currents do not drop on the heads of the patients, but in the central aisle between the rows of beds. At the end of each ward there is a desk telephone, telegraph instrument and nurses' work room.

In this work room are bedpan sinks, bedpan sterilizers and blanket driers and warmers. The bedpan and urinal racks are made of the hot water radiator pipe, which serves to heat this room, and thus are in cold weather always dry and warm. Across the hall from the nurses' work room is the patients' bathroom and lavatory. The ventilation of this is so arranged that all the air currents are deflected out of the building. On this side also is the soiled clothes chute, which is porcelain lined and leads to the basement. This chute is equipped with an automatic sprinkler system which flushes its sides when soiled clothes are dropped therein.

The place is equipped with a duplex heating system, hot water and hot air, both from the central power station. The air is heated and washed before it is forced into its many different ramifications. The land slopes gently in one direction toward the power house, providing an easy gravity return flow for the hot water. The piping, and there is a forest of it, is all open, and works its way out from the power plant through covered corridors to the various groups of buildings.

Each pavilion has its ample roof garden, with substantial canvas awnings, wind breaks and other ample protections to which steam hose can be attached and the floor cleared of snow or ice in a few minutes.

There are two entrances for patients, so that accident and emergency cases are not brought into contact with other entering patients. There is a special night receiving ward for all cases entering after 9 p. m., so that the rest of the patients in the various other wards may not be disturbed by patients entering at night.

The power plant resembles that of some huge industrial concern and is equipped with huge batteries of boilers, massive noiseless engines, giant electric generators, etc.

There are on the grounds, in addition to the large contagious diseases building, four small isolation hospitals for certain types of contagious diseases, and each is a complete unit in itself. The arrangements of the contagious disease building are, as in every other department of the

institution, complete and elaborate. Visitors have special uniforms which have the ends of the sleeves closed, so that the visitors may not bear away contagion on their fingers. Near the entrance of the wards are the dressing rooms for the doctors, and here their sterile ward visiting gowns are left to be sterilized.

The chapel has two parts, divided by a glass partition. When a funeral takes place the arrangement is as follows: On one side are the relatives and the officiating minister, and the other the corpse and coffin, in an atmosphere saturated with formaldehyde gas. The chapel is so situated that visitors may enter from the street and do not enter the hospital at all.

A special isolated pavilion has been provided for drunks and other noisy patients. The strong rooms of this apartment have very high ceilings, and the windows are short and so near to the ceiling that the inmates cannot reach them. The doors are double and have a closed vestibule, so that as far as possible no one patient will hear the noise made by the others. These rooms have hose connections and drains, so that they can be easily and quickly cleaned.

Patients before entering the wards have a very thorough bath and are equipped with uniforms supplied by the hospital. Meanwhile their clothes are cleaned, sterilized, mended and pressed in readiness for their leaving. Dr. Holmes says that to him nothing looks more forlorn than to see a patient leaving the hospital wearing soiled, wrinkled, perhaps blood-stained garments.

Each ward has its own built-in garbage incinerator, in which most of the refuse can be destroyed by burning.

There is one water bed, modeled after German patterns, and said to be very useful in the treatment of burns and certain skin diseases. The rubber mattress for this bed is made in several removable sections.

The ratio of nurses to patients is about one nurse to three patients. The air space for the patients is based on the reasonable estimate of 1,500 cubic feet per patient.

The hospital has its own large and well equipped work shop with its departments

for paint, wood and metal working, etc. A great many of the appliances used in the hospital will be either made or repaired there.

No provision has been made for pay patients except in the contagious department. Dr. Holmes says, however, that later the hospital may arrange to take care of private patients. He hopes also that the local medical society will have its headquarters and hold its meetings there. The large library and central location of the hospital favor this idea. The library is large, and the splendid reading room contains the current literature as well as all of the up-to-date works of reference. Older works are stored in adjacent rooms.

Patients and nurses have two separate kitchens, in which the food is prepared by separate cooks. Each large ward has its orderly, and every patient in the building is served inside of ten minutes from the time the meals are ready. The dishes, in fact all eating utensils, are sterilized after each meal.

All clocks in the building are electrically controlled by one master clock, in order that there may be uniformity of time and no one late. The call system for officers and doctors is by telegraph. Each one has his number, so that in case of a call in the central office this number is clicked simultaneously all over the building and the party located immediately.

The administration building is large and has accommodations for an enormous number of internes, looking forward to the time when all physicians will be required to spend not less than a year in a hospital after graduation, as is now required by law in most foreign countries and in Pennsylvania.

From the standpoint of construction, the new hospital is as completely fire-proof as it is possible to make it. The numerous sterilizers are all built as units, the utensil, water, dressing and basin sterilizers all being erected on one stand.

The animal experiment station is situated in the top of one of the pavilions and is well equipped for animal surgery. The animals have a bath room that would put many so-called bath rooms for human beings to shame. That nervous aggrega-

tion of fanatics, the anti-vivisectionists, do not thrive in Cincinnati.

The hospital is arranged according to an elastic plan, so that there will never be a large number of empty beds, as the upkeep of an empty bed is considerable. The present capacity is 850 beds and can easily be run up to 1,000 by a little crowding. The hospital has been four years in building and opens for patients January first. The contagious diseases department has been in operation for more than a year. The outdoor treatment of many diseases is much in vogue in Cincinnati and has been amply provided here.

The laundry from each ward is counted and a fresh piece is supplied in its place. This method is simple and effective and saves much bookkeeping.

Capital City Bank Building.

Selections

FOUR YEARS' EXPERIENCE WITH MENINGITIS IN NEW YORK.

(Under this title Drs. P. L. DuBois and J. B. Neal of New York give, in *American Journal Diseases of Children* for January, the results of their rather extensive experience. We here give only what they say as to treatment.—Editor.)

The treatment of epidemic cerebrospinal meningitis resolves itself into prophylaxis and specific and general treatment. The prophylaxis consists in quarantining patients ill with the disease and those in contact with them who show meningococci in cultures from the nose and throat. Under ordinary circumstances epidemic meningitis is not very highly contagious, but it sometimes becomes so. We have seen more than one case in a family in only four instances. The first time a child of 11 had it and three months later her mother had it. Both recovered. The second time two brothers, adults, were sick in the same room. Most insanitary conditions prevailed. The first brother had been ill two weeks and had had no doctor. The second was a fulminating case and the patient died in three days. The first one was sent to a hospital and finally died after five weeks' illness. In the third instance a brother and sister adults, and the 8-year-old daughter of the

sister were all ill in the same apartment. The brother and sister were taken ill within two hours of each other and both died. The little girl was taken five days later and recovered. The day before the little girl was taken sick a neighbor, a man living in the same house, came down with it and eventually recovered. The fourth instance was that of a sister of 14 and a brother of 3½. The sister had been taken sick two days before the boy. The attacks were mild and both recovered.

The question of carriers is rather a difficult one. In the first place, it requires careful bacteriologic technic to isolate meningococci from nose and throat cultures when they are few in numbers, and the work cannot be left to laboratory assistants unless they have exceptional training. When there are many cases to be diagnosed and treated is the time when nose and throat cultures from carriers come in thick and fast, and until quite recently we have not had a sufficiently large force to manage the cultures satisfactorily. From some work done here two years ago, we think the most satisfactory method of dealing with carriers is to swab out the nose and throat two or three times daily with 20 per cent. argyrol. We hope to do more work along this line this winter. Hatchel and Hayward report success with a spray of anti-meningococcic serum and with subcutaneous injections of meningococcus vaccine.

The specific treatment consists in the intraspinal administration of antimeningitis serum. This is a specific immune serum of therapeutic value only in meningococcic meningitis and then only when administered subdurally. In making a lumbar puncture we do not use either general or local anesthesia. We think that general anesthesia is dangerous, and local anesthesia takes so much preparation and time that the overcoming of the pain does not compensate for the increased nervous tension on the part of the patient. Adults not acutely ill who submit to lumbar puncture for diagnostic purposes do not seem to mind much. The back is not very sensitive, and if the patient is held properly—lying on the side with the knees drawn up against the abdomen, the neck bent and the back well arched so that the intervertebral spaces will be as great as possible—and the op-

erator is skillful there is very little pain. Never under any circumstances do we do it with the patient sitting up. Iodin is used over about 4 square inches immediately around the point of election for puncture, and a sterile or bichlorid towel is laid over the hips through which to find the landmarks. We have never to our knowledge had a secondary infection of the meninges of the cord. Sometimes the skin has become infected in small children from soiled napkins. We use a Quincke needle, size 18 or 19, and go in the mid-line through the notch most nearly coinciding with a line drawn from crest to crest of the ilium. A piece of tubing about 15 inches long is attached to the metal connection that fits in the end of the needle when the stylet is withdrawn. To the other end of the rubber tubing is attached the barrel of a syringe. We usually cut the rubber and insert a short piece of glass tubing near the metal connection, so that we can see the fluid flowing out or the serum flowing in. It is well to attach the tubing in removing the fluid, because by raising and lowering the glass container the rapidity of outflow can be regulated. A too sudden decrease in intracerebral pressure is undesirable. When the fluid withdrawn is cloudy we always inject antimeningitis serum at once, even though we suspect that some other organism may be the cause. The serum does no harm, no matter what the organism may be, and if it is meningococcal meningitis the earlier the serum is administered the better. Later treatment depends on the examination of the cerebrospinal fluid. We have used streptococcus and pneumococcus serums in appropriate cases. No patient with pneumococcus meningitis directly under our supervision has recovered, but we know of two patients who did. One patient with streptococcus meningitis out of fifteen recovered, but no influenzal patient. At present we have a good supply of anti-influenzal serum furnished us by Dr. Flexner, and as cases come along we shall use it.

As stated above, if the first fluid is cloudy we inject antimeningitis serum. It is warmed to body temperature and injected very slowly by gravity under the least possible pressure. This method was introduced by Koplik. A syringe is dan-

gerous, and is probably responsible for many deaths following the administration of serum. In general, the dose for an adult is from 20 to 40 c.c., and for infants and children from 3 to 20 c.c. The amount depends as much on the quantity of cerebrospinal fluid withdrawn as on the age. An infant will frequently stand 20 c.c. without difficulty. The dose should usually be at least 5 or 10 c.c. less than the amount of cerebrospinal fluid withdrawn.

We have seen a number of cases of undoubted dry taps during the course of cases of meningococci meningitis. The serum ran in freely and showed the usual variation in movement depending on respiration. In such cases it is advisable to proceed very slowly and to watch the patient carefully for the slightest change in pulse and respiration. We think that possibly in some cases the exudative period is followed for a short time by one of decreased secretion. At any rate, a dry tap is frequently followed by one in which fluid is obtained. In cases with thick exudate that will not flow through the needle, gentle suction with a syringe may be tried. If that fails a little serum injected will sometimes start the flow. In very severe cases we inject the serum every twelve hours until there is improvement. In moderate and mild cases we usually repeat it each day for the first four days. Further administration depends on the patient's general condition and the bacteriologic examination of the fluid. Usually from 4 to 6 injections are necessary, but we have employed as many as 16 or more. We consider that we get better results if the patient is turned from side to side so that no two successive punctures are done with the patient lying on the same side. That insures the emptying of the lateral ventricles in rotation.

A number of times during or immediately after the injection of serum the patient has gone into shock. Respiration has become slow and shallow or ceased, the facies pale and pinched and the pulse rapid and thready. At first this was very alarming, but we have never had a patient die from it. If the needle is still in place we withdraw some of the serum. Artificial respiration is resorted to if breathing has ceased and hypodermic

stimulation is given for the heart. We have seen it happen much less frequently since we have been using smaller doses.

The serum we have been using lately contains 0.2 per cent trikresol; earlier it contained 0.3 per cent. As is well known, the trikresol has been blamed by several physicians, especially Dr. Kramer of Cincinnati, for the fatal results that have been reported in a few instances following the injection of antimeningitis serum, usually in young children. Hale of the Hygienic Laboratory at Washington and Auer of Rockefeller Institute, report experiments with dogs showing that serum containing trikresol is somewhat more toxic than unpreserved serum or that containing chloroform or ether. Auer carried on experiments with monkeys also, and showed that they were far less sensitive to trikresol serum than the dogs. Furthermore, in France, where serum without preservative is used, cases of shock and occasional fatal results are reported. As stated above, we have never seen such a case, although we have administered the serum considerably over five hundred times and to children of all ages, fourteen of our patients being under a year old. In view of our experience with serum that has always contained trikresol we cannot believe that it is the cause of the fatalities. We think rather that they may be due to injudicious administration of the serum—too large doses, or too rapid increase of pressure, which is likely to happen unless the gravity method is used—or to an unusual susceptibility on the part of the patient. On account of the fear of trikresol—unfounded, we feel—that has been produced by these reports it seems advisable to try for a while the use of chloroform as a preservative. A comparison of the results with the serum prepared with the two different preservatives will enable us to decide which method is preferable.

We have not given the method of administering serum with the use of the blood-pressure apparatus a fair trial because we have so seldom had sufficient assistance to manage it. We think it is probably a help to those who have had little experience.

If a case shows a tendency to become chronic we make an autogenous vaccine and give it every four or five days in

doses of from 250 to 1,000 million. Sometimes it has seemed to be very effective, but we have not had enough cases to be able to draw definite conclusions. We can say that we have never seen it do any harm. In treating cases it must be remembered that frequently the stiff neck is the last symptom to disappear, and if the fluid has cleared up and the temperature stays down it may be entirely disregarded.

The use of hexamethylenamin (urotropin) comes between general and specific treatment. We recommend its administration in all acute meningeal infections. It is said that twenty minutes after its administration formaldehyd can be detected in the spinal fluid. It may not be there in sufficient amounts to do much good, but the procedure seems rational. The fact that meningococci may be isolated from the urine is another argument for its use. In one case of streptococcus mucosus capsulatus meningitis we gave hexamethylenamin dissolved in normal saline intraspinally. The temperature dropped from 106° F. to 102° F. and the patient became rational, but the case terminated fatally.

In planning the general treatment we find it necessary to remember that epidemic cerebrospinal meningitis may be a greatly prolonged febrile disease. The patient is best kept in a quiet darkened room. Sedatives are needed if the patient is very restless. We have had one fatal prolonged case in which we thought the patient might have been saved had the doctor given her an opiate so that she might occasionally have had a few hours of rest. The bowels and bladder should receive careful attention, particularly the bladder. Retention and cystitis are not uncommon. The patient should be examined for a distended bladder daily and the family warned to report infrequency of micturition. Patients should not lie in a draught and should be carefully covered up, especially during and after puncture. We have learned by bitter experience how easily they fall victims to pneumonia. In ordering the hygiene of the sick room it must be remembered that the meningococci are found in the secretions of the nose and throat and in the urine. The diet should be such that it may be easily digested, but generous in

amount. The high caloric diet of typhoid is indicated for the reason that meningitis, like typhoid, may be prolonged. The ice-bag gives a measure of relief for the headache.

Among the complications we have had pneumonia in 7 cases, basic meningitis in 6 cases, paralysis in 3 cases, hydrocephalus in 3 cases, deafness in 3 cases, cystitis in 2 cases, serum rash in 2 cases, iritis in 2 cases, typhoid in 1 case, scarlet fever in 1 case, measles in 1 case, purulent otitis media in 1 case, blindness in 1 case, arthritis in 1 case.

In no case of basic meningitis under our care has recovery ever ensued. At first we used to try very hard to get the patients into hospitals to have brain puncture done. Now we explain to the family that it may do some good, but do not urge it strongly because we do not feel that it is of much avail. Of the cases with paralyzes, two cleared up. One case of deafness cleared up entirely after the lapse of several months. The patients with typhoid and measles both recovered. We are much interested in the question of mental deterioration following meningitis and are following up our cured patients. In the course of time we shall have sufficient data from which to draw conclusions.

Table 5 shows our mortality statistics for the four years from July 1, 1910, to July 1, 1914:

Year.	Total No. Cases.	Patients Recovered.	Patients Died.	Result Unknown.	Mortality, Per Cent.
1910-1911.....	17	10	7	0	41
1911-1912.....	25	7	15	3	60
1912-1913.....	29	17	12	0	41
1913-1914.....	41	30	11	0	26

The 1911-1912 statistics need some explanation. Four cases developed into basic meningitis and in five other fatal cases the patients were either in hospitals already or were sent there and we had slight oversight of the treatment.

We feel that this particular department—meningitis—is a worth-while venture in treating cases of meningitis, in teaching physicians whom we see in consultation to administer serum and in training

a group of experts who will be able to handle efficiently the outbreaks of meningitis that occur about every ten years in New York City.

**WHAT ARE CHIROPRACTORS?
DR. MATSON ANSWERS QUERY.**

Cult Which Seeks to Practice Legally in Ohio Requires Very Little Training.

The increased activity of the chiropractors throughout the State has developed several inquiries relative to the methods of this cult and its history in Ohio. Recently a Youngstown physician wrote the journal that he is in close touch with his legislator and that he had been asked by him for complete information on the subject. We referred the matter to the State Medical Board and are printing herewith the answering letter written by Dr. George H. Matson, the secretary, who has had extensive experience in prosecuting these people in Ohio.

Believing that the information will be of interest in many quarters at this time, we are reproducing the letter in full.

Dr. Matson's Answer.

"In 1896, when our medical law was passed, and for several years prior to this, when other similar laws in other States were being enacted, one seldom heard of this character of practitioner (chiropractor). Indeed, the term chiropractor was not generally known. These various medical laws which were enacted for the benefit of the public, and not for the benefit of physicians, cults or classes, established a high standard (for that time) of medical education—indeed, so high was this standard that many an honest but poor boy was forced to seek other pursuits. Those who did not possess sufficient preliminary education to meet the requirements of the law, but who seemed determined by hook or crook to join the profession, sought out these various so-called methods and have attempted with some considerable success to plant themselves in fertile fields of practice. It was soon after the passage of the law that Chiropractors, Mechano-Therapists, Neuropaths, Magnetic Healers, Spondylo-Therapists, Napravits and Electro-Therapists arose. Schools of Chiropractic were established, the first at Davenport,

Iowa; then one in Michigan, one in Oklahoma, one in Pennsylvania and of late years several others in different parts of the country.

"In the beginning these courses could be pursued either at the so-called institutions or at the homes of individuals. In most cases they were pursued at the homes, through correspondence. Later a certain definite term was required at the institution—at first three months, then six months.

"At one of these institutions in Davenport two courses are now open—one for a short period and one for a long period. Or, if the applicants desire, the first part of the course may be obtained through correspondence, but the latter part must be taken at the institution.

"The business of making chiropractors has become so profitable now that I am told three chiropractic schools are located in Davenport where but a short time ago only one thrived. These schools are at loggerheads. Each employs national counsel to defend its graduates who may be prosecuted by any State authorities. This applies to Ohio the same as other states. The Lieutenant Governor of Wisconsin represents one of these schools, and either he or his partner has usually represented those whom we have prosecuted in Ohio.

"In all of the catalogues and literature which we have been able to collect distinct mention is made of medical subjects that applicants must pursue, such as anatomy, physiology, symptomatology, diagnostics, etc., and following these are the courses in therapy which these schools advocate.

"In no instance has any cult or ism arisen since the passage of the medical practice act that maintained or proposed anything like the preliminary or medical requirements now exacted of physicians and surgeons, nor has a single advanced position been taken by any of the schools representing these cults or any of the individuals coming from the schools. That their practice is the practice of medicine, as defined by the Supreme Court of the State of Ohio, there can be no doubt in any one's mind if he will but read the case of *Marble vs. the State* in the 72d Ohio, page 21.

Needs of Practice Acts.

"The whole matter summed up in a nutshell is simply this:

"First, to protect the public, those who practice medicine should be required to at least be able to make a proper diagnosis.

"Second, it has been well established by educators that no one can thoroughly master the subject of diagnosis without a proper preliminary education, the minimum of which is that required for graduation from a first grade high school of this State (most of the better medical colleges require at least one year in a university in addition).

"Third, until one is able to make a diagnosis he is not in a position to recommend or advise any kind of treatment, and when he is able to make a diagnosis, then, and not until then, should he be permitted to advise the sick. In other words, we believe that no one should be permitted to practice any branch of medicine with lower qualifications than those required by law of physicians and surgeons, and if they are granted such privilege, then the law demanding such high qualifications from physicians and surgeons should be lowered to the same level in order that honest, poor boys may not be driven into other callings. The State would stultify itself by establishing more than one standard for those who are to do the same thing—that is, to examine, diagnose and treat the sick.

Chiropractic Methods.

"Now a word concerning the practice of chiropractic. This consists of a so-called 'adjustment of the spinal vertebra.' It is contended by chiropractors that the cause of disease is the impingement upon the nerves leaving the spinal column or dislocated or subluxated vertebra, and that by adjusting the vertebra the cause is removed, circulation is restored and the muscles or organs controlled by the nerves relieved of embarrassment or disease. We have found chiropractors 'adjusting the spine for blindness,' for deafness, and for other diseases involving the cranial nerves proper, as well as for diseases involving other organs and structures of the body.

"We had one booklet in which a chiro-

practor advised adjustments to cure lice. This, of course, is an extreme case, but not more ridiculous or absurd to intelligent physicians than that mentioned above where chiropractic adjustments were given to relieve blindness or deafness.

"Let us suggest that you have some friend write to the Chiropractic School, Davenport, Iowa, for a catalog and literature concerning their courses. I refer to the school there which is owned and controlled by B. J. Palmer. You might address them "The Palmer School of Chiropractic, Davenport, Iowa." This school, we believe, is recognized as requiring the highest standards in the chiropractic field. It will but require a glance to determine how low these standards are."—Ohio State Medical Journal.

WARNING!

NEW LAW—HEAVY PENALTY.

Under the national antinarcotic law, every physician, dentist, and veterinarian who either handles or prescribes any opium or coca leaves, or derivative or preparation of either, must register before March 1st with the United States Collector of Internal Revenue for the district in which he resides or has an office. He must pay a fee of \$1.00 per year and will be given a registry number. He must attach this registry number to all prescriptions for such drugs written by him, must sign his full name, give the full name and address of the patient, date the prescription, and have thereon his office address; otherwise the prescription cannot be legally compounded.

Any physician who wishes to purchase, sell, give away, or keep in his possession any of these drugs or preparations must obtain from the Collector of Internal Revenue for the district in which he lives a book of duplicate order blanks. All orders for such drugs, whether addressed to wholesalers or retailers or to other physicians, must be written on these official order blanks, the physician retaining the duplicates. Prescriptions for patients should not be written on these official order blanks, but on ordinary prescription blanks. Where the physician or dentist dispenses these drugs to patients on whom he is in personal attendance, he need not keep any record of their disposal, but if he furnishes them to any one on whom he is not in personal attendance, he must keep a full record of the transaction.

Every person having any of the drugs or preparations named in his possession on March 1st, is required to make an inventory of the quantity and character of such drug or preparation and, before March 15th, file this

inventory, accompanied by a sworn statement, with the United States Collector of Internal Revenue for the district in which he practises. **THE PENALTY FOR FAILURE TO COMPLY WITH THE LAW IS A FINE OF NOT MORE THAN \$2,000, OR IMPRISONMENT FOR NOT MORE THAN FIVE YEARS, OR BOTH.** This is a United States Internal Revenue law; that means that it will probably be enforced; our readers are therefore urged to comply with the law at once. A letter should be addressed to the U. S. Collector of Internal Revenue for _____, giving the name of the city—asking for an official blank application and instructions. This should be done immediately, for all must be registered on or before March 1st. Preparations containing less than two grains of opium or one eighth grain of heroine, or one grain of codeine, or one quarter grain of morphine in each ounce, and preparations used exclusively for external use and not containing cocaine, are exempted from the provisions of the act.

The law applies to all who handle or deal in such drugs, including importers, manufacturers, wholesalers, retailers, physicians, dentists, and veterinarians. Government, State, county, or municipal officials only are exempt from the provisions of the act. Nurses and employees of persons registered under the act are covered by the registration of their employers.—(Editorial N. Y. Med. Journal.)

Before beginning a series of mercurial injections ascertain the condition of the kidneys. In the presence of a renal lesion, as manifested by albuminuria, casts or lowered urea output, proceed very carefully with mercury, and begin with small doses of a soluble salt. The same careful renal test should be made before giving salvarsan, too.—Urologic and Cutaneous Review.

Do not overestimate the value of vaccines in prostatic infections.—Urologic and Cutaneous Review.

Protection for an irritable skin in the shape of a mask must be provided in the case of infants with facial eczema if a cure is to be obtained. The arms should be fixed in splints.—Urologic and Cutaneous Review.

In bad cases of acne, especially in women, always examine for seborrhea of the scalp. If this be present it must be treated actively.—Urologic and Cutaneous Review.

Some cases of eczema of the scalp, unbenefited by ointments, will respond to hot air treatment or a few exposures to the Kromayer lamp.—Urologic and Cutaneous Review.

Tell your patients that the day of urethral discharges following innocent "strains," and suppurating buboes consequent upon heavy lifting, is fast passing; especially so in the case of married men.—Urologic and Cutaneous Review.

The West Virginia Medical Journal

S. L. JEPSON, A.M., Sc.D., M.D., *Editor.*

L. D. WILSON, A.M., M.D., *Assistant Editor.*

Wheeling, W. Va., February, 1915.

THE JOURNAL issued on the first of each month.

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All articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over 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 will be 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 to the editor and printer.

ADVERTISEMENTS.

Advertising forms will go to press not later than the 5th of each month.

Advertisements of proprietary medicines must be accompanied with formulae. Rate cards sent on application.

REMITTANCES

Should be made by check, draft, money or express order or registered letter to Dr. S. L. Jepson, Ch'm of Pub. Com., 81 Twelfth Street, Wheeling, W. Va.

Editorial

Reading "Warning" on p. 276.

GET BUSY.

Every physician should make it his business to write at once to the Delegate and Senator of his district urging favorable action upon Senate Bills No. 129 and No. 130. These bills were introduced by our colleague, Senator James McClung, M.D., and House Bill 153 is in charge of Dr. Sinsel of Grafton. These are the bills which have been agreed upon by the committees of the State Board of Health and the State Medical Association. Their provisions are intended to remedy serious defects in our public health and medical law, and if passed they will prove a blessing to our people and our State will cease to be a by-word on account of its defective health laws, inferior sanitary conditions and resulting large mortality. His Excellency, Governor Hatfield, in his message to the Legislature, devoted much space to a consideration of these matters and has urged the passage of these bills. For many months the State Board of Health, through the activity of a special commit-

tee and the indefatigable work of its President, has succeeded in directing the attention of the people to the unsatisfactory condition of our public health and the ways in which it may be remedied. As a result of the agitation of this question a strong sentiment has been excited among many classes of our people in favor of the bills in question, so that the prospects of their becoming laws are reasonably good. Yet greater certainty would be felt if every physician would promptly go on record as approving these bills and make known his sentiments to the members of the Legislature. We wish to see these bills passed, and, as stated, have good reason to hope that they will pass, but would regret to see this happen without some credit coming to the medical profession for an earnest support of them. No time should be lost in the proper expression of this support.

All legislators are susceptible to the influence of the voters at home and of those who can influence voters. The profession can truly say of these bills that they are intended not for the benefit of the medical profession, but for the betterment of the sanitary conditions of the State, and, of course, as a result, for the benefit of the health of the people.

The present laws, as the writer has learned from his two years' experience in their administration, are very defective in many ways, and especially in the very limited authority given to the Board in its control over water supplies, sewage disposal and nuisances of various kinds. The proposed laws will increase these powers and enable the Board to do many things which it cannot now do, although the people expect it to do them, and it is difficult to convince them that it does not have the requisite authority.

The medical profession, as has very often been demonstrated, is an unselfish profession, and its members are ever ready to advance the cause of public health, even at the sacrifice of their own private gain. Therefore we expect the physicians in the State to aid in the passage of the bills now before the State Legislature and whose passage is earnestly desired by our professional brother, His Excellency, Governor Hatfield. While a physician is in the gubernatorial chair is an opportune time for the enactment of

such legislation as is here proposed and if failure should occur now many years may pass before such an opportunity again presents itself. To put this proposed legislation upon our statute books will reflect glory upon the Governor's administration. Ever since his inauguration, as the writer can testify from the numerous communications received from him, Governor Hatfield has manifested an intense interest in all matters pertaining to the public health. It is therefore due to him that we should not let this opportunity pass of assisting him in the enactment of legislation that he so greatly desires, and that will so greatly benefit the people.

S. L. J.

CORRECTION.

A slight error occurred in the summary of a small folder concerning the status of trained nursing in Charleston, West Virginia, which appeared in the December number of the Journal. It is stated in the summary that Charleston's first hospital training school for nurses was instituted at the "Charleston General Hospital, October 1, 1898." It should read at the "Thomas Hospital, Charleston, West Virginia." While the Thomas Hospital is now the Charleston General Hospital, it was the Thomas Hospital and Training School for Nurses from October 1, 1898, to August 1, 1904. The Charleston General Hospital training school was organized in 1899 in another building on Kanawha street. In 1904 Dr. F. S. Thomas (now deceased) gave up the City Hospital building, in which the Thomas hospital and training school had been conducted, and it was taken over by the management of the Charleston General Hospital.

RELIEF FOR BELGIAN PHYSICIANS.

A committee of American physicians has been constituted to secure aid for the members of the Belgian medical profession, who in common with the other people of that distressed country are passing through great affliction and are suffering immense loss. Among others, Dr. L. S. McMurtry of Louisville and C. A. L. Reed of Cincinnati are members of this committee, whose treasurer is Dr. F. F. Simpson of Pittsburgh. Many contributions are being made in sums from

\$1.00 up to \$100 or more. Periodically lists of the physicians making these contributions are sent out. We have not space here for the printing of the names of these generous men, but earnestly appeal to our own members to send to Dr. Simpson such sums as they may be able to help our Belgian colleagues, a number of whom are said to be literally starving. Many hundred boxes of food have already been sent to them and others are in preparation. We cannot be too earnest in this appeal.

EXAMINATION OF CANDIDATES FOR ASSISTANT SURGEON.

New officers are needed in the U. S. Public Health Service. Boards of commissioned medical officers will be convened to meet at the Bureau of P. H. Service, No. 3 B St., S. E., Washington, D. C., and at the Marine Hospitals of Boston, New York, Chicago, St. Louis, Louisville, New Orleans, and San Francisco for the purpose of examining candidates, who must have had one year's hospital experience or two years' professional work. Assistant surgeons receive \$2,000, and, when quarters are not provided, commutation at the rate of \$30 per month is allowed. For invitation to appear before the Board of Examiners address Surgeon-General, P. H. Service, Washington, D. C.

The Dietetic and Hygienic Gazette, which is just completing the thirtieth year of its existence, has been purchased by The Critic and Guide Company, and, beginning with January, 1915, will be consolidated with The Critic and Guide, and the combined journals will be under the editorship of Dr. William J. Robinson. The offices of publication are at 12 Mt. Morris Park W., New York City.

SPECIAL INTERNAL SECRETION NUMBER.

The editors of the Woman's Medical Journal wish to call especial attention to the March issue which will be an "Internal Secretion" number, and which will contain much of interest on this most interesting subject.

The contributors are particularly well known and able members of the medical profession. Dr. Eugene Hertoghe of Antwerp, Belgium, is perhaps the foremost authority in Europe on his specialty, "Hyper-thyroidism," and he contributes a most helpful and scientific article based on researches he has made in his study of the thyroid gland, Dr. Henry R. Harrower of New York is an authority on "Hormone Therapy", having recently written a very important book having for its title "Practical Hormone Therapy". Dr. Harrower will consider mammary therapeutics in an article entitled "The Mamma as an Internal Secretory Organ".

In this number Dr. Mary Sutton Macy will write on "Rest as a Therapeutic Measure in Systemic Goitre", while Dr. W. S. Bainbridge will give some of the results of his large experience in the study of the "Internal Secretion of the Ovary".

Our readers are assured of a splendid symposium, which will prove both helpful and inspiring.

A unique little brochure (24 pages) on "Clinical Symptomatology" has already been distributed to the medical profession by the Purdue Frederick Company, who prepare the well-known Gray's Glycerine Tonic Comp. This consists of a number of Tables or Charts giving the common or usual "symptom-complex" of each of sixty different diseases and will prove of exceptional value for reference purposes. If any physician did not receive a copy of "Clinical Symptomatology" he can easily obtain a copy by addressing The Purdue Frederick Company, 135 Christopher Street, New York City.

Society Proceedings

AMERICAN PROCTOLOGIC SOCIETY.

Peri-Rectal Gumma: Report of Two Cases—

By Alois B. Graham, M.D., of Indianapolis, Ind.

The subject peri-rectal gumma owes a great deal of its interest to its rarity. The author reports two cases which are rather unique. They were seen within twenty-four hours of each other, and both presented a typical peri-rectal gumma in that no lesion of any kind could be detected in the rectum of either patient.

The author's conclusions are that peri-rectal gummata are rare. The two cases reported are unique and of interest in that both were typical examples of peri-rectal gummata. In both cases the gumma was seen in its early or vascular phase. In one case it appeared 23 years after the initial lesion; in the other case it appeared three years following the syphilitic infection. Both gummata were painless to palpation and fluctuation was detected in both. An error of diagnosis in one case was responsible for the incision and subsequent suppuration which followed. In the other case no incision was made and suppuration did not occur. No demonstrable rectal lesion could be discovered in either case. The induration in both cases disappeared rapidly under anti-syphilitic medication. No fistula resulted in either case.

Anal and Rectal Growths of Benign or Doubtful Character—By Dr. T. Chittenden Hill, M.D., Boston, Mass.

Hill states that in a series of 3,000 rectal cases previously reported there were 49 benign and 76 malignant growths of the rectum. The large majority of these tumors were characteristic and the differential diagnosis was easily

made. A few malignant growths seen in an early stage, and some unusual benign types associated with ulceration, were of such a nature that the exact diagnosis was not easily determined.

The writer emphasized the fact that the operative measures to be employed differ radically in each of these conditions. An excision of the rectum is necessary for the malignant cases, a simple local excision is all that is required for the benign growths, where an incision and drainage will suffice for the abscesses and fistulae. Therefore a doubtful case cannot be treated as a breast case in which a complete amputation for a benign growth may be justified. In the case of the rectum there is not alone mutilation, but a high mortality and a serious impairment of function as well to be considered. Furthermore, the removal of a specimen of a suspected tumor is not now approved and this complicates the problem still more.

The histories of several cases which illustrate the doubtful nature of some border line conditions occasionally found in the rectum are cited. They tend to show that aside from benign growths, some of which have many of the characteristics of malignancy, there are certain abscesses which develop in the loose cellular tissue of the retro-rectal and pelvic-rectal spaces which are even more suspicious. These indurated, irregular swellings bulging into the rectal ampullae at first resemble very closely the sensation imparted to the finger in malignancy. A little later they become soft and fluctuation is perceptible, when all doubt as to their nature is removed. The sinus from an old fistula occupying these same spaces is apt to be much more perplexing than an abscess. As the slow process goes on the rectal wall is crowded into the lumen of the bowel and assumes an irregular, indurated outline which is very suggestive of cancer. Other conditions of similar doubtful character such as gummatous growths and tubercular ulceration are also discussed.

Retrorectal Infections—By Collier F. Martin, M.D., Philadelphia, Pa.

Martin reviews the histories of 67 cases. In addition to the infection of the retrorectal space many of the cases also had involved the pelvirectal and ischioirectal spaces. Some of the more chronic cases were complicated with stricture of the rectum and multiple fistulae.

Eighty-five per cent of the infections occurred in males. External traumatism was not a factor in this series of cases. The author holds that most of these infections originate from internal traumatism, associated with some condition which lowers the resistance of the individual to pyogenic infection.

Pulmonary tuberculosis appears to be most constant factor in thus lowering the resistance. Twenty-one per cent died from tuberculosis at varying periods, either after examination or operation.

Forty-three per cent of the cases are noted as having pulmonary tuberculosis more or less advanced.

Of the fifty-five cases operated upon thirty were cured. These present sixty per cent of the operative cases, or nearly fifty per cent of the total number examined.

In nearly half of the cases the original abscesses had opened posteriorly, either between the sphincters or at the anorectal line. Pain was not a prominent symptom.

The method of incision applicable to the various complicating conditions are briefly outlined.

The author lays great stress upon the seriousness of these infections and upon the necessity of the prolonged watchful after-treatment.

While the prognosis as to both complete recovery of the local conditions and the general health, as well as to the preservation of the sphincter control, should be guarded, careful after-treatment and prolonged observation will result in saving a large proportion of these really serious cases.

An abbreviated history of the findings in the entire sixty-seven cases is given.

Hemorrhoids: Their Treatment—By Dr. J. Rawson Pennington, Chicago, Ill.

Dr. Pennington states that clinically hemorrhoids should be classified:

1. According to their location.
2. According to their structure.

According to their structure they are divided into (a) those containing fluid blood, (b) those containing clotted blood, (c) those containing both fluid and clotted blood, and (d) those consisting of "skin tabs" or folds of skin.

Most hemorrhoidal cases can be operated on under some form of local anesthesia. He operates on 90% of his cases by blocking the field of operation. The cocain is usually employed in the strength of from $\frac{1}{4}$ to $\frac{1}{2}$ of 1%. The quinin and urea in from $\frac{1}{4}$ of 1% to 1% solution. Sometimes he combines the solutions, the cocain being used for its immediate effect and the quinin and urea for prolonging the anesthesia.

During the last 20 years he has given a fair trial to a number of methods advocated which promised a reasonably good result, including the ligature, the clamp and cautery, Whitehead, injection, suturing and other methods which unite tissue in mass, and has come very definitely to the conclusion that by far the best way of treating this condition is by the excision or enucleation method.

The operative procedure should have for its object the removal of the cause of the tumefaction. The treatment for each type of hemorrhoid should be practically the same. This should consist in removing an ellipse from the tumor-like formation and in the case of the thrombotic pile turning out the clot, and in that of the internal variety the varicosity and allowing the blood to escape, and in the fleshy pile of dissecting out the excess of tissue.

The Barbour-Randolph-Tucker Society.

Wildell, W. Va., Jan. 8, 1915.

Editor West Va. Medical Journal:

Dear Sir:—The Barbour-Randolph-Tucker Medical Society held its first meeting for 1915 at Philippi on January 6th. Owing to bad weather, and business of physicians in caring for their patients, the attendance was poor. We fear many physicians are careless and therefore are easily prevented from attendance. We find that attending medical society meetings is like any other habit, good or bad, the more you engage in it, the more you desire it; and the converse is equally true, the less you indulge the less is your own inclination to participate and the less you miss the pleasure. What we lacked in numbers, however, we made up in interest.

Under the suspension of rules, Dr. J. P. Farson, of Century, who formerly was a member of Upshur County Society, was admitted to membership, and the following were received by written application, presented through the work of our field worker, Dr. L. S. Trusler: Drs. C. L. Rohrbaugh, Belington, W. Va.; U. M. Carwell, Hendricks, W. Va.; W. W. Dear, Parsons; E. H. Stump, Philippi; Willis S. Michael, Hendricks, and Amos E. Calvert, St. George. Most of these have been members at one time or other, and have dropped out more from carelessness than any other cause.

Dr. Murphy gave an interesting talk on his experience from an attack of appendicitis, especially as to the lack of prominent symptoms usually found and the new and unusual predominance of misleading symptoms, which might easily mislead any physician in making diagnosis.

Dr. Irons read a paper on The Small-Pox Problem. This is more and more a problem in West Virginia, as it is becoming so prevalent, the people getting so careless, quarantine so difficult of enforcement, and the expense so great to the State in its attempts to control and care for the sick, and immunize the well. In view of the fact that this is one of the most safely and easily prevented diseases, it would appeal to us that a more rigidly enforced vaccination law should be required, that the people may be more adequately protected, and that the State may be saved the enormous and uselessly expended money in managing this loathsome disease.

There should also be some law enacted to suitably punish the meddlesome "wisacres" who infest every community and pretend to know more of the diagnosis of every disease than the best physician in the country, and thereby obstruct health measures and become a veritable "thorn in the flesh" of the physician and a menace to the community. We trust the present Legislature will handle these problems without gloves, and give us an enforceable and efficient enactment.

The next meeting of the B.-R.-T. Society will be in Elkins the first week in April.

Yours truly,

J. C. IRONS, Sec'y.

Harrison County Society.

At a regular meeting of the Harrison County Medical Society, held Thursday evening, January 28th, at St. Mary's Hospital, the following program entertained the twenty-five members present.

"Diagnostic Problems of the Abdomen" by Dr. S. M. Mason.

"Conservation of Vision" by Dr. B. F. Matheny.

Dr. Mason emphasized the necessity of making a careful examination in every case of upper abdominal trouble, first to exclude such conditions as tuberculous spondylitis, pleurisy, pneumonia and other chest conditions which may simulate abdominal disorders; second, not to diagnose functional disorders of the stomach until every means has been exhausted to rule out an organic basis; third, not to overlook the dyspeptic conditions due to chronic appendicitis. The paper was too long to summarize: it will be presented to the Journal in full. One point worthy of mention is the necessity of going carefully into the early history of cases of indigestion, since the method of onset often differs widely in ulcer, gallstones and appendicitis.

Dr. Kornman reported three cases of spina bifida with large sacs seen within a period of two months. All three died from rupture of the sac.

The library committee made its first annual report. Former experience has shown that it is useless to expect physicians to come directly to the library and do their reading there. Instead, the library committee has tried to anticipate any want and has during the past year placed in the hands of physicians authoritative articles bearing on cases under their care. This has not only been of direct help to the physician, but has resulted in the presentation of interesting and instructive cases before the society. During the coming year the society will publish a monthly bulletin, a large part of which will be devoted to pointing out interesting articles in the current journals. Half the expense of this undertaking will be borne by the Academy of Medicine. The report of the committee was accepted and funds were voted to continue the library.

The society has now sixty-three paid-up members; four new applications are under consideration.

S. L. CHERRY, Sec'y.

Clarksburg.

State News

Dr. L. N. Yost, County Health Officer of Marion County, has recently, with the help of County Agricultural Agent Smith and County Superintendent of Schools Kennedy, been successfully conducting public health meetings in Marion County. A large attendance is reported and much interest manifested in the meetings. Each speaker discusses the subjects in which he is especially interested, agricultural, educational and sanitary. Stereoptican views are used in illustration of the talk. This is a

work that should be encouraged in all the counties, and it is heartily commended for various county health officers.

* * *

The County Court of Tyler County has recently appointed the following physicians to treat all indigent cases and cases of infectious disease in the districts named: Centerville, Dr. E. B. Conaway; Ellsworth, Dr. Paul Engel; Lincoln, Dr. W. H. Young; Meade, Dr. J. A. Gartlan; McElroy, Dr. J. A. Baker; Union, Dr. Joseph Eddy.

* * *

Dr. T. L. Barber, Jr., of Charleston, was married to Miss Elizabeth Louise Shelter, of Chicago, November 16th. Dr. Barber is at present a resident physician of one of the large Chicago hospitals, and expects to locate in Charleston for the practice of his profession next Spring.

* * *

We are greatly pleased to note that Mrs. Eleanor Yeakley, widow of the late Dr. Yeakley, of Keyser, has just been awarded a medal and \$80 per month by the Carnegie Pension Fund. It will be recalled that Dr. Yeakley lost his life in an attempt to save his wife and another lady from drowning.

* * *

Dr. A. E. Rays, of Boomer, W. Va., has returned from a visit to Indiana.

* * *

Dr. R. D. Roller, of Eccles, Raleigh County, has gone on a visit to New York and other points north.

* * *

Mrs. W. N. Haines, the wife of Dr. William Haines, of Boomer, W. Va., died recently of cardio-renal disease.

* * *

Dr. H. H. Young, of Charleston, is doing special work in the eye, ear, nose and throat in New Orleans.

* * *

The wife of Dr. G. Robertson, of Olcott, W. Va., died last month.

* * *

Dr. W. C. Mays, recently of Quinimont, has removed to Sharon, West Virginia.

* * *

As we go to press, the new public health bill, which was prepared under the direction of the State Board of Health, and which has many of the excellent features contained in the health laws of our most progressive states, is meeting with great objection in the Legislature. The coal operators have combined against it because their inflamed imaginations see in it powers that do not reside there which they think may be enforced to cripple their industry. The financial condition of the State is offered as a reasonable excuse for avoiding any enactment that may entail increased taxation. The bill has been amended so as materially to reduce the cost of its administration, but this has been done necessarily at a cost of its efficiency also. Even in its amended form it seems doubtful that it will pass, although it has the earnest support of Governor Hatfield.

Progressive Medicine

SURGERY.
Dr. F. L. Hupp.

Fractures Near Joints—Surg., Gyn. and Obstet., Aug., 1914. Sherman and Tait of San Francisco. Report of work done in the Surgical Research Laboratory of the University of California. The following conclusions are presented:

1. Dogs and cats offer exceptional facilities for the study of juxta and intraarticular fractures.
2. The trans-articular method is the only practical method which gives perfect access to certain joint fractures and permits accurate reposition of the fragments.
3. The innocuousness of the trans-articular route for the reduction of these fractures may be considered demonstrated.
4. There would seem to be a decided mechanical advantage in using intraarticular screws or screws and plates to insure the accurate maintenance of the replaced fragments.
5. Screws and plates so used seem to be per se innocuous. Aside from the trauma incidental to their trans-articular insertion the reaction following the introduction of screws and plates does not differ from that caused by a foreign body in other connective tissues of the body. When properly countersunk they are rapidly excluded from the joint cavity by a layer of newly-formed fibrous tissue, which grows up from the marrow spaces. Under aseptic conditions the ultimate fate of intraarticular metallic fixation appliances is the same as that of extra-articular appliances: they remain firmly embedded.
6. Per se the screws cause very little more reaction than the autoplasmic bone peg.
7. The use of two different metals in the screws and plates does not change the result in the articulation, except so far as the possible electrical reaction is concerned in the staining of the tissues.
8. Even with slightly projecting intra-articular screws or plates the function of the joint rapidly becomes normal. The direct wearing away of cartilage by an insufficiently countersunk screw-head does not lead to intra or extra-articular deformities, except under faulty technical conditions.

Dr. J. E. Cannaday of Charleston reported before the Southern Surgical and Gynecological Association at the Asheville meeting, a case of spontaneous rupture of the tubercular spleen, successfully operated on. So far as he has been able to ascertain, cases of spontaneous rupture of the tubercular spleen are exceedingly rare. This patient was a barber, 24 years of age, and had been taking treatment at Mt. Clemens, Michigan, for what he thought was rheumatism, as he suffered from joint pains. On his way home from Mt. Clemens, while riding in a passenger coach, without any violence whatever, he felt a sudden severe pain in his abdomen. This pain persisted but he was able to remain on the train until he reached his home that evening. His family physician was called and referred

the case to Dr. Cannaday. The doctor did a laparotomy the next morning and found the abdomen filled with blood. After a rather long search, the point of bleeding was found to be a good sized rupture in the main body of the spleen. The spleen was removed and the wound closed without drainage. The spleen was full of caseous and calcareous nodules. The patient made a fair operative recovery.

Examination for Admission to the American College of Surgeons.—At the annual meeting of the American College of Surgeons in Washington, D. C., on November 16, the following report was presented by the Committee on Examination for admission:

Your committee begs to submit the following tentative scheme for admission to the American College of Surgeons:

On and after November 1, 1914, the candidate for admission to the American College of Surgeons, in addition to fulfilling the conditions previously indicated, i.e. that he shall have been graduated from a medical school for not less than five years, and shall present evidence of personal probity and specialization in surgical lines, shall be required to lay before the Committee on Examination:

1. Evidence that applicant has served at least one year as a hospital interne and three years as assistant, or one year as first assistant to a surgeon of recognized ability and with an adequate hospital service. From those who were graduated before 1915 an equivalent surgical experience shall be acceptable, especial importance being attached to laboratory and research work.

2. Evidence that he has visited other surgical clinics and laboratories than those to which he has been officially appointed, giving the dates of such visits, the time spent, and a brief summary of the work witnessed or performed.

3. An abstract of at least fifty consecutive major operations which he has himself performed, this abstract to contain the name and address of the doctor or consultant referring the case; the pre-operative diagnosis; the anesthetic given, by whom, the quantity and the time of administration; the date of operation, and a brief description of it, with a note of the time required for its performance, calculated from the first incision to the beginning of the application of the dressing; the post-operative course, and a mention of complications, if such occurred; not only those conditions usually classed as such, but consecutive bleeding which calls for measures directed toward its control, hematoma of sufficient extent to require evacuation or drainage or supuration, as slight even as a stitch abscess, are to be regarded as complications. The condition on discharge from the hospital with subsequent course of the case up to the date of application for membership, or as near this as is practicable. The applicant shall supplement his individual report of operations by a further abstract report of at least fifty cases in which he has acted as assistant.

"4. All applicants for fellowship to the American College of Surgeons whose date of graduation is 1920 or later shall be graduates from medical schools which shall have demanded of its matriculates two years of collegiate training, or the equivalent, including biology, chemistry, and physics. If the candidate's school of graduation be not accredited by the American College of Surgeons, he shall be required to pass a technical examination.

"5. Surgeons widely recognized by the profession as leaders of progress and exponents of finished technic, by a unanimous vote of the board of regents may be admitted to fellowship on recommendation of the Committee on Examination."

Management of Nephrolithiasis.—Dr. H. H. Grant (Louisv. Mo. Jour. of Med. and Surg., August, 1914), in outlining the character of the operation demanded, states: 1. In order to confirm the diagnosis aspiration may be employed to show the presence of pus or water. 2. Pyelotomy is the operation of choice if the stone can be located in the pelvis of the kidney after exploration. 3. Nephrotomy should be the primary step where the kidney is found to be in fair condition. 4. Nephrectomy where the kidney is badly damaged, or where nephrotomy is found later to fail to give relief. 5. Where the stone is located in the ureter of one of both sides the operation at one sitting should be complete as indicated. 6. In anuria prompt removal of the stone upon the affected side, and if both sides are affected the best kidney should be operated upon first, provided the patient cannot bear a double operation.

Treatment of Deep-Seated Carcinomata with the Roentgen Rays.—Prof. E. Bumm and Dr. K. Warnekros (Munch. med. Wochenschr., Nov. 29, 1914), as the result of an extensive experience with the x-rays in the treatment of cancer during the past two years, express a preference for this agent over the radioactive bodies even in the deep-seated forms of malignant disease on account of its greater freedom from injurious effects. Observations in cases of uterine, mammary, pulmonary and ovarian cancer showed that the x-ray can exert its action to a depth of 10 cm. without danger, and they believe it can be utilized to advantage in the treatment of carcinomata in other regions of the body, such as the gastrointestinal tract, esophagus and larynx. To obtain good results, however, cross firing with large quantities of hard rays is necessary. This treatment has its limitations when applied to the deeper-seated growths, as was particularly seen in ovarian carcinomata with extensive metastases in the abdominal organs, as well as in disseminated cancer of the breast, because even though it destroys the nodules, it does not prevent the formation of others in the periphery. It was also found that in some instances application of the rays in large amounts in the region of the stomach, intestines and heart caused intractable vomiting, diarrhea and arrhythmia, necessitating discontinuance of the treatment. The local effect of

the hard rays on the skin was only superficial and never caused the protracted deep-seated necrosis following the soft variety of rays. This interesting translation is taken from the International Journ. of Surgery for October.

Occult Blood in Gastric Ulcer.—Boas (Deutsch. Med. Wochenschr.) says that the most important sign in the diagnosis of gastric or duodenal ulcer is the presence of occult blood in the stool. A persistently positive reaction, in the presence of the usual symptom-complex, proves the existence of a florid ulcer; a constantly negative blood test speaks against the presence of an active ulcer but not against the existence of a healed ulcer, with all the sequelae that come in its train. For these tests the old guaiac or benzdinin tests are not sufficiently delicate. The phenolphthalein test, according to Boas, is the only one capable of showing the presence of minimal traces of blood in the feces. By its means an early diagnosis is made possible and relapses can be recognized with certainty. The combination of the test with an oil breakfast enables one to distinguish between gastric and duodenal ulcer. The gastric contents having been found free from blood, a number of ounces of olive oil are put into the stomach. Thereby a regurgitation of duodenal contents into the stomach is brought about. The oil is then expressed through the stomach tube and tested for blood. A positive reaction speaks for duodenal ulcer, provided the stomach tube was manipulated so gently as to minimize the possibility of traumatic bleeding.

OBSTETRICS AND GYNECOLOGY.

Dr. R. E. Venning.

The Treatment of Eclampsia by Intravenous Injections of Hirudin, Based Upon the Results in Fourteen Cases—By F. Englemann (Zeitschrift für Geburtshilfe und Gynaekologie), Bd. 68, Heft 3.

Engelmann has now treated 14 cases of eclampsia of the severest type with intravenous injection of hirudin, a leech extract, with rather striking results. Its use is based upon an experimental study of its action in animals. It has been shown that intraperitoneal injections of the amniotic fluid from cases of eclampsia produced lesions in guinea pigs similar to findings in eclampsia cases. Later it was found that intravenous injections of a small amount of the same fluid in rabbits produced even a more marked effect. The animals succumbed quickly, and the post-mortem findings corresponded almost exactly to the other. Furthermore, simultaneous injections of hirudin checked the death of the animals. The latter animals, when killed, showed no pathological changes. Therefore, the conclusion was drawn that in eclamptic amniotic fluid there is a toxic substance not present in normal fluid, as shown by control experiments, which may be counteracted by hirudin.

Loeb, Tuttle and Strickler showed that the fatal effect of intravenous serum injections,

e. g., injections of dog's serum into rabbits which causes hemolytic changes could be checked by previous treatment with hirudin. By analogy this could be made to apply to eclampsia if one adopted the theory of Lockemann and others that a material contained in the fetal blood passes over to the maternal blood and causes the same effect. Again, Engelmann found that, whereas, extract of placenta injected intravenously into animals produced changes leading to coagulation, this could be avoided by first injecting hirudin. He thinks that in eclampsia there is a poison which causes coagulation which is responsible for much of the clinical picture. The convulsions may be explained by thrombus formation, and we need, therefore, not seek a special poison as a cause of the convulsions.

Just how hirudin acts is not clear, but seems to possess further favor than that of merely hindering coagulation of blood. Deetjin showed that it prevented the destruction of blood plates. In the clinical cases hirudin was given intravenously in doses of 0.2 to 0.3 gm. in water, either with a syringe or in the form of an infusion. The cases selected were the worst ones in the clinic, in ten of which the convulsions persisted after delivery, or first appeared postpartum, cases which did not respond to the usual methods of treatment. There was a marked influence upon the convulsions in all but two cases. In seven cases the convulsions either stopped immediately or after one to four recurrences. In one case there had been about 50 convulsions and in another 26, with none after the injection. Seven cases proved fatal, but even in these there was a marked beneficial effect upon the convulsions, wherein apparently lies the chief claim for hirudin.

The writer does not as yet advise the routine use of this preparation, but hopes that it will be tried in large clinics in the worst cases which do not respond to other methods. Although he states that it must be used with care when the heart action is poor, he has never noticed an increase or disturbance in pulse or respiration. The blood pressure is lowered, but not to a point below normal.—Cleveland Medical Journal. S. L. J.

Extra-Abdominal Ovarian Cyst.—T. S. Cullen, Baltimore (Journal A. M. A., October 14), gives a detailed history of a case of a woman, aged 56, mother of eleven children, who had had a kidney-shaped tumor below and to the right of the umbilicus for a number of years which had lately begun to trouble her and increase in size. At operation it was found to be a partly solid, partly cystic tumor of the ovary lying external to the abdominal muscles, the tumor and its surrounding sac being covered over with a small amount of adipose tissue and the skin. The pedicle of the tumor passed through a hernial ring to the outer side of the right rectus and obliquely across the lower abdominal cavity to what corresponded to the normal insertion of the right utero-ovarian ligament. He has been unable to find

a similar case recorded in the literature. The more important reports of the presence of ovaries in hernial sacs that have been recorded are reviewed by him. Since the ovary has a rather free excursus, it is not remarkable, he says, that it sometimes forms part of the contents of a hernial sac and we should not be surprised to find now and then cases where ovarian cysts have protruded into the inguinal canal or been incarcerated within the abdominal wall.

PEDIATRICS.

Syphilis of the Nervous System in Infancy, Children and Early Adult Life—Dr. Wilse Robinson, Kansas City, Mo., in the Interstate Medical Journal, St. Louis, concludes:

1. Lesions of the nervous system secondary to congenital or early acquired syphilis are of quite common occurrence.

2. Those lesions secondary to syphilis which are acquired in infancy or early childhood do not differ in kind or degree from the lesions secondary to congenital syphilis.

3. There may be evidence of gross lesions of the nervous system secondary to syphilis and yet be no obvious symptoms or signs of syphilis.

4. By the aid of the Wasserman test of the blood or cerebrospinal fluid and by a cytological and chemical examination of the cerebrospinal fluid, many obscure conditions may be demonstrated as being secondary to syphilis in which syphilis may not be suspected and cannot otherwise be demonstrated.

5. Hydrocephalus, meningitis and convulsions during early infancy are very commonly secondary to syphilis.

6. The so-called idiopathic type of general epilepsy is not an unusual sequence of syphilis of the young. The Jacksonian type of epilepsy quite frequently occurs secondary to cortical lesions of syphilitic origin.

7. Lesions of the spinal cord other than tabetic are unusual in syphilis of the young.

8. States of mental defectiveness are very commonly caused by syphilis.

9. Any lesion of the nervous system occurring in the young is serious. This is especially true of those lesions occurring secondary to syphilis.

10. Some forms of meningitis, gummatous formations, epilepsy, pseudotabes and a few other conditions occasionally respond to treatment. Juvenile paresis and tabes do not yield to treatment.

11. The treatment should be anti-syphilitic and should be pushed to the limit. S. L. J.

Starch In Infant Digestion.—T. S. Southworth, New York (Journal A. M. A., Oct. 17, 1914), discusses the influence of starch on infant digestion. He agrees with Finkelstein as to the disturbing effects of carbohydrate sugars on the intestinal functions of infants but goes further in attributing these untoward results to fats as well. He reviews the historical and clinical evidence supporting this and also

the usefulness of starch in counteracting such effects. He says it is time to ask ourselves seriously why it has been empirically found that cereals in the form of boiled and therefore gelatinized starch should have become an essential in the final composition of such diversified types of feeding as diluted cow's milk, fat-free butter-milk, whey modified milk and malt soup mixture. It would seem that starch has a protective action against the undesirable effects of fat in milk. Starch and dextrin less rapidly undergo acid fermentation than some of the sugars and they also excite a prompt and long-continued secretion of pancreatic juice which is the opposite to the action of fats. While the practice of giving all the carbohydrates in the form of sugar frequently causes overtaxing of the upper intestine the slower conversion of starch spreads the process of absorption over a greater length of intestine and this must have its influence. In conclusion he says the indication for the use of starch appears. In such its chief end is not solely to nourish the infant but to also promote nutrition by making possible a more orderly digestion and absorption of the main nutriment—milk. It is admitted, of course, that excessive use of starch may itself cause digestive disturbance but instances of such abuse do not preclude its judicious employment.

S. L. J.

Symptoms of Rheumatism in Childhood—H. P. Dawson (Southern Medical Journal, April, 1914) says that in a child the articular phenomena of rheumatism become a matter of merely secondary importance; indeed, a child may suffer severely from rheumatism who has never had a pain in its joints. In England much stress is laid upon the presence of subcutaneous fibroid nodules as a manifestation of rheumatism, but the rheumatic nodule appears to be rare in America. He calls attention to the relation between tonsillitis, chorea and rheumatism, and refers to the significance of more or less vague pains in the limbs and elsewhere. Stiff neck may be the earliest manifestations, and a common trouble in rheumatic children is headache. The rheumatic child is, above all, a nervous child; rheumatism is frequently associated with night terrors, somnambulism, habit spasm and lenteric diarrhea. One other phenomenon worthy of note is the association of red hair with rheumatism and rheumatic heredity.

S. L. J.

Intravenous Injections of Diphtheria Antitoxin.—Dr. E. H. Shorer advocates this treatment in Am. Jour. Dis. of Children. He concludes:

"Generally the introduction of diphtheria antitoxin is not believed to be followed by an elevation of temperature, but slight elevations do occur frequently. When given intravenously, four injections out of sixteen were followed in from one-half to one and a half hours by striking symptoms. These were usually ushered in by a marked chill, then an elevation of temperature from 103.2 to 104 F., and in two cases by respiratory distress. All of these

symptoms disappeared in from three to twenty hours, when the patients usually felt entirely well. That these were serum reactions did not seem to be the case, as in none did the later serum rashes appear. When serum rashes and reactions did occur they did not differ from those following other serum injections, though none occurred in the small series of patients receiving subcutaneous injections.

"It is evident that so small a series does not offer enough evidence on all of the facts detailed. It seems fair, however, to draw some conclusions from the data. It will be observed that following intravenous injections the fever and membrane disappeared sooner and the patients felt well; that diphtheria bacilli disappeared more rapidly; that there were fewer carriers and that paralyses were less frequent than when subcutaneous injections were made.

Two children died in each series; death occurred from seven to fourteen hours after the first injection in each case. All four children who died had laryngeal diphtheria, but there were seven cases of laryngeal diphtheria in the series that received intravenous injections, and only two in the series given subcutaneous injections.

"Reactions, however, followed only intravenous injections. The data in regard to this are shown in Table 2. These reactions are classified as 'immediate' and 'serum' reactions."

S. L. J.

EYE, EAR, NOSE AND THROAT.

Drs. H. R. Johnson and P. A. Haley.

Tuberculosis of the Middle Ear.—H. H. Briggs (Annals Otol., Rhinol. and Laryngology, Vol. xxxiii, No. 3).

According to Brieger, 25% of all cases of tuberculous infections involve the middle ear. Westmacotte, in the examination of 1500 school children, found 2% suffering from middle ear tuberculosis.

The disease is no doubt of far more frequent occurrence than statistics would indicate, as the conditions usually passed from a pure tubercular to a mixed infection before coming under observation, the suppurative condition masking the initial infection. The careless manner of classifying all discharging ears as O. M. S. without careful microscopic examination or inoculation tests is unfortunate.

For a long time tuberculosis infection was thought to take place by inhalation, but now abundant facts, both clinical and experimental, are at hand which prove beyond question that the digestive tract is one of, if not the most, important avenue by which tubercular infection travels. It is well known that the tonsils are frequently the portals through which the organisms gain entrance.

Etiology.—Predisposing Factors.—Other than general hygienic, environmental and constitutional taints, the immediate factors are:

- (1) The existence of a tubercular lesion elsewhere in the body.
- (2) Abnormal conditions in the upper air tract.

(3) Adenoids, which have frequently been found to be the seat of latent tuberculosis.

(4) Nasal obstructions, which interfere with drainage and ventilation of the nasal fossa and naso-pharynx.

(5) Infancy and childhood favor infection on account of anatomic conditions, such as a short and patulous eustachian tube, adenoid vegetations and acute or chronic inflammation of other lymphatic structures or the throat.

(6) The temporal bones of infants are soft and contain red marrow, thus affording a favorable soil for tubercular organisms.

Channels of Infection.—First, mechanically through the eustachian tube either air borne or by particles of mucus being forced into the tympanic cavity by blowing the nose, coughing, sneezing, etc.; secondly, through the blood channels, and lastly, through the lymphatics.

The anatomical conditions in infancy favor mechanical conveyance of tubercular infection to the middle ear.

J. Horn has shown that aural tuberculosis is a more frequent complication of pulmonary tuberculosis with cavity formation than any other type.

To the author the mechanical theory seems the simplest, easiest and most probable in the majority of cases.

Infection through the blood channels from a focus more or less remote, may localize in cancellous spaces of the temporal bone, and thus invade the middle ear.

Many observers regard the haematogenous the most frequent mode of infection in childhood.

Lymphatic infection can occur, only in a direction contrary to the lymph current, such extension does occur elsewhere and is a possibility in this locality.

An intracranial origin of middle ear tuberculosis must be regarded as an extremely rare occurrence.

Pathology.—Clinically, tuberculosis of the middle ear manifests itself in two distinct forms; viz, acute and chronic.

In the acute form rapid destruction of tissue is characteristic. Some observers contend that the tubercular process begins in the mucous membrane of the tympanic cavity and most often in the region overlying the promontory, while others claim it begins primarily in the antrum.

The destruction is rapid and is due to erosion rather than the proliferation of tubercle and caseation.

After perforation, mixed infection modifies the process with rapid destruction of bone and soft parts ensuing.

In the chronic form it runs a slower course, as infiltration, caseation and necrosis takes place more slowly.

The granulations are flabby and enemic and may fill the tympanic cavity and antrum and mastoid cells and protrude as polypoid masses through the perforation. The mastoid antrum and cells will be found filled with granulations in which are found giant cells, caseation and other tuberculous changes.

The ossicles become necrotic early, the foot-plate of the stapes may be destroyed and the infection invade the labyrinth through the fenestra ovale and rotunda, giving rise to disturbance of equilibrium, nystagmus and deafness.

Bricger holds that brain complications are common in childhood, but rarely occur in adults.

Diagnosis.—In determining the diagnosis the family history and parental habits should be carefully considered and in adults the personal history is equally important.

The absence of pain, loss of hearing, extensive destruction, and the proliferation of pale, flabby granulations, with history of previous tubercular infection of the clinical evidence of present lesions in other organs, would lead to the conclusion of a probable tuberculous origin. The development of facial paralysis in children is very suggestive of tuberculosis, as it occurs in one-third of all cases of tubercular otitis media, as against 2% in the ordinary pyogenic infections.

Positive diagnosis can only be determined:

- (1) By microscopic findings of tubercle bacilli in the discharge or granulations;
- (2) Epithelioid or giant cells in the tissues;
- (3) By experimental inoculation.

Prognosis.—The prognosis in middle ear tuberculosis is as a rule unfavorable. The middle ear involvement of itself would not be so unfavorable were it not so frequently associated with advanced tuberculosis of the lungs or other organs. It is unfavorable if symptoms of labyrinth involvement or facial paralysis arise.

The aural condition will improve or not as the general condition improves or grows worse.

Treatment.—Two phases of the treatment are considered: Tuberculin therapy and surgical intervention.

As to the treatment of tuberculosis of the middle ear with tuberculin Politzer is quoted as saying: "Injections of tuberculin in this condition have proven worthless." The author takes issue with this statement, claiming that it has its field of usefulness and is of value in properly selected cases. It should not be used in acute cases where the body is already burdened with toxins.

A serious obstacle to accurate observation as to the results of tuberculin treatment in tubercular otitis media is found in the fact that it is rarely found as a primary condition, but is due to a tuberculosis antedating the middle ear involvement and may be of such a nature or at such a stage as to contraindicate tuberculin treatment. The fundamental principle governing this treatment holds true; viz, that properly used it strikes specifically at the cause of the trouble by increasing the immunizing forces of the body and frequently yielding remarkable and permanent improvements. While no details as to dosage and methods of administration are given, two points are emphasized; viz, the correlation of the size of the dose and the tolerance of the patient.

These two points can never be disassociated

and at once disposes of a haphazard or rule-of-thumb administration.

Haste has no place in tuberculin treatment, and too often a desire to get to the big dose is responsible for much of the disappointment in its administration.

The duration of tuberculin treatment is a point which has not been clearly determined, but varies to meet the requirement of each individual case. It is the general consensus of opinion, however, that to be of lasting benefit, it should be continued over a period of several months; after which supplementary treatment should be given for short periods every six or eight months.

The Surgical Treatment.—The tympanic membrane in tuberculosis of the middle ear is to be incised early, and under no circumstances should it be delayed until perforation takes place.

After incision, the tympanic cavity and eustachian tube should be given the same treatment as in non-tuberculous conditions.

The wick drain, often replaced, should be used, iodoform and iodine derivatives have yielded the best results.

The author advises the use of sunlight directed into the ear and onto the tympanic membrane by the use of a concave head mirror for five or ten minutes daily.

If the process extends to the mastoid cells or labyrinth, prompt surgical intervention is imperatively indicated, making use of such measures as the exigencies demand.

The one dominant object to be striven for is the thorough and complete eradication of involved tissues.

H. R. J.

GENITO-URINARY & DERMATOLOGY.

Dr. A. P. Butt.

The Place of Dermatology in the Medical Curriculum.—Quite early in his career the medical student who is keen at his work begins to find out that it is a bit of a puzzle to get in all of his subjects towards the end of an already over-crowded curriculum. What with ward work, the outpatient clinics, the post-mortem room, and the lunatic asylum, not to mention the numerous lectures, classes, demonstrations and laboratory work, his time has to be mapped out with great precision in order to get "signed up" for his final examinations. Small wonder is it, therefore, if the specialties tend to become cramped, or, at any rate, to assume a place of second or third importance. Only very rarely does it happen that a man chooses his specialty before qualification, and such a choice is not to be encouraged at this stage. In the case of dermatology, for instance, it not infrequently happens that a man may pass out into the world in possession of a medical degree or diploma and yet with the scantiest knowledge of even the commoner forms of skin disease. For such an individual the blessed word "eczema" covers a multitude of cutaneous disorders and to him zinc ointment and the use of arsenic in-

ternally comprises the summum bonum of therapeutics. Of course, there are many institutions where more or less training in dermatology is undertaken, but only in a few is it incumbent upon students to attend so many clinics or lectures before admission to a final examination.

Time was when other subjects, such as ophthalmology and bacteriology, were as lightly treated, until it became obvious that these should be made compulsory in the interests alike of practitioners and the public. Is dermatology any less important that attendance in skin outpatient departments should not always be rendered compulsory? It is not necessary that the practitioner should be able at once to diagnose a case of *acanthosis nigricans* or even *sporotrichosis* but he should be able to treat a patient suffering from *eczema* or *psoriasis* with intelligence and restraint. Not less than three months' attendance at a skin hospital or dispensary should be required of all candidates for medical degrees. Whenever possible the cases should be followed up in the wards, though here again many hospitals are terribly handicapped through having totally inadequate in-patient accommodation for skin cases. For this state of affairs, the lay authorities are often to blame, for the idea is still only too prevalent that patients with cutaneous disorders do not need interne treatment at all. Recent development in therapeutics, especially in so far as dermatology is concerned, make it all the more necessary that students should receive practical instructions in x-ray work, bacteriology and electrotherapeutics so that they will be up-to-date in their treatment. Every practitioner, particularly those who intend taking up school inspection or public health work, ought to be absolutely familiar with the principal parasitic affections of the skin and the means to be taken for their effective cure. There is an immense deal of ground to be covered in the field of dermatology, but some effort should be made by all schools to ensure that no practitioner succeed in obtaining a qualification without having attended at least a three months' course of instruction in what furnishes the thoughtful student with much matter for reflection, namely, the diagnosis, pathology and treatment of the commoner affections of the skin.—Urologic and Cutaneous Review.

The results following nephrectomy for tumor which have been so large as to cause a marked varicocele are far from satisfactory. Some surgeons hold varicocele due to renal pressure to contra-indicate operation.—Urologic and Cutaneous Review.

If you would have peace of mind, do not arouse the interest of chronic gonorrhoeal patients in the three-glass test.—Urologic and Cutaneous Review.

In gonorrhoeal cystitis, as in most cystitides, put your faith in nitrate of silver.—Urologic and Cutaneous Review.

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Pratt, S. A.	Kingwood	Sloan, H. E.	Clarksburg	Webb, Wm. S.	Warwood
Preston, B. S.	Charleston	Slusher, W. C.	Bluefield	Wehner, E. F.	Clarksburg
Preston, D. G.	Burnwell	Smith, A. W.	Farmington	Weirich, T. H.	Wellsburg
Price, H. D.	Parkersburg	Smith, E. P.	Barracksville	Wentz, G. W.	Chester
Price, R. C.	Morgantown	Smith, G. W.	Sprigg	Werner, Harry	Thomas
Price, N. R.	Marlinton	Smith, Isaac	Reel Tree	West, H. S.	Wheeling
Price, S. W.	Scarbro	Smith, J. W. R.	Academy	Wetzel, E. T.	West Union
Price, W. H.	Chattaroy	Smith, L. S.	Monongah	Wheeler, B. B.	McKendree
Prichard, K. C.	Huntington	Smith, W. J.	Williamson	Whelan, M. E.	Roanoke
Putney, Jas.	Charleston	Snodgrass, F. P.	Darlington, Va.	White, I. C.	Smithville
Quaintance, R. W.	Minden	Snuffer, D. W.	Beckley	White, T. W.	Coatwood
Quillen, O. L.	Belleville	Snyder, Geo.	Weston	Whittico, J. W.	Williamson
Quillen, R. D.	Belleville	Soles, J. R.	Warwood	Whitman, W. R.	Roanoke, Va.
Quimby, W. A.	Wheeling	Solter, H. C.	Huntington	Wilcox, J. F.	Marmet
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Rader, J. E.	Huntington	Spangler, A. M.	Pageton	Williams, C. B.	Philippi
Ramage, C. R.	Fairmont	Spillman, J. W.	Wheeling	Williams, D. T.	Martinsburg
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Rose, E. E.	Hinton	Taylor, D. H.	Wheeling	Young, H. H.	Charleston
Rose, L. O.	Parkersburg	Taylor, E. H.	Morgantown	Young, W. H.	Sistersville
Ross, C. F.	Logan	Taylor, I. W.	Mt. Calm	Total	824.

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Original Articles.

A CONTRIBUTION TO THE STUDY OF JOINT-BODIES FROM WITH- IN, PRESENT IN ARTICULA- TIONS OTHERWISE AP- ARENTLY NORMAL.

Aime' Paul Heineck, M.D., Chicago, Ills.

An Analytical Review of All Cases of
Joint-Bodies Originally Reported in
the English, French and German Medi-
cal Literature from 1890 to 1913, Incl.*

Our knowledge of the etiology, pathologi-
cal anatomy, symptomatology and of the
various methods of treatment of joint-bod-
ies is as yet incomplete and, therefore, calls
for much further study.

The articular bodies which we herein dis-
cuss were unassociated with joint-lesions
other than those determined by the presence
of the joint-body or by the violence respon-
sible for its existence.

To avoid misstatements and to have ac-
curate data as substructure of our conclu-
sions we only analyzed cases in which the
diagnosis of joint-body was verified at the
operating, dissecting or post-mortem table.
In formulating our conclusions we excluded
from consideration:

1. Cases reported with insufficient data
or with only unimportant details.
2. Supposed or actual cases of frag-
mented, displaced or detached semilunar
cartilage.

3. Supposed cases of joint-body, proven
at time of operation to be extra-articular
bodies.

4. Cases of extra-articular foreign bod-
ies of intra-muscular origin.

5. Cases of foreign body lodged in joint-
capsule diverticula communicating, or not,
with the general synovial cavity.

6. Cases of a nature so distinct from
that of the joint-bodies under consideration
that their inclusion would serve no useful
purpose, would needlessly confuse the read-
er (pendulous chondra-sarcomata).

7. Cases in which a pre-existing or co-
existing disease of the articulation harbor-
ing the joint-body might be considered a
contributory etiological factor (gonorrheal,
suppurative arthritis).

8. Cases of mono or poly-articular ar-
thritis deformans.

We attempt to determine some facts rela-
tive to joint-bodies originating within the
organism:

- a. What is their incidence
 1. As to age?
 2. As to sex?
 3. As to articulation involved?
 4. As to association with pre-existing or
co-existing, congenital or acquired, anom-
alies of the affected articulation?
- b. Their etiology, nature and pathologi-
cal anatomy.
- c. Their symptomatology.
- d. Their differential diagnosis.
- e. Their treatment—operative or non-
operative. If operative, should one resort
to local or general anesthesia? To joint-

*All the English, French and German publica-
tions to be found in the John Crerar Library,
Chicago.

lavage? To joint-drainage? To immediate closure of the articulation? To immobilization? What is to be the nature of the post-operative treatment?

- f. Results of operative treatment.
- g. Conclusions.

INCIDENCE AS TO AGE.

The reader will keep in mind that the age given in case reports is not that at which the joint-body first became manifest, but is the age of the patient at time of operative relief.

The two youngest patients operated for joint-bodies originating within the organism were nine and twelve years old, respectively. The knee was the articulation involved in both cases. The oldest patients were sixty-four and sixty-five years of age, respectively. The other cases in which the age is stated admit of the following tabulation:

From 14-19 years	45 patients
20-29 years	97 patients
30-39 years	41 patients
40-49 years	34 patients
50-60 years	10 patients

Forty-one patients were subjected to operation for removal of elbow joint-bodies. Twenty-six of them were under twenty-one years of age.

INCIDENCE AS TO SEX.

Thirty-three of the patients were females and the remaining two hundred and sixty-two were males.

The relative freedom of the female sex from this pathological condition applies to all articulations. Out of two hundred and forty-five patients operated upon for knee joint-bodies twenty-six are said to have been females. One female patient was operated for a joint-mouse in right hip.

Women, owing to occupation, mode of life, etc., are less exposed to traumatic influences than men, and therefore pathologic conditions due to external violence are far less frequent in females than in males.

INCIDENCE AS TO ARTICULATION INVOLVED.

The condition may be mono-articular, poly-articular or bilateral. Dissimilar joints may be involved in the same individual.

The unequal distribution as regards articulation involved is well recognized. In some articulations joint-mice are pathological curiosities. Thus Morestin found in the right piso-pyramidal joint of a female dis-

secting room subject a smooth, ovoid, bean-sized, osseous, pedunculated body.

The joint incidence in the other cases is as follows:

Upper Extremity.

Metacarpo-phalangeal joint of thumb	1
Right	1
Radio-carpal joint	2
Right	1
Left	1
Shoulder joint	1
Left	1
Elbow joint	41
Side not mentioned	1
Right	30
Left	10

Lower Extremity

Second meta-tarso-phalangeal joint	1
Ankle joint	4
Side not mentioned	1
Right	2
Left	1
Hip joint	3
Right	2
Left	1
Knee joint	250
Side not mentioned	42
Bilateral	8
Right	99
Left	101

ASSOCIATION WITH PRE-EXISTING OR CO-EXISTING, CONGENITAL OR ACQUIRED, ANOMALIES OF THE ARTICULATION WHICH HARBORS THE JOINT-BODY OR BODIES.

Primary joint-bodies occur in articulations otherwise normal, occur in articulations the seat of other pathologic processes. In the latter condition there will be present a double disability—that determined by the presence of the joint-body and that dependent upon associated conditions. They have been found in connection with joint-bodies from without, with extra-articular foreign bodies, with dislocations, with ruptured ligaments, with fractured articular surfaces, etc.

ETIOLOGY.

In the causation of joint-bodies external violence either of a direct nature, such as that attending bumps, blows, falls, etc., or of an indirect nature, such as forcible muscular or ligamentous contractions, energetic torsions, efforts, sprains, etc., appears to be the main etiological factor. Indirect injuries are commonly due to movements productive of abnormal pressure or great traction on osseous or cartilaginous bone ends.

Patients often do not give a history of an injury sufficiently serious to have impressed itself upon their memory. Nevertheless, in two hundred and eighteen cases, a distinct and definite history of trauma is recorded.

In the elbow cases it is stated in twenty-seven cases of elbow joint-body the causative violence was:

A sprain of upper extremity-----	1 case
A fall upon outstretched hand-----	2 cases
A dislocation of elbow-----	2 cases
Throwing of a stone, of snowballs-----	2 cases
Fall upon elbow-----	8 cases
An elbow injury-----	12 cases

Among forms of violence productive of knee joint-bodies we find the following:

Jumping -----	8 cases
Blow upon knee-----	10 cases
Sprained knee-----	16 cases
Injury to knee-----	46 cases
Fall upon knee-----	56 cases

In a few cases a history of more than one injury is obtained. In such cases one at times finds it difficult to determine which of the two traumatisms is the causative one. In other cases the first violence partly detaches the joint-body, the second one completely frees it from its base. A partly detached joint-body may remain in that state for a long period.

It has been amply demonstrated that trauma, slight or severe, may break off chips of articular cartilage and underlying bone without inflicting necessarily serious injury upon other portions of the joint. Slight force, attempting to avoid a fall, motion carried beyond normal limits, etc., may be the determining factor. The femoral condyles are the most frequent site of origin of traumatic knee joint-bodies.

As regards the etiology of joint-bodies, the following facts are demonstrated:

a. One or more osseous, cartilaginous or osteo-cartilaginous fragments may be forcibly detached into the knee-joint from the femoral condyles, tibial tuberosities or patella; may be forcibly detached from any articular surface into the joint cavity, in the formation of which that surface, in part, enters.

b. Organization of blood clot and resulting formation of a fibrous mass acting as a joint-body is a possible sequel of articular hemorrhage.

c. Lipomata originating in the subsynovial fatty connective tissue may become pedunculated and hang into the joint cavity.

d. Exceptionally the joint-body is a free or pedunculated fibroma, enchondroma, osteoma or echondrosis. Purely cartilaginous joint-bodies are not common.

e. As a result of injury a portion of synovial membrane and underlying fatty connective tissue undergoes thickening and induration. Should this portion project into the articulation, it will be nipped repeatedly during joint-movements.

f. In its normal state the synovial membrane fringes may contain nodules of cartilage. Morbid conditions, as sprains, irritation, etc., act as a stimulus to these cartilage cells, causing them to subdivide, multiply and give rise to growths projecting into the joint-cavity; if these growths are snipped off by the joint-movements, loose joint-bodies result.

In the greater number of cases only one joint-body is present, in some two are present, in some three, in some four, in some five, in some six, in others eight, in others ten.

The joint-body or bodies may be free, pedicled or only partly detached. The joint-body may be adherent to the synovial membrane, the articular capsule or the bone.

a. The joint-bodies were bound down by adhesions in nineteen cases.

b. They were pedicled in twenty-six cases.

c. They were free in eighty-six cases.

Joint-bodies vary in size, shape and surface characteristics. They may be ovoid, oblong, flat, oblong, spheroidal, pyriform, biconcave, biconvex, concavo-convex, flattened, reniform, etc. They are pea-sized, lima bean-sized, olive-sized, pigeon egg-sized, large chestnut-sized, hen egg-sized, etc.

The detached body either remains free or becomes adherent to bone, articular cartilage or synovial membrane by an osseous, fibro-cartilaginous or purely fibrous bond of union.

The cases of joint-bodies which we studied may be classified, according to structural characteristics, as follows:

A. Fibrous in structure-----	11 cases
B. Subserous fat lumps or subserous fat swellings-----	6 cases
C. Lipoma, pedicled or non-pedicled--	12 cases
D. Osteoma -----	1 case
E. Enchondrosis -----	1 case
F. Osseous in structure-----	15 cases
G. Cartilaginous in structure-----	103 cases
H. Osteo-cartilaginous in structure---	123 cases

The large number of osteo-cartilaginous bodies is due to the fact that, in by far the larger number of cases, a piece of underlying bone is broken off with the cartilage, the line of cleavage being in the bone and not between the bone and cartilage.

I. Nature of body not manifest. . . 32 cases

Complete examination of the entire articular cartilage is rarely possible; nevertheless, in many cases, one sees, during the course of the operation, the gap left by the detached joint-body. In knee cases this defect is commonly situated on the outer surface of the internal femoral condyle in front of and close to the seat of insertion of the posterior crucial ligament.

SYMPTOMATOLOGY.

Two sets of symptoms call for consideration—first, those referable to the injury sustained by the joint as a whole at the time of the partial or complete detachment of the joint-body; second, those directly dependent upon the joint-body itself. In many cases the subjective and objective symptoms are so distinct that the condition is easy of recognition. In other cases the symptoms are either inconstant, mild or difficult of interpretation. Partly detached joint-bodies may persist for years as such, causing at long intervals more or less joint irritation. Symptoms may be entirely lacking. Joint-locking may be the first symptom.

The main signs and symptoms of this condition are the following: Pain and tenderness, joint effusion, joint disability, crepitus, joint-locking, direct palpation of joint-body and X-ray evidence of joint-body existence.

Pain and tenderness are present in a large number of cases and may or may not be associated with other symptoms. They may be constant, intermittent or present only on attempted motion. They vary in degree, being in some cases merely a sensation of discomfort or rheumatic in nature.

Joint effusion—The synovial membrane is fretted by the presence of the joint-body, and from this and from the initial trauma an effusion results (hemorrhagic) (rarely) sero-hemorrhagic or serous). The effusion contributes, directly and indirectly, to impairment of joint function. When massive and of long duration it overdistends the joint ligaments, and there results a pathological laxity of these structures which al-

lows abnormal joint movements (lateral movements in knee), impairs joint stability and predisposes to luxation.

Joint disability—Joint bodies are mechanical obstacles to movements, which may or may not produce great pain. Joint disability is reported as marked impairment of function in ninety-three cases, as joint weakness in thirty-four cases, and as limitation of motion in fifty-one cases.

Crepitus—Crepitus is a sensation and a sound; one feels and hears crepitus. In eighty-seven of the studied cases, it is said to have been distinctly elicited. In all cases in which the authors report the presence of crepitus, the joint body or bodies present were cartilaginous, osseous or osteo-cartilaginous in nature.

Joint locking—Sudden attacks of acute severe, excruciating pain associated with joint locking, constitute one of the most pronounced symptoms of this condition. It occurs irrespective of the nature of the joint body. The pain is so severe that not infrequently the patient is nauseated or faints. In the knee, joint locking usually manifests itself as follows: While walking, patient has a very sudden acute pain; he is compelled to stop, to sit down, the joint movement is not completed, the joint is locked, usually in the partly extended position of the articulation. Often the patient knows where the body is impacted.

Direct palpation of joint body—Should the clinician, in examining the affected articulation, palpate one or more joint bodies, the diagnosis is clinched. Palpation informs the surgeon as to size, number, surface characteristics and degree of mobility of joint-bodies. In one hundred and seventy-five cases, one or more joint bodies were palpable before operation.

In the elbow, the joint body may be felt between the ulna and radius or between the radius and humerus or ulna and humerus.

Inability to palpate a joint body does not exclude its existence.

A palpable joint-body may be immovable, slightly movable or very movable. It may be movable in all directions or only in one direction. A movable body may lose its mobility and later recover it.

One of the most valuable agents for the diagnosis of joint-bodies, is Roentgenography. Its value, according to our experience, is dependent to a great degree upon

the ability of the radiographist to take and interpret negatives. The X-ray examination should include both an antero-posterior and a lateral view. Joint-bodies from within containing no calcific deposits or no osseous foci, will not cast a shadow upon the X-ray plate.

Differential Diagnosis—In the differential diagnosis of this condition the difficulties encountered are due to various reasons:

a. The causative violence may not have been sufficiently severe to leave a lasting impression upon the patient's memory.

b. The condition may not come under the surgeon's observation in the early stage; therefore, one, at times, is in doubt as to whether an existent joint-body is primary in nature or secondary to a pre-existing or co-existing joint-affection.

c. In the absence of an exploratory incision, the interior of a joint cannot be inspected.

d. Radiography may fail to make the case clear.

With few exceptions, the mistakes made in reference to the diagnosing of this condition, are avoidable. Joint-bodies located in deep-seated joints (hip, etc.), are the ones which puzzle the clinician. As to the symptom joint-effusion, we should bear in mind that a hydrops which resists appropriate treatment is not a disease sui generis. A joint-effusion calls for interpretation. Is it primary? Is it secondary? If secondary, secondary to what? To the presence of a joint-body? The palpatory findings are all important. The detection of a palpable joint-body, movable or immovable, makes the diagnosis self-evident. Joint-locking occurs in only one other common condition: Partial or complete detachment of one or the other, almost always the internal semilunar cartilage. In the latter condition, the pain is most marked over the interarticular line. In the differential diagnosis between a joint-body and a torn or detached semilunar cartilage, Roentgenography is an invaluable aid. It helps to diagnose the presence, number and location of joint-bodies. The semilunar cartilages consist of a core of fibrous tissue arranged transversely and longitudinally, with a covering above and below of white fibrous cartilage. As they contain neither calcific nor ossific deposits, they are not opaque to the X-rays, and when torn or

displaced cartilages give no findings on the X-ray plate. Osseous and osteo-cartilaginous joint-bodies appear as shadows on the X-ray plate.

A partly or completely detached semilunar cartilage calls for an arthrotoomy as a preliminary step to its proper fixation or removal. All primary, free or pedicled, joint-bodies call for an arthrotoomy as a preliminary step to their operative removal. Since both conditions call for opening of the synovial cavity, failure to differentiate one from the other is neither a disastrous nor even a very significant mistake.

Treatment: In all cases of joint-body herein considered, the involved articulation was opened. In almost all the cases, one joint-body was removed; in the remaining cases, two or more were extracted.

For the operative removal of joint-bodies, in the absence of contraindications, we subject our patients to general surgical anesthesia, employing either nitrous oxide-oxygen or sulphuric ether anesthesia, initiating the latter by nitrous oxide gas. General surgical anesthesia secures complete abolition of consciousness, complete muscular relaxation and more ample protection against pain.

For the removal of joint-mice, select an incision giving easy access to the joint-body or bodies present and inflicting a minimal amount of trauma upon the peri-articular structures. The position of the incision is largely determined by the location of the body or bodies to be removed. It is generally longitudinal. Joint may be opened directly over mouse. For the removal of knee joint-bodies, some operators make an incision to the inner side of the patella, some to the outer side.

We advise that articulations be opened by longitudinal incisions, incisions parallel to the long axis of the limb, and in suitable cases, made directly over the joint-body itself. In the knee, make your incision, if not directly over the joint-body itself, to the inner or to the outer side of the patella. On the inner side of the knee are present the thick muscular fibres of the vastus internus. If adapted to the case at hand, an incision external to and above the patella, parallel with the fibres of insertion of the vastus externus is the incision of election.

There is one exception to this rule. A joint-body in the posterior part of the ar-

tication cannot, owing to the narrow communication between the anterior and posterior portions of the capsule, commonly be removed by means of an anterior incision unless one cuts the lateral ligaments. This is to be avoided. In such cases, place your patient during the operative intervention in the ventral position and use a posterior incision. The length of the incision varies with the articulation and with the number and nature of the joint-body or bodies to be removed.

Joint-lavage—Healthy joints do not call for irrigation. All irritation of joint-endothelium must be avoided. Irrigation of the peritoneal cavity as a prophylactic to peritonitis has been abandoned. Irrigation of the pleural cavity in the treatment of empyema is meddlesome; it has no curative value. Joint-irrigation is no preventive of arthritis. It water-logs the tissues; it lowers tissue resistance; it serves no useful purposes; it delays recovery. We advise that it be not practiced. We do not irrigate clean operative wounds. Why irrigate normal articulation?

Joint-drainage—Joint drainage frequently results in partial or complete ankylosis. A non-infected joint does not call for drainage.

Immediate closure of articulation—Immediately after the removal of joint-mice, the joint-capsule and the divided overlying peri-articular tissues should be reunited. The synovial membrane and capsule are closed with catgut and the overlying tissues with removable non-absorbable suture material.

Immobilization and post-operative treatment—In the cases under consideration, it is desirable though not essential that the operated joint be immobilized and that its articular surfaces be pulled apart. Secure fixation of the limb by the application of an anterior (rarely), posterior (generally) plaster-of-Paris splint moulded to the extremity. The splint should be of sufficient length to prevent all motion in the operated joint. To immobilize the knee-joint, the splint should extend from about two inches above the malleoli to within two inches of the perineum. By making extension on the distal segment of the limb, one can secure the desirable separation of the articular surfaces. Thus, the desired separation of the articular surfaces of the knee will be

obtained by making moderate extension on the leg.

Results—All the patients recovered from the operation.

In analyzing the results, we first note the important fact that there were no operative deaths. The case-reports show that in a large majority of cases, non-operative treatment was tried and was found inappropriate, valueless, harmful. In the treatment of primary joint-bodies, it is generally recognized that non-operative measures are not curative. They prolong the patients' local suffering and disability; they indirectly lead to, or aggravate existing articular changes. Repeated attacks of joint-locking usually lead to permanent hydrarthrosis. Chronic joint-effusions can disturb to an irremediable degree the anatomical integrity of joint-structures.

In the large majority of cases, over two hundred, joint-body removal was followed by restoration of anatomical and functional integrity, expressed as follows: Complete functional recovery, function of joint normal, perfect anatomical and functional recovery, full recovery, etc., etc.

With such results before us, no one should be allowed to go about suffering from loose or pedicled joint-bodies. Operation cures the condition and is followed in a large majority of cases, sooner or later, by complete anatomical and functional joint-integrity.

SUMMARY.

1. Primary joint-bodies occur in joints otherwise normal or presenting only such anatomical changes as are secondary to the presence of joint-body or bodies.

2. Primary joint-bodies occur in joints, the seat of congenital or acquired pathological states, having no relation, either as cause or effect to joint-mice.

3. Joint-bodies occur in the white and colored race, in both sexes and at all ages. They are met with maximal frequency in the male sex and during the third and fourth decades of life.

4. They are single or multiple, free or pedicled, and involve one or more similar or dissimilar joints. They may co-exist with extra-articular bodies and with various pathological peri- and extra-articular conditions.

5. Joint-bodies vary as to nature, shape,

size, mobility, surface characteristics, and as to relation to articular bone-ends and synovial membrane. All undergo, sooner or later, degenerative anatomical changes. All determine sooner or later, degenerative anatomical changes in one or more or all the structures constituting the joint.

6. Joint-bodies, organized blood-clots excluded, are composed of one or more of the constituent tissues of the joint. In structure they are of a fibrous, lipomatous, osseous, cartilaginous, osteo-cartilaginous or mixed nature. The joint-bodies reported were chips or fragments of bone, of cartilage, of bone and cartilage, masses of thickened indurated connective tissue, organized blood-clots, fibromata, lipomata, chondromata or osteomata.

7. Joint-bodies can co-exist with various articular lesions due to the same causative violence, or secondary either to joint-body irritation or to totally distinct and independent causes.

8. We know as to articulation involved, that—

a. No diarthrodial joint is immune.

b. Excluding the joints of the upper extremity, the right and the left-sided joints are involved with about equal frequency.

c. The knee and the elbow are the most frequent seats of joint-bodies; joint-bodies in other articulations are clinical and pathological rarities.

d. Joint-bodies are found over five times as often in the knee as in all the other joints put together.

e. All bilateral cases reported in the literature are knee cases.

9. Violence is the first and foremost etiological factor. It may be direct (bumps, blows, falls, etc.) or indirect (torsions, efforts, sprains, strains, etc.). slight, moderate or severe, and cause, in addition to the joint-body, other articular and peri-articular injuries. In exceptional instances, joint-bodies result from an inflammatory or a neoplastic process.

10. Cases of joint-bodies are not infrequently unrecognized, misdiagnosed and, as a result, subjected to injudicious and, at times, actually injurious treatment.

11. Joint-body symptoms are referable to three factors—

a. The injury causative of the joint-body.—The causative injury determines symptoms of acute articular and peri-articular

joint inflammation, symptoms analogous to those occasioned by strains, sprains, contusions, fissures of cartilaginous articular surface and other joint traumatism.

b. The joint-body proper.—Joint-bodies proper determine one, more or all of the following symptoms:—Joint-pain and tenderness, joint-swelling, joint-crepitus, joint-effusion, joint-disability, joint-locking. These symptoms are merely suggestive of the condition which we are discussing. If the joint-body be palpated, the diagnosis is absolute. If the existence of the joint-body be demonstrated by the fluoroscope or skiagram, the diagnosis is manifest.

c. The secondary joint-changes induced by the presence of the joint-body.—The secondary articular changes induced by the presence of the joint-body cause symptoms varying from slight to complete joint-crippling. Repeated attacks of joint-locking and recurrent hydrarthrosis are responsible to a large degree for the deviations from the normal in contour, attitude and measurements of the affected articulation and also for the impairment of joint-function.

12. An attempt should always be made to diagnose not only the presence of joint-mice, but also their number, location, nature and other characteristics.

13. Roentgenography is an invaluable aid to diagnose the presence, number, location and many characteristics of joint-bodies. The X-ray examination should include an antero-posterior and a lateral view. Stereoscopic radiographs are to be preferred. Joint-bodies may exist though the X-ray plate be negative. If a joint-body from within be not the seat of calcific deposits or contain no osseous portion, it will cast no shadow upon the X-ray plate. X-ray findings have merely a confirmatory value.

14. The only relatively frequent condition which is difficult, at times, to differentiate from joint-bodies, is a partly or completely detached or ruptured semi-lunar cartilage. This condition also calls for an arthrotomy; therefore, the mistake of a joint-body for a detached or ruptured semi-lunar cartilage or vice versa is not a significant diagnostic mistake.

15. Primary joint-bodies, irrespective of origin, location, nature, volume, number, mobility or surface characteristics invariably impair, sooner or later, the anatomical and

functional integrity of the articulation which harbors them.

16. Joint-bodies should invariably be removed by an open operation, using that incision which gives best access to the joint-body or bodies and which inflicts the minimal amount of permanent injury upon the peri-articular structures. Chronic synovial effusions are dangerous to the integrity of the joint and justify the very slight risks which attend modern aseptic methods.

17. Important operative points are:—(a) General anesthesia. (b) Use of an Es-march constrictor which is removed immediately after ablating the joint-body and before suturing the capsular wound. (c) Incision parallel to the long axis of the limb. (d) Location and length of incision determined by the site, size and number of the joint-bodies. (e) Removal of joint-bodies by aid of instruments. Intra-articular manipulation should be reduced to a minimum. (f) No joint-irrigation. (g) No joint-drainage. (h) Separate suture of capsular and cutaneous wounds.

18. The removal of joint-bodies is an operation of great simplicity, having no morbidity and no mortality. If an arthro-tomy be performed with aseptic precautions, the risks to the articulation, immediate or remote, are nil.

19. The removal of joint-bodies is followed by more or less complete anatomical and functional recovery. In cases of long standing, the return of complete functional integrity is not always immediate.

20. No one should be allowed to go about suffering from primary loose or pedicled joint-bodies. Operation cures the condition and in a large majority of cases leads to a complete return of anatomical and functional integrity.

ACQUIRED NON-TRAUMATIC CATARACT OF THE YOUNG.

Dr. C. B. Wylie, Morgantown, W. Va.

(Read before the American Academy of Ophthalmology and Oto-Laryngology, Boston, Mass., October, 1914.)

The question of intra-nasal deformity as a causative factor in the production of ocular lesions has been recognized for a number of years, and much has been written on this subject as it applies to both

ocular and oral disturbances. Little has been written, however, as to the relationship between acquired non-traumatic cataract of the young and intra-nasal pressure.

During the last five years eleven of such cases, in various stages of development—from slight opacity of the lens or capsule to complete cataractous condition—have come under my observation. Such measures were instituted as in my judgment offered the best results in each case.

To present a brief description of these cases, together with the line of treatment instituted, the results attained, and conclusions as to the underlying etiological factor in their production, is the object of this paper.

Before beginning a description of these cases, permit me to review briefly the nerve relationship of the nasal cavity and ocular structures.

It is a well known fact that the tri-facial anastomoses with more of the cranial nerves than any other in addition to its close relation with the sympathetic ganglions, but I shall only speak of the association of these parts by way of the vaso-motor or sympathetic nerves in their influence on nutrition, resulting in the conditions found in these several cases.

The gasserian ganglion as it lies on the upper surface of the petrous portion of the temporal bone—just at the exit of the internal carotid artery from that structure—divides into three branches, the ophthalmic, superior and inferior maxillary nerves—the first two being sensory, the latter motor. The ophthalmic and superior maxillary branches, which are of interest in connection with this subject, supply the ocular and nasal structures respectively with sensory impulses; the sympathetic system anastomoses abundantly with these sensory nerves through their ganglionic centers, the ciliary or ophthalmic, sphenopalatine or Meckel's, otic and submaxillary; the first two only being of importance in this connection.

The superior cervical sympathetic ganglion, which connects with all the spinal sympathetic nerves, gives off a superior branch which travels along the internal carotid artery, passing into the carotid canal where it divides into two branches, one passing along the external and the other the internal walls of the artery. The external, in addition to supplying filaments to

the artery, forms the carotid plexus; the internal likewise gives off filaments to the artery and as it passes on, forms the cavernous plexus; the carotid here communicates with the gasserian ganglion and the sphenopalatine ganglion. The cavernous plexus with the third, fourth, fifth and sixth nerves and the ciliary ganglion. Both the carotid and cavernous plexuses supply filaments which traverse the carotid and its branches to its final termination.

The ciliary ganglion, situated external to the optic nerve in the orbit, receives branches from the naso-ciliary and carotid plexus and sends branches to the interior of the eye and through the nasal nerve reaches the upper and anterior portion of the nasal cavity.

The sphenopalatine ganglion, situated in the sphenomaxillary fossa, receives branches from the superior maxillary, the facial and the carotid plexus and sends fibers to the turbinated bone and palate. The otic ganglion, while connected with the third branch of the fifth nerve and the carotid sympathetic, is not of interest in this connection.

The close relationship of the sensory and sympathetic nerves, and the fact of the sympathetic nerves being also vaso-motor in function, gives to them a controlling influence over nutrition.

In taking up these several cases, much of their history has been omitted for the sake of brevity, and I will give only the essentials in each case.

CASE 1.—Boy eighteen years of age came to me with a history of having first noticed a blurring of vision of right eye about one year previous. Six months later a similar condition was noticed in the left eye.

On examination I found right eye 20/40, left eye 20/30, with several punctate opacities on the posterior capsule of both lenses—more pronounced on the right. Subjective symptoms negative except blurred vision.

Personal history good; family history fair. Fundus examination showed normal condition. On making nasal examination a pronounced septal thickening was found, making pressure on both middle turbinates. Operation was advised, which was rejected by parents. He was put on iodid of potassium treatment for four months, at which time examination showed the opacities markedly heavier. An operation was then agreed to.

A sub-mucous resection of the thickened portion of septum was done. The iodid treatment was continued with marked improvement in three months. Three months later the opacities had entirely disappeared and vision was 20/20 in both

eyes. Two years later there was no evidence of a return of the conditions.

CASE 2.—Boy seventeen years of age referred to me by a physician from a rural district with a history of beginning failure of vision of both eyes five years previous. When seen by me could count fingers at six feet.

Family history negative. Personal history, no severe acute sickness or ocular disturbance preceding the beginning failure of vision. Both pupils presented light gray appearance, showing advanced cataractous lens. No kidney, specific or rheumatic history.

On examining the nasal cavity a septal thickening was found, pressing on both middle turbinates. A septal operation was done; also the posterior third of both middle turbinates was removed, disclosing a purulent anterior ethmoiditis on both sides.

The patient was then put on mercury and potassium iodid treatment for six months with no appreciable change. I then did a lens extraction of the left eye, which gave 20/30 with plus 10.00 spherical correction. Nothing has yet been done for the right eye.

CASE 3.—Young woman twenty-three years of age; family history; general rheumatic condition of several members of family, otherwise negative. Personal history—Eighteen months previous to coming to me she had noticed a blurring of vision of both eyes, which had gradually increased until her vision at that time was 20/40 in both eyes. Both lenses showed a light gray color, more intense in center of pupil.

On examining the nose, the posterior end of both middle turbinates was found to be quite large, making pressure on the septum. These hypertrophied ends were removed, which gave free drainage and ventilation to both nostrils. She was then put on iodid and continued for six months; vision at that time was 20/25, both eyes. The case was afterwards lost sight of.

CASE 4.—Young man twenty-five years of age came to me for gradual failure of vision of both eyes, which had first been noticed two years previous. At time of first seeing him he could count fingers at ten feet, the lens decidedly opaque, both eyes much the same. Personal history—Acute sicknesses of childhood, no severe sickness since that time. Had always lived in the country.

On making a nasal examination a septal spur was found on both sides, extending and pressing against the anterior two-thirds of the middle turbinates. A sub-mucous resection of the septum was done, and after healing he was given constitutional treatment for a period of eight months, at which time his vision in both eyes was 20/60, and, despite continued treatment, has remained much the same.

CASE 5.—Woman thirty-one years of age living in the country, was married and had three children, the youngest of which was six years old; had first noticed a blurring of vision in left eye three and one-half years before, followed six months later by similar condition in right eye. At time of first visit had light perception of left eye and could count fingers at five or six feet with right eye.

Nasal examination showed posterior third of both middle turbinates very much enlarged and

pressing on septum, with muco-purulent secretion in posterior nares. The hypertrophied portion of the middle turbinates was removed. She was then given constitutional treatment for eight months with apparently no benefit. A lens extraction was done on both eyes, with three weeks intervening. With plus 9.00 spherical correction she is able to see, right eye 20/30, left eye 20/40.

CASE 6.—Boy nineteen years of age, poorly nourished, came to me with a history of having noticed a beginning failure of vision in right eye six years previously. Same condition began in left eye one year later. Examination showed only light perception in both eyes.

This case gave a history of having been struck on the nose while playing ball about one year before beginning of trouble in right eye. On examining the nose I found the septum very much thickened and deflected, making pressure on both middle turbinates, with polypi showing under anterior end of turbinates.

A septal operation was done and the polyp removed. He was then put on mercury and iodid for several months with no appreciable results. Lens extraction was then done on the left eye, and with a plus 8.00 sphere gave 20/40 vision. Operation on right eye was refused.

CASE 7.—Boy twelve years of age was referred to me with a history of failing vision of right eye for one and one-half years, left eye two years. Family history good. Personal history—Measles and whooping cough before eight years of age.

Examination showed shallow anterior chamber, lens slightly but uniformly hazy, vitreous cloudy. Vision of right eye 20/30, left eye 20/50. Further examination showed enlarged faucial tonsils, adenoid vegetation in posterior nares, anterior third of left middle turbinates greatly enlarged, crowding the septum over against the right middle turbinate. Adenoid and tonsils were removed, later a part of left middle turbinate was removed, relieving the pressure in both nostrils. Eight months later under constitutional treatment right eye was 20/20, left eye 20/30.

CASE 8.—Boy fourteen years of age was referred to me for information regarding a school for the blind. At that time lenses of both eyes were cataractous—could count fingers only at three feet.

Family history uncertain. Personal history—No severe sickness of childhood; had a blow on the nose when eight years of age. Dimness of vision was first noticed five years ago, gradually progressing until the condition stated above on first examination.

Examination showed a greatly thickened nasal septum, with practically no breathing space on either side, posterior nares filled with adenoid growth. Growth was removed from posterior part of the nose and a septal operation done. Constitutional treatment was instituted for several months with no appreciable results. The lens of right eye was then removed and with correcting lens had 20/40 vision, some capsular involvement still remaining. Nothing has yet been done for the left eye.

CASE 9.—Girl eighteen years of age came to me for failure of vision in left eye, first noticed four months previously. Family history fair. Personal history—Acute sicknesses of childhood, no

severe illness for the last five years. Vision of left eye 20/40, right eye 20/20.

Nasal examination showed septal deflection to left side with enlarged left middle turbinate. Operation for correction of this deformity was refused. She was then put on iodid and this was continued for four months, with result of continued failure of vision of left eye. Operation was then agreed to. The septal deformity was corrected, constitutional treatment continued and in two months some improvement was noticed. In six months vision had improved to 20/20, at which time patient moved away.

CASE 10.—Man thirty-five years of age came to me complaining of inability to see clearly for the last two months—there seemed to be a mist before his eyes.

Family and personal history good. Vision of both eyes 20/30. Examination of both lenses showed a hazy condition. There had been no acute sickness or specific trouble.

On examining the nose the posterior end of both middle turbinates was found to be enlarged and pressing on the septum. These enlarged parts were removed, the patient put on constitutional treatment and in four months vision in both eyes was 20/20.

CASE 11.—Man twenty-seven years of age referred to me with pronounced opacity of both lenses. Trouble began four years previously with slight haziness and had grown progressively worse until at time of first visit could count fingers at five or six feet. About one year before this trouble was first noticed he had been struck on the bridge of the nose while playing football, which gave him considerable trouble at the time, but from this he had apparently entirely recovered.

On examining the nose a very much thickened and twisted septum was found, making pressure on both lateral walls. A sub-mucous operation was done, removing the greater portion of cartilaginous and bony septum. This was followed by constitutional treatment for six months with no improvement. Lens extraction was then done on both eyes, with an interval of six weeks. Both capsules were involved in the cataractous condition, so that with correcting lens, right eye 20/50, left eye 20/60, vision was the best that could be developed.

In all of these eleven cases, neither syphilis, nephritis nor tuberculosis was manifest, nor was there any serious acute sickness preceding these ocular disturbances.

To summarize: Six of these cases, the patients ranging in age from twelve to thirty-five years of age, showed marked improvement following nasal operation and constitutional treatment—four of which had 20/20 vision in both eyes, one 20/25 in both eyes, the other 20/60 in both eyes—the latter being due to a marked capsular involvement.

Five of these cases, the patients ranging in age from fourteen to thirty-one years of age, had disturbance of vision ranging from

three to six years duration. In none of these did nasal operation and internal treatment produce any appreciable result; lens extraction, however, gave fairly useful vision. Thus, the conclusions to be drawn from conditions of this nature produced by intra-nasal pressure are, that if corrected before a marked destructive process has taken place in the lens and capsule by suitable operative procedure within the nasal chamber, good results will follow. It is likewise evident from these other cases, which were not benefited by operative procedure in the nasal cavity, that a permanent structural change had taken place and that nasal operation was not followed by any beneficial results.

I do not wish to be understood from the above statement, to specify an arbitrary time when such conditions will or will not improve following a correction of an existing nasal trouble, for different conditions may alter the time when such changes take place; but that where such conditions have existed a sufficient length of time to produce a structural change, resolution will hardly take place even after normal nutrition has been re-established.

In view of the fact that all nerves possess trophic fibers, it is evident that where a degenerative process of the nerves themselves takes place, the trophic nerves will also degenerate and lose their function. Thus, a continued pressure within the nasal cavity of long standing will be followed by an atrophic condition of the trophic nerves, which so interferes with the nutrition of the crystalline lens and capsule as to produce a permanent derangement.

This same condition of pressure for a short period of time, however, is not likely to produce any real tissue change and when corrected will soon re-establish normal function and nutrition; while long-continued pressure or irritation will in time produce actual destruction. In the beginning pressure symptoms within the nose will produce an irritation of the sympathetic nerves which will be followed by temporary exhilaration of the vaso-motor nerves while if this condition is long continued, these trophic nerves will atrophy and thus destroy the control of nutrition to the parts involved.

It seems obvious that disturbance of nutrition of the crystalline lens and capsule

may take place simultaneously from the same cause, and that the resolution of one is usually accompanied by resolution of the other.

Loss of cellular elements of the lens capsule due to vaso-motor disturbance of nutrition may be followed by passage of aqueous fluid through the capsule into the lens substance, producing lens opacity and more or less swelling. If interference of nutrition is arrested before actual disintegration of capsular substance takes place, resolution may follow in the capsule, rendering it again non-porous when lens opacities may under favorable conditions be absorbed; if, however, there is an actual degeneration of the capsular substance, resolution of the lens substance will hardly take place even after normal nutrition has been re-established to the lens.

SYPHILIS — SALVARSAN — SCEPTICISM.

W. C. Slusher, M.D., Bluefield, W. Va.

The medical press has been so flooded with literature on the subject of salvarsan therapy that I have some misgiving in contributing further to it, but the diversity of opinion concerning its merits, careless administration, and exploitation by medical charlatans, has suggested this article.

This diversity of opinion and exploitation by quacks, are tending to make the profession unduly sceptical as to the virtue of salvarsan in many syphilitic manifestations. One investigator tells of brilliant results obtained in certain syphilitic conditions, and another reports little or no benefit in the same manifestations. Why this vast variance of results? If one authority gets uniformly good results, is it not natural to assume that the poor results are due to faulty technic, insufficient amount of drug, mismanagement of case before or after administration, idiosyncrasy, or some factor overlooked or disregarded by the operator reporting the poor results? I am of the opinion that a great many bad results following administration of salvarsan and neosalvarsan are due to faulty technic, particularly in regard to aseptis.

Burchell, of New York Eye and Ear Infirmary Laboratory, and myself, conducted a series of experiments, results of which

were published in *New York Medical Journal*, July 15th, 1911, calling attention to fact that neither of these drugs nor the media in which they were administered, were germicidal.

The notoriety and popularity of salvarsan with the laity have made a certain class of physicians think that they must administer it or be looked upon as "back numbers" (if you will pardon the slang); then others essay its administration purely as a means of graft.

It is administered in both cases without regard for its contra-indications, and in most instances the patient is led to believe that one dose is sufficient to eradicate the disease. A relapse, of course, in the majority of cases, is inevitable, and the patient is disillusioned and made sceptical, to say nothing of the time lost in treatment, the expense, and the menace the patient has been to society.

Salvarsan, like the X-Rays, was heralded with a tremendous wave of enthusiasm, and the profession, as well as the laity, has been carried beyond the bounds of credulity. The pendulum is now on the backward swing, and it remains to be seen how far it will be carried by this backward movement—scepticism. It, like all new cures or so-called cures, must pass through these stages before the painstaking investigators of the profession work out the indications and contra-indications, and place the remedy on a sound and proper footing in our therapeutic armamentarium.

The technic of salvarsan administration should be as scrupulously carried out as that of brain or abdominal surgery, and any doctor attempting its administration without the facilities for such technic is jeopardizing life unnecessarily.

After administering over two hundred doses of salvarsan and neo-salvarsan, I have come to the following conclusions:

1st: Salvarsan is safer and more potent than neo-salvarsan.

2nd: At least three doses should be administered at intervals of four to ten days, and after Wassermann reaction becomes negative, mercury and iodide should be given for a period of months if well tolerated, and before discharging patient he should be advised to remain under observation for several years, and be made to understand the seriousness of syphilis to so-

ciety; but the hopeful side of the situation must not be neglected, for syphilitic patients are too prone to become phobic.

3rd: That salvarsan is indicated in every manifestation of syphilis, unless the patient is moribund.

(In this connection the following from *The New York Medical Journal* is interesting.—Editor)

A WARNING CONCERNING THE USE OF SALVARSAN.

By W. C. SLUSHER, M. D.,
Bluefield, W. Va.,

AND E. B. BURCHELL, M. D.,
New York.

After hearing much said concerning the probable germicidal powers of salvarsan, it occurred to us that some experiments tending to settle this moot question would be interesting, and the following experiments were carried out in the laboratory of the New York Eye and Ear Infirmary:

Four cubic centimetres of a one per cent. solution of salvarsan in sterile water were added to a pure culture of staphylococci of twenty-four hours' growth on plain agar, and then, after intervals of five, ten, twenty and fifty minutes, a loopful of this mixture of staphylococci in salvarsan solution was transferred to slants of plain agar, and incubated for twenty-four hours at 37° C. On the tubes exposed for five, ten and twenty minutes the colonies were so numerous they could not be counted. On one exposed fifty minutes forty-eight colonies were found. Then a twenty-four hour pure culture of staphylococci was similarly treated with a 4 c.c. salvarsan solution prepared for injection by the alkaline (Lesser's) method, and after a repetition of the procedure it was found that all four slants contained so many colonies they could not be counted. On a control tube, inoculated at the same time, without being subjected to alkaline solution of salvarsan, the growth was not so luxuriant, which proved to us that the alkaline solution of salvarsan favored, rather than retarded, the growth of bacteria. At the same time a pure culture of staphylococci was subjected to iodipin (ten per cent. iodine in oil of sesame, Merck), in which case the growth on all four tubes of agar was so profuse, if not more so, than the tubes submitted to the alkaline solution of salvarsan.

It is a fact that physicians often go to their druggist to have salvarsan prepared for administration, or prepare it themselves, in the office, and administer with little or no regard for asepsis, believing that salvarsan, or the medium in which it is administered, is germicidal. Our experience in adminis-

tration of salvarsan, after thorough sterilization of everything coming in contact with the patient and the result of experiment, leads us to the belief that the cases of necrosis and infection are due to carelessness or disregard of asepsis.

A CASE OF SPOROTRICHOSIS.

(The First Recorded in West Virginia?)

R. H. Haynes, M.D., and S. L. Cherry, M.D., Clarksburg.

(Exhibited before the Harrison County Medical Society, December, 1914.)

Mr. E. M. H., a farmer, age 44, presented himself with the following condition. On his right hand at the base of the little and next finger was an elevated, warty growth about three quarters of an inch in diameter. The surface was ulcerated and was discharging a thin serous fluid. A series of subcutaneous gummatous formations extended at intervals all along the flexor and outer surface of his arm. They were dark red in color, but slightly tender and there was no evidence of softening. Between the nodules the lymphatics could be felt and the axillary glands were enlarged. There were no constitutional symptoms.

The first lesion appeared six weeks previously as a small pimple in the position of the gumma that was now ulcerated.

One of the non-ulcerated nodules was opened under aseptic conditions. Several small flakes were picked from the curet and cultured on blood serum at room temperature. On the third day a pure culture of *Sporotrichium Schencki* was obtained in four of the six tubes inoculated. Subcultures grew out in twenty-four hours. No organisms were found in smears made directly from the lesion; the only feature was the abundance of large mononuclear cells containing inclusion bodies.

The patient was given potassium iodide in increasing doses and was entirely well on Jan. 15th, 1915.

There are probably other cases of this kind in the state; it is easy to mistake them for tuberculosis or syphilis.

Correspondence

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION, 27TH ANNUAL SESSION.

Dr. J. E. Cannaday, Charleston, W. Va.

This last meeting was held at Asheville, N. C., in the New Grove Park Inn which is situated on the side of the Sunset Mountain. This hotel is perhaps one of the most unique buildings in the world. It is built of native weather-beaten stone, gathered from the mountain sides, all laid with the weather worn surfaces outward, and no mortar showing in the joints. This, with the style of construction, gives it an appearance of great age and massive construction. At either end of the great lobby there is a huge open fireplace in which logs twelve feet in length are burning on andirons that weigh five hundred pounds each. The elevator shafts are skillfully concealed in the jambs of the colossal fireplaces.

At this meeting of the association, Dr. John Wesley Long, the most prominent surgeon of North Carolina, was president. This society was organized more than a quarter of a century ago by a number of the leading surgeons of the Southern States. Its membership is not limited to the south, as its name might indicate, but at this time about one fifth of the members reside in the north and west.

The membership is limited to two hundred, and at present there are eighty-five applicants on the waiting list. There were seven vacancies this year, and for these, candidates were selected by the council.

Dr. H. A. Royster of Raleigh, North Carolina, was chairman of the local committee of arrangements and took excellent care of the visiting members.

Dr. Henry O. Marcy, the veteran surgeon of Boston, related a number of his experiences as surgeon in the Union Army during the Civil War. He also discussed military surgery from its historical aspects. He spoke of Baron Larrey, Napoleon's chief surgeon, who accompanied him in all his campaigns. Napoleon was a great admirer of men and things scientific, and had all of the French soldiers vaccinated. Once Jenner, the discoverer of vaccination, made some request of the French Government. Napoleon said that by all means his request must be granted, and remarked that he con-

sidered Jenner one of the greatest benefactors of the age. Dr. Marcy said that it was not generally known that Napoleon was an epileptic. Baron Larrey relates how on one occasion a great battle was to begin at sunrise. Napoleon had left word that he be called at four o'clock in the morning, but meanwhile, that night, Napoleon had a severe epileptic seizure and Larrey let him sleep until six o'clock. Meanwhile a great battle was going on and the fate of empires was being decided.

Dr. Marcy reviewed the surgical service of the Civil War, and related many stories of those stirring times. He described the sanitary service and regulations in use in the troop camp on Folly Island off the coast of South Carolina, where he was stationed. From this island the city of Charleston, South Carolina, was bombarded. He gave his soldiers at that time a sterile diet, that is, he only allowed them to eat cooked food. He told how he vaccinated five hundred negroes in one night, and thus saved the army from an epidemic of smallpox. Even at that day Dr. Marcy observed that the wounded in tents did much better than those taken care of in houses or hospitals. The Civil War was the first large war in which general anesthesia was made use of.

In reference to the surgical service in the Civil War, I recall a manual issued by the Confederate Government for the use of its military surgeons. In this unique work the subject of hospital gangrene is treated somewhat in detail. I recall that two widely divergent remedies were recommended for this dreadful malady, one being liquid bromine and the other cranberries, both locally applied.

Dr. Marcy described the ambulance service as used in the Civil War, and said that J. Marion Sims was knighted for introducing the American ambulance service in the Franco-Prussian War of 1870. During the Civil War one-third of the cases of typhoid fever died. He described how, on one occasion when unable to obtain suitable splint material, in order to prepare a large number of cases of fracture for transport, he made use of straw from sheaves of wheat, firmly bandaged alongside the limbs. He showed how alcohol affects the soldier and brings about his deterioration. Dr. Marcy was Lord Lister's first American pupil, and he described his original method of operat-

ing in the presence of numerous sprays of carbolic acid, and described the gradual transition from antiseptic to aseptic surgery. He considers the duties of the military surgeon before the battle to be more important than those after. He recalled how, after a great battle, Ambrose Pare being unable to minister to all the wounded, by pouring boiling oil into the wounds, etc., as was the custom then, found that the untreated wounded did better than the others.

In conversation with Dr. Rudolph Matas of New Orleans, he remarked to me that the amount of anaerobic infection occurring in wounds on the battle front in Belgium and northern France, had reached frightful proportions, that it was in a large measure attributable to the highly cultivated and fertilized state of the soil. He said that military surgeons on duty there were having their faith shaken in asepsis and were returning to antiseptics.

Dr. J. C. Bloodgood, of Baltimore, gave an extended talk on what the civil surgeons can do for military surgery in time of peace. He said some of our time-honored methods of protection from infection were certainly fallacious in the extreme. We want simplicity and economy. Tincture of iodine has come to stay. We have gotten over our former religious veneration for bichloride of mercury. The railways should use a first aid package similar to that used on the battlefield. He exhibited the Southern Railway emergency package which the trainmen are instructed in using. All manufacturing establishments should have a similar first aid service. The Colorado Fuel and Iron Company have been among the leaders along that line in this country. Every chauffeur, motorman and policeman should carry a first aid package and have definite instruction regarding its use. The sterile dressing promptly and properly applied is of great value in accident cases, and protects against infections. Our medical students need instructions in regard to the fixation of fractures and the treatment of wounds and joints. Every medical school should have a military surgeon to give special instruction; plaster is not the proper thing for the immobilization of fractures; transportation of wounded needs special attention. We have too many little hospitals. A comparatively small number of large, well equipped institutions can take

better care of the sick and injured. The usual civil surgeon would be a rather dangerous person to send to the front in time of war.

Simple methods are best in dealing with infected fractures, radical work is usually dangerous in these cases. Wounds of the chest usually get well, because the surgeon has too much respect for the chest to meddle there. Head injuries call for rapid transportation to well equipped hospitals, so that a decompression operation, if needed, can be done early. Don't wait in these cases. If you do wait as long as twenty-four hours, you had as well continue to wait, and let the patient die undisturbed. Alcohol, balsam of peru and iodine, are our best antiseptics. The Southern Railway first aid package contains carbolized vaseline for burns.

Col. Richards, of the surgical service of the United States Army, was present by invitation, and discussed military surgery with special consideration of gunshot injuries. The treatment of these injuries at the front has to be modified by the peculiar conditions that exist in war. Owing to the very sudden influx of patients, it becomes impossible to carry out civil hospital methods. Most of the wounds are caused by projectiles and from fifteen to twenty percent of these are due to the artillery arm of the service.

The initial velocity of the modern army rifle ball is twenty-seven hundred feet per second. In shrapnel, spherical bullets are used. The solid shot of artillery no longer exists. The shrapnel shell is a pointed cylinder, arranged either to explode by a time fuse or by contact. Shell wounds are ragged; ordinarily the bullet cuts its way rapidly and causes but little splintering of bone. In soft organs it is more apt to have an explosive effect, especially at comparatively short range. At long range the rifle ball usually does not do so much damage; however, when nearly spent, it may wobble or turn, end on end, causing great destruction of the tissues. When it strikes sidewise, it causes the keyhole type of injury.

Eighty-five percent of deaths on the battlefield are due to primary hemorrhage. Conditions on the battlefield nearly always preclude the successful performance of abdominal operations. Small openings in the

bowel may cause but little leakage and may also heal spontaneously.

Col. Richards exhibited a number of pathological specimens obtained from the Balkan and the Spanish-American wars.

The modern army rifle bullet may be said to be fairly humane, except when it is deflected from its course or meets with great resistance.

Dr. John Young Brown said fractures were often infected by the attending physician. He advocated laparotomy in all cases in which we have perforating wounds of the abdominal wall. Symptoms of shock and hemorrhage, taken along with a perforating wound of the abdomen, particularly indicate laparotomy. Perforating wounds of the comparatively bloodless part of the bowel cause neither hemorrhage nor shock. Do not wait for perforation symptoms. In civil practice it is safest to assume that there is an injury to the bowel.

Dr. Caldwell quoted Dr. John B. Deaver as saying that pneumonia is likely to follow liver wounds. Dr. Bloodgood said that Ambrose Pare established the principle of non-interference with wounds on the battlefield. In military surgery, the benefits of meddling interference are negative. Instruct the layman to do nothing to a wound except to apply the first aid dressing. Col. Richards says that on the battlefield the first aid dressing should be applied as promptly as possible, and that there should be absolute non-interference. The ambulance attendant paints in and around the wound with tincture of iodine, applies sterile dressings and nothing else is done to the wound, until the field hospital is reached. Fixation in fractures is most important so as to transport safely. The word dum-dum comes from a small town of that name in India. The bullet of that type is readily deformable and has a great stopping power. Savage and wild tribesmen are often not stopped in their charge by ordinary perforating wounds of the body, but the dum-dum bullet always stops them. Any soldier can dum-dum his cupro-nickel covered bullet quickly and readily by nicking the jacket with a knife or file. This weak point lets the soft lead filling readily pour out whenever the bullet meets with resistance. The soldier goes on the theory that he must put his opponent out of action or be killed himself, and hence often makes

his bullet deformable. The American soldiers in the Philippines often converted their bullets into the dum-dum article by sandpapering them.

Dr. Charles H. Mayo described his method of dealing with cases of prolapse of the uterus. He modified his treatment to suit the severity of the individual condition. In women thirty to thirty-five years of age, and desirous of bearing children, he shortens the round and utero-sacral ligaments. In a more pronounced type he amputates the cervix in addition to the above mentioned procedures.

In another type, in which there is a cystocele and not a great deal of descensus, he amputates the cervix and does the Watkins operation of interposing the uterus under the bladder; also sterilizes the patient by resecting the tubes from the uterine cornua. This method may cure cases of first and second degree prolapse.

Firm fixation of the uterus in the abdominal wall after the principle established by Dr. Theodore Kocher brings about a cure in many cases. Dr. Mayo advises that the uterus be bisected antero-posteriorly, its mucosa removed. Turn half over one rectus muscle and other half over the other rectus, secure by suitable sutures, then sew the aponeurosis over this. Tuck the fascia down deeply in the center and suture into angle made by splitting the uterus down to the cervix.

This last stitch is quite important in the support of the vagina. This method has the disadvantage of not curing many cystoceles. The most radical method which Mayo has reserved for many of the worst cases is as follows: He does a vaginal hysterectomy, leaving as much of the broad ligaments as possible. These are drawn down by clamps as far as their strength will permit and sutured together by strong heavy mattress sutures, passed back and forth through as great a width of these ligaments as it is possible to bring down into position with each other. In addition to this, he dissected up the vaginal wall from the bladder and sutures these broad ligament stumps close up to the pubes by an encircling suture, so as to make a strong support for the bladder. This operation, in addition to doing away with the uterus, takes the place of the interposition operation of Watkins. In finishing this operation the vaginal mucosa is brought

together by a submucous suture of chromic catgut. He also does a high perineorrhaphy in these cases. Dr. Mayo makes a pear-shaped incision around the cervix in the beginning of his hysterectomy, pointing toward the bladder.

Dr. Byford reported a case in which the urethra of a young girl became severely prolapsed following severe and prolonged coughing. He said that these cases were in a great measure due to congenital weakness of the pelvic floor. He said he had seen a complete uterine prolapse in a woman who had never been pregnant. Personally I recall a case in which the uterus of a little seven-year-old girl was prolapsed third degree incident to the straining due to a prolonged attack of the so-called summer diarrhoea. There was a sloughing of part of the vaginal wall and considerable loss of tissue, but she recovered.

Dr. Hill of Birmingham said the condition of prolapse was rare in the negress. He spoke of the LeFort operation of suturing the anterior and posterior vaginal walls together after denuding a strip down the center, leaving a narrow channel on each side for the escape of discharges.

Dr. Boldt said this operation was a satisfactory one of the widows past the marriageable age. He recommended the Edebohls operation of complete extirpation of the vagina in some cases. He said he believed this was about the only operation for prolapse in which the surgeon could guarantee a cure; probably no case was ever cured by the use of a pessary. If the uterus is large and we wish to leave it behind, we should excise a wedge-shaped segment from it so as to reduce it to normal size. The Gilliam operation is one of the best during the child-bearing period.

Dr. Howard Kelley said the old writers called prolapse hernia, which is its proper name. He says prolapse is very common among strong, well developed European peasant women.

(To be continued.)

To encourage the drainage of pus from the pelvis through an abdominal wound it is helpful to have the patient lie face downward at intervals, preferably with the foot of the bed elevated—but not until two or three days after the operation.—*American Journal of Surgery.*

Original Abstract.

STANDARDIZATION OF PUBLIC HEALTH OFFICERS AND THEIR WORK.

(*Charlotte Medical Journal, January, 1915.*)

That public health work should be standardized to secure only the most efficient service is gaining ground with rapidity. When one considers for a moment that almost everything of any value whatever has a standard of requirement or of measurement—call it either, it means the same—it is surprising this matter has not been considered and provided for ere this, and this may only be accounted for on the hypothesis that public health work has required so much labor to get its authorization by the governmental powers that be that, when once arranged for, it was and is generally permitted to progress along in its own fashion or according to the personal work. The suggestion of standardization was made at the last annual session of the State Health Officers' Association of North Carolina in Raleigh in June, 1914.

North Carolina, taking the lead of states in the work, now has some thirteen or fourteen local whole-time county health officers, each working after his own special methods, fashioning his measures to meet the conditions present as seen through his own eyes. Good work is being performed and unquestionably some admirable results are accruing from the efforts being put forth, but the lack of standardization, the lack of a definite clearing house with detailed reports from week to week and month to month, showing just what is being done and how and why, is a bar sinister on the work, and means, if nothing less, the loss of an immense amount of valuable experience at present only available by the individual health officer in his county or municipality. In other words, the health officer is working under a lack of system shaped and designed to collect, tabulate and preserve for the educating of others the varying experiences he may have. Again, it is to be remembered that so complex and multifarious have become of late years the possible duties of a local medical health officer in a county or municipality that it is practically an impossibility to take from the ranks of even skilled practitioners of medicine or surgery

physicians who are at once fitted to engage in practical public health work without some special preparation or study looking particularly toward the practical application of the principles of the medical sciences and art to the bettering of community health. In other words, the average good doctor has spent his days and his nights wrestling with pathological problems in the main as affecting individual members of the social body, and his efforts are more particularly directed toward curing diseases rather than studying the whole people with the object of ascertaining how best to proceed to keep them well. With this purpose in mind several of the medical teaching institutions have designed special courses leading to the degree of Doctor of Sanitation and Doctor of Public Health, and it is assumed the possessors of such degrees are better fitted to perform the responsible duties appertaining to practical public health work than the average medical practitioner. About the absolute correctness of this conclusion there will yet remain some degree of doubt in the judgment of physicians who have had large experience as general practitioners of medicine, for it is well known that one of the greatest dangers that confront future public health work is the avidity with which many of its devotees jump wildly at a tentative theory, merely put forth to incite farther study or scientific investigation of a given subject and enlarging upon the given hypothesis, being at once to teach the public the same assumption as an established fact. Herein lies one of the greatest imperilments jeopardizing the success of future public health work. The public sanitarian, if he only realizes the limitations of the domain of certainties in his work, while prosecuting his labors with courageous conviction, will not lapse into an overindulgence in superheated promises of results that men who have had years of general practice realize are impossible of realization. And right at this point it may be suggested that in all likelihood men who have had experience as practitioners of general medicine are, other things being equal as to education, professional and general, more likely to develop into capable and efficient practical public health officers. Discretion, tact, capacity to feel the community pulse and determine its notations, the ability to weigh and measure local sentiment and engage it for useful helpful purpose—these and other acquire-

ments are scarcely to be learned in schools other than those of practical life, and the contact and relations of some years existing between the practicing physician and the people he works among and upon afford him educational opportunities denied the recent graduate from even the best schools of our science and art. The North Carolina State Board of Health has, through its able Secretary, Dr. W. S. Rankin, arranged the following tentative plan for the giving of a course of practical training which will require about six or seven months to complete. This course, when taken by a physician who has had previous training in the practice of medicine, should fit him, if otherwise capable, to engage as a whole-time health officer in any community with a well defined knowledge of what he is to do, how to go about it and what results to expect. The course is as follows:

State health administration or state health laws and policies, four weeks. During this course the apprentice is assistant to the executive officer of the board, answers as much of the official literature as he can, and is referred to and quizzed upon the proper literature.

Vital statistics, four weeks. During this time the apprentice is given actual experience in every phase of the work of the bureau of vital statistics, is referred to proper references on vital statistics, and is required to study and criticise the vital statistics table appearing in various reports.

Popular sanitary education, three weeks. During this course the apprentice is required to prepare articles for the bulletin and press service, to study exhibits, slides and lanterns, and to act as assistant to the bureau chief.

Tuberculosis, four weeks. During this time the apprentice assists at the state sanitarium, and in the bureau for tuberculosis is assigned the proper reading and is given quizzes upon it.

Laboratory, four weeks. During this time the apprentice will do the routine examinations of the state laboratory and be quizzed on the interpretation of water analysis and upon epidemiological procedure.

County health work, six weeks. During this time the apprentice will serve as assistant to an efficient county health officer and will be sent to see special phases of county health work in different counties.

On the completion of this six or seven months' practical course a certificate of proficiency in public health work signed by the president and executive staff of the board will be given the apprentice. J. N. S.

Selections.

CAUSES OF REDUCED DEATH RATE FROM TUBERCULOSIS.

The reasons for the reduction of the tuberculosis death rate are now receiving careful study because every one knows that the conduct of the future campaign against the disease depends upon our knowledge of its causes. Karl Pearson, one of the world's greatest statisticians, found that the reduction began long before we discovered the bacillus, before much was known as to methods of cure or prevention, and that the curve had not been much modified in Europe by the past crusade. He concluded that the phenomenon was the usual one by which a race becomes partially tolerant to any infection such as measles, by survival of the fittest, or those able to develop immunity, the susceptible being killed off. He has given great offense to the workers in this field, and their indignation has been increased by Dr. Thomas J. Mays of Philadelphia, who has asserted that as the yearly reduction of the death rate has been somewhat less in the last ten or fifteen years, the crusade has actually increased the death rate over what it would have been had the old process continued. As we have previously explained, Dr. Mays's conclusion cannot be accepted because the yearly reductions must necessarily lessen as we approach the irreducible minimum. Indeed, the rate in Buffalo, 1.2 per 1,000, has not materially changed for about fifteen years, and the Buffalo Medical Journal suggests (Nov., 1914) that either it is the minimum under present economic conditions or that there is a factor, possibly climatic. Dr. S. Adolphus Knopf in defending the present crusade (New York Medical Journal, Nov. 7, 1914) makes the assertion that the modern methods of controlling the disease in New York City caused a reduction of 40 per cent. between 1887 and 1902, a rather extreme view, which would

seem to be open to question, since it assumes that the causes of the reduction prior to 1887 were no longer operative. Hoffman's statistics show that the rate has been irregularly declining since 1832, when it was 6.329. He remarks that "the problem of tuberculosis prevention, in other words, is intimately conditioned by the prevention of many other diseases and the elimination of many factors which lead to an impairment of physical vigor and diminished disease resistance." This is certainly a fair explanation of the fact that the great modern reduction began with the birth of practical sanitation in the early eighties. The curves for typhoid and tuberculosis, for instance, are more or less parallel. Since many cases of tuberculosis date from measles, whooping cough and other infections, it is evident that the more we prevent these diseases the fewer will be the deaths from consumption. If the wonderful work of health departments is lessening this death rate, then in God's name let us pour more money into their laps to multiply the good. The anti-tuberculosis workers have done such grand things they need not be afraid to confess that they reach only a small percentage of consumptives, and therefore cannot possibly affect the death rate very much. We have 50,000 tuberculosis cases in New York City alone, but can give proper care to only a small percentage of them. If the "home hospital" described by Porter in our September number is to care for these we beg our millionaires to contribute, for each dollar is a treasure laid up in Heaven.

The future crusade against tuberculosis will probably be directed largely against the factors which reduce resistance. Nothing effective can be done in that direction until the profession comes to an approximate unanimity of opinion as to the full consequences of the discovery that practically all people in communities are tubercular from childhood, and that the perpetual auto-vaccination of the tiny lesions causes an immunity which resists massive infection from consumptives. Some are not yet convinced, but incline to the view that, though practically every one does become actively tubercular some time in his life, the lesions completely heal, the bacilli die, the

immunity fades, and the man is again so susceptible that he may perish from a massive dose. Some physicians seem to fear that if we acknowledge the harmlessness of consumptives to an adult we thereby acknowledge that they are also harmless to babies who have not yet acquired immunity. No infectious disease can be communicated to immunes, but no one dreams of asserting that smallpox is not contagious to the unvaccinated or typhoid not communicable to those who have not recently had it. Indeed, the dreadful results of contact between babies and consumptives would almost justify us in declaring tuberculosis a contagious disease as far as they are concerned. If the new facts as summarized by Hoffman are accepted we must teach the public that if a person develops consumption it is probably not a new infection but something has reduced the immunity developed by his own lesions, permitting them to spread, and that if this something is an improper mode of living, a timely restoration to normal living will cure the case. A husband may die of it, but the wife remain healthy. If both become consumptive, as in a small percentage of cases, it is probably due to the same environmental cause which has reduced immunity in each, for they were in all probability tubercular on marriage. Dr. Knopf asserts that this small percentage, which, of course, occurs in some thousands of recorded cases among the millions of married consumptives who have been studied, proves "without a shadow of a doubt" that the infection was transferred from one to the other. Dr. Knopf, however, can hardly expect this conclusion to be accepted until he furnishes proof that the husband or wife was free of tuberculosis at marriage, and was not infected from some other source. Such proof is necessary to substantiate this deduction. Some physicians who have studied the matter recently have asserted that a new infection of a city adult is exceedingly rare, if it ever occurs. When several members of a group become consumptive, say of workmen in a factory, the fault is now generally laid to the environment—and the correctness of this conclusion becomes more firmly established as the evidence accumulates.—Editorial in American Medicine.

ANTITYPHOID VACCINATION IN CHILDHOOD.

Major F. F. Russell, M.D.,
U. S. A. Medical Corps, Washington.

Antityphoid vaccination was introduced into the army in 1909, and in that year we vaccinated a few children, and have been vaccinating more and more each year since. The results have been very satisfactory. Typhoid fever is a disease of young persons. Of one thousand deaths from typhoid fever, collected from the registration area of the United States, one-third occurred in persons under 20 years of age, and one-fifth in those under 15 years. Another reason why the results of antityphoid vaccination were so satisfactory was that children stood vaccination well and the reactions were few. We have collected statistics on the temperature reactions in children all over the United States, the children in army posts and in the families of officers, which included both the general and the local reaction. We have classified the reactions into two classes—those that were troublesome and those that were not. The troublesome ones include the moderate and the severe reactions. Less than two per cent. of the children showed a temperature reaction of 103° F. or more. As a rule the children did not have to remain home from school or indoors. Sometimes there was a slight fever in these children who were vaccinated, but they were unaware of it. For these reasons vaccination among young people is increasing rapidly.

We never take the risk of vaccinating a sick child—that is, one seriously ill. A trivial illness is not a contraindication. But here one must use his discretion and be governed by the degree of illness and by the immediate danger of typhoid.

Among the children vaccinated no harmful effects had been reported and there had been no case of typhoid fever that could be learned of. It was not possible to follow up the children as closely as the men in the army, but I think that if there had been a case of typhoid fever in a child who had been vaccinated we would have heard of it. Furthermore, it

was true that many of them have been exposed to the disease.

Revaccination should be performed more frequently in children than in adults.

The dose is regulated according to the weight of the child, the rule being, for instance, that if the weight of the child was one-third that of an adult, the dose of vaccine should be one-third of that given to an adult. It is better to give a little more rather than a little less in proportion to the weight. If the child gains rapidly in weight it may be advisable to repeat the vaccination. The duration of immunity is thought to be about three years. As yet there has been no falling off in the immunity of the men in the army. In the antityphoid vaccination it is a good plan to follow the method used in smallpox—that is, vaccinate once in infancy, once in childhood, once in youth and once in adult life. This would probably give good protection. The results of antityphoid vaccination in the army are most convincing as to the value of this measure. In the year 1913 in the entire army of 90,000 men who had been vaccinated there were only three cases of typhoid fever and no fatalities. One of these occurred in China, and the man was not vaccinated, and the other two cases occurred in new recruits who came down with the disease before the vaccination was completed.

There is one other way of measuring the efficiency of any procedure, and that is by the "constantly non-effective rate." According to this, before the introduction of antityphoid vaccination one man out of every thousand was sick every day in the year; last year only one-three-thousandth of a man was sick every day in the year. This measure of efficiency showed that antityphoid vaccination saves the time of the soldier and keeps him out of the hospital and fit for duty. A sick man means not only that one man's time was lost, but that it takes the time of two others to care for him. The same is true of any school or institution, and in the face of their present knowledge no schools or institutions should run the risk of an epidemic of typhoid fever when it can be prevented without risk.

The vaccination should be given subcutaneously and never deep into the mus-

cles. It is desirable to have a slow absorption, which one gets in the loose subcutaneous tissue. With a deep injection one is apt to have a severe reaction which will arouse an opposition to this measure, which is unnecessary. The second dose should not be given at the site of the first, but a new site should be chosen. The severe reaction following a deep injection shows that the absorption was too rapid. The second injection is given after an interval of ten days in the army; in civil life we use weekly intervals, choosing Saturday afternoon, so that, should any reaction occur, the subject of the vaccination can lay off over Sunday.

A fear has been expressed that antityphoid vaccination may light up a latent tuberculosis. Our statistics show that not only has the steady decrease in the number of cases of tuberculosis in the army been maintained but that the decrease in the number of cases has been more rapid since the introduction of compulsory vaccination. This was no doubt due to the improved sanitary conditions and the greater care exercised in examining recruits. In the annals of medicine there is only one campaign that can be compared to this one, and that is the practical extermination of smallpox by vaccination.—New York State Journal of Medicine.

"TWILIGHT SLEEP."

Dr. Richard E. Venning.

In an editorial in the American Journal of Obstetrics and Diseases of Women and Children, January, 1915, under the caption "An Obstetrical Procedure on Trial," the author notes the attention that has been attracted by the so-called "Twilight Sleep" or "Dammerschlaf," among numbers of the profession as well as the public. He thinks that the women of the present generation in the better walks of life have less difficulty in delivering themselves than did our mothers and grandmothers and that this is largely due to better hygienic conditions for our growing girls, including proper exercise and outdoor life.

In the discussion of the value of scopolamin-morphin anesthesia, the question resolves itself into what interference with the normal process of labor results from its application, and whether any real necessity exists for its routine employment? Its most enthusiastic advocates admit that although the first stage of labor is favored, or at least not interfered with by the procedure, that the second stage is very apt to be prolonged. It

is during this time that the greatest danger to the child may result. It is claimed that the voluntary expulsive efforts on the part of the mother are not interfered with by the form of narcosis, but that the woman is able to bring into play her accessory muscles of parturition without being aware of the fact. Is this contention borne out by the statistics which show that the prolongation of the second stage, alone referred to, necessitates in many instances the application of forceps for the purpose of terminating the labor? Admitting all the favorable things which have been said in regard to "Twilight Sleep" are the results sufficiently convincing to admit of a general adoption of this procedure? Those who have given the method a most careful study are of the unanimous opinion that individualization and the conduct of the case in a hospital are requisites to its proper and successful employment. This at once limits its application. Many will attempt it under surroundings which are not favorable, and if the popular clamor leads to its more extended application by the profession at large, we will soon hear of direful consequences. The brilliant results claimed by European observers have apparently not been duplicated by careful students of the procedure here. It is doubtful whether in this country even those who are most enthusiastic will permit their enthusiasm to range as widely as that of our European colleagues.

The author thinks that, admitting most labors verge on the pathological and require some degree of narcosis to relieve the pain or favor dilatation, we have at hand remedies that have been amply tried and that the advantages claimed for "twilight" are not of sufficient extent and importance to overbalance the disadvantages which even the advocates of the method are compelled to admit, and that one can not disregard the warnings sounded, that in many women the second stage under "twilight" is unduly prolonged, that forceps deliveries are often necessary, and that a certain number of babies are asphyxiated. The question is asked—"Are we not playing with fire in allowing a more or less superficial knowledge of the procedure to be spread broadcast among the profession and laity?" Is it fair to womenkind for reputable physicians to urge upon the sex in the public press a demand for such a procedure in order to hasten its adoption, and to denounce the objectors with the statement that they are merely ignorant concerning the method?

It is not the wish of the author to condemn "twilight sleep" but rather that the profession should have an open mind to receive from legitimate sources any information which will tend to relieve human suffering. If medical opinion can be guided by an impartial study and trial of this procedure, the battle will not lack deserving attention, but the senseless reiteration of its wonders by writers and speakers, both lay and professional, such as have been published within recent months, may justly be regarded as undignified and questionable. The indiscriminate employment of the method is bound to be harmful, will detract from its possible value, and will hasten its relegation to the great unknown where now repose so many exploded medical practices and fancies.

R. E. V.

The West Virginia Medical Journal

S. L. JEPSON, A.M., Sc.D., M.D., *Editor.*

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All articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over 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.

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Editorial

TO THE COUNTY SECRETARIES.

The State Medical Association at its last session directed the editor to remove from the mailing list the names of all members who failed to pay their dues before April 1st. Will you therefore kindly send me the names of all who have not yet paid for 1914, and also of those who have not paid for 1915, in order that the instructions of the Association may be carried out.—Editor.

SUFFERING OF BELGIAN PHYSICIANS.

In an editorial note of our February issue, we spoke of the great suffering among our medical brethren in Belgium and of the efforts put forth among the physicians of our own country, for their relief. Subscriptions in considerable amounts are being contributed by physicians all over the country, individuals giving from one to a hundred dollars for this very worthy cause. Space will not permit us to publish the lists

that are received in this office. The last report shows a total of nearly \$5,000, and we are glad to note that some of this amount comes from West Virginia. Those who feel able should not hesitate to send their contributions to Dr. F. F. Simpson, Treasurer, Pittsburgh. The following letter was sent to Dr. Simpson from Baltimore, under date of February 23rd:

"MY DEAR DR. SIMPSON:—Your letter of February 19th received. Madam DePage was in Baltimore for a short time last week. I told her something of the work that the medical men in this country were doing for their confreres in Belgium. She was much interested and most grateful for what had already been done. She is in this country commissioned by the King of Belgium, to whom her husband is personal physician, to do everything she could do to secure contributions for her starving countrymen. Her account of conditions in Belgium is pathetically interesting. The needs of her country beggar description. While so much is being done and has already been done by this country, so much more must be done in order to save from starvation many hundreds of men, women and children. I wish it were possible for everyone to hear her account of what the Belgians are doing for themselves and of their gratitude for what is being done for them and, at the same time, get some sort of an appreciation of the magnitude of the need for more and immediate assistance. I feel sure it would result in a more prompt and generous response on the part of the profession than that which has already been made. Madame DePage herself is now on her way across the Continent and will visit as many cities and see as many people as possible in order to deliver her message.

"With kind regards.

"Sincerely yours,

(Signed) "J. M. T. FINNEY."

To the above, Dr. Simpson adds, that the efforts of the committee of American physicians are directed toward the relief of civilian physicians and their families in North-eastern or invaded portions of Belgium. The purpose of Madam DePage is to establish additional field hospitals and further Red Cross work in the southwestern portion of Belgium. In a recent letter she says: "The big conflict of the present war is still in the future. The most terrific fighting of all will come this Spring; we must foresee the coming slaughter and be prepared to render instant aid to the thousands of wounded, friends and foes, who will fall within our lines." This noble woman has visited a number of our eastern cities, and is traveling westward and lecturing at the principal points in the interest of the noble cause which she represents. The English government, as announced in a letter from Dr. J. Riddle

Goffe, has published notice that it can no longer grant its monthly contribution to the British commission for relief in Belgium. This makes it the more necessary that the generous people of our own country, including those of our own profession, shall put forth renewed efforts in behalf of this stricken people, and especially those of our own profession. The picture of Belgian civilian physicians and their families, as reported by Dr Jacobs of Brussels, is no less than heart-rending. Their case certainly appeals to the generosity of every man who feels that he is financially able to make a contribution to this most worthy cause.

S. L. J.

Special mail course for Health Officers.—A correspondence course for health officers is announced by the University of Wisconsin, Extension Division. This course has been prepared to meet the need and desire frequently expressed for better preparation for local health administration. It is designed for health officers not able to pursue residence work, as well as for others desiring to take up the study of health administration.

The medical profession and business men of Mount Clemens are making special efforts to bring the waters of that place to the attention of the American public. A recent large public meeting was held composed of laymen and physicians, with a view to exciting interest in this subject. It is the purpose of the Society to put the administration of the baths under the direction of capable physicians of known reputation, who will give really scientific treatment. See advertisement on another page.

We can save a few dollars for anyone who is contemplating taking a post-graduate course in New York City. Write us.

Editor Journal State Medical Association, Wheeling, West Virginia:

DEAR SIR:—The attention of the secretaries of the county societies is called to the following paragraph in Sec 12 of the Act on Senate Bill No. 129, passed February 16th. In effect ninety days from passage. Approved by the Governor February 26th, as follows:

"The term 'practice of medicine and surgery' as used in this act shall be construed to be treatment of any human ailment or infirmity by any method. To open an office for such purpose or to announce to the public in any way a readiness

to treat the sick or afflicted shall be deemed to engage in the practice of medicine and surgery within the meaning of this Act: Provided this clause shall not apply, however, to regularly registered optometrists."

And the county secretaries are requested to report to the Councillor of the State Medical Association of their district, any person or persons who would be amenable to this Act.

Yours very truly,

J. W. McDONALD, M.D.,

Chairman of Council of State Medical Association.

Below we print the public health bill as it passed the legislature, and it becomes active, we believe, July 1st, 1915. It became necessary to modify the bill materially from the form in which it was originally prepared, otherwise it would certainly have failed to pass. In its present form it is a great advance in the right direction, and if vigorously administered will, we believe, prove a blessing to the State.

All health officers of the State are requested to preserve this copy. Study it carefully, and prepare to lend all possible aid to the new Council on Health. The State Board of Health is dead. Long live the Public Health Council.—EDITOR.

NEW PUBLIC HEALTH BILL.

A bill to create a state department of health, defining its powers and duties; to change the name of the State Board of Health, and limit and define its duties; to amend the public health laws; to invest the department of health with the management and control of the state tuberculosis sanitarium; to provide penalties for violation; and to appropriate money for purposes of public health.

Be it enacted by the legislature of West Virginia,

Section 1. There is hereby created and established a state department of health, which shall be constituted as provided in this act, and shall exercise all the powers and duties now conferred and imposed by law upon the State Board of Health, and such other powers and duties as are herein provided for.

The State Department of Health shall consist of a commissioner of health, whose office shall be located at the seat of government; a public health council, of which the commissioner shall be an ex-officio member; directors of divisions, and other employees as herein provided for.

Section 2. The commissioner of health shall be appointed by the governor, by and with the consent of the senate, and shall be a physician skilled in sanitary science, and experienced in public health administration. The term of office of the commissioner of health shall be four years; he shall receive an annual salary of three thousand dollars and necessary expenses incurred in the performance of official business and shall not engage in any other occupation or business.

The commissioner of health shall be the administrative head of the State Department of Health and he shall be ex-officio a member of its public health council. His duties shall be to administer the laws and regulations of the de-

partment; to prepare rules and regulations for the consideration of the public health council; and with the approval of said council, to appoint, remove and fix the compensation of the directors of divisions and all other employees; but said compensation shall be within the limitations of appropriation therefor; to advise with the public health council; keep himself informed as to the work of each local health officer within the state; aid each health officer in the performance of his duties; assist each local health officer in making an annual sanitary survey of the territory within his jurisdiction, and in maintaining therein a continuous sanitary supervision; adjust questions of jurisdiction arising between local health officers within the state; study the cause of excessive mortality or morbidity from any disease in any portion of the state; promote efficient registration of births, deaths, and notifiable diseases; inspect and report from time to time the sanitary condition of institutions, schools and schoolhouses, public conveyances, dairies, creameries, slaughter houses, workshops, factories, labor camps, hotels, and places where offensive trades or industries are conducted; inspect and report the sanitary condition of streams, sources of water supply, the sewerage facilities; endeavor to enlist the co-operation of all physicians, and volunteer health organizations in the improvement of public health; promulgate information to the general public in all matters pertaining to the public health. He shall perform all executive duties now required by law of the State Board of Health and other customary duties incident to his position as chief executive officer, and shall provide for offices and equipment necessary for the transaction of the business of the State Department of Health, out of funds appropriated for the State Department of Health.

He shall submit annually to the governor on or before the first day of November, or as soon thereafter as practicable, a report of the operations of the department, with any recommendations he may have to make, which report shall be printed and distributed as soon as practicable thereafter in the same manner as other public documents of the state.

The commissioner whenever required by the governor shall report to him as to any designated subject or matter, and furnish such information as may be required.

The commissioner of health may direct any official or employee of the State Department of Health to assist in the study, control, suppression and prevention of diseases in any part of the state, and necessary expenses shall be paid while in the performance of such duty.

Section 3. The public council shall consist of the commissioner of health and six other members, who shall be appointed by the governor, by and with the consent of the senate. Said commissioner and other members shall be graduates of a regular medical school and shall have at least five years' experience in the practice of medicine. Of the members, other than the commissioner, first appointed, three shall hold office for two years, and three for four years, the terms of offices of members thereafter appointed, except to fill vacancies, shall be four years. Vacancies shall be filled by appointment for the

unexpired term. The public health council shall meet at least twice a year, and at such other times as they shall determine by their rules, or upon the request of the commissioner of health, the members, other than the commissioner, to receive ten dollars per diem, not to exceed sixty days in any one calendar year, and actual and necessary traveling expenses, when engaged in the actual discharge of their duties.

The public health council shall elect one of its members president, whose term of office shall be two years. The commissioner of health shall be secretary of the public health council.

It shall be the duty of the public health council to promulgate rules and regulations; take evidence in appeals; approve plans and appointments; hold hearings; advise with the commissioner of health; define the qualification of local health authorities, and directors of divisions and said directors of divisions shall be graduates of reputable colleges and discharge other like duties required by law of the present State Board of Health.

The public health council shall have power, by the affirmative vote of the majority of its members, to establish and from time to time, amend regulations under the public health laws, the enforcement of which devolves upon the state commissioner of health.

Every general regulation adopted by the public health council shall state the day on which it takes effect, and a copy thereof, duly signed by the commissioner of health, shall be filed in the office of the secretary of state, and a copy thereof shall be sent by the commissioner of health to each health officer within the state, and shall be published in such manner as the public health council may determine. Any violation of the regulations so promulgated when said regulations are reasonable and not inconsistent with the law shall be a misdemeanor, and punishable by a fine of not less than ten dollars nor more than three hundred dollars, and by imprisonment, in the discretion of the court, for not more than thirty days in the county jail.

Section 4. Inspectors, examiners or other persons appointed by the commissioner of health may be appointed at such time or times as by him deemed necessary; and they shall act as representatives of the commissioner of health, and under his direction, shall secure the enforcement of the provisions of the public health laws and regulations, and shall have the right of entry into any workshop, public school, factory, dairy, creamery, slaughter house, hotel, or other place of business or employment, or any common carrier or public utility when in the discharge of his duties. Any person interfering with or attempting to interfere with any inspector, examiner or any other duly authorized employee of the commissioner in the discharge of his duties under this section shall be guilty of a misdemeanor and upon conviction fined not exceeding one hundred dollars.

Section 5. There shall be in the State Department of Health the following divisions:

- Division of preventable diseases.
- Division of sanitary engineering.

The commissioner of health shall appoint, with the advice of the public health council, a director

to take charge of each division and shall prescribe, with the advice of the public health council, the duties pertaining to each division and arrangement of the sub-divisions, if any, thereof. The compensation of directors of divisions shall be fixed by the governor and commissioner of health, in the manner herein provided.

Section 6. The state department of health shall have the authority to enforce all the laws of the state concerning the public health, and shall take care to protect the life and health of the inhabitants of the state, and to that end shall make or cause to be made sanitary investigations and inquiries respecting the cause of diseases, especially of epidemics, endemics and the means of prevention, suppression or control, the source of mortality and the effects of localities, employments, habits and circumstances of life on the public health, and shall gather information in respect to these matters and kindred subjects for diffusion among the people. It shall inspect and examine food, drink and drugs offered for sale or public consumption in such manner as shall be deemed necessary, and shall report all violations of all laws of this state relating to pure food, drink and drugs to the prosecuting attorney of the county in which such violations occur, and lay before such prosecuting attorney the evidence in its knowledge of such violations. The commissioner of health, or any member of the public health council, may make complaint and cause proceedings to be instituted against any person or persons or corporation for a violation of any of the health laws of this state without the sanction of the prosecuting attorney of the county in which proceedings are instituted if said officer fail or refuse to discharge his duty, and in no such cases shall they be required to give security for costs.

Section 7. Whenever the character and location of plumbing, drainage, water supply, sewers and disposal of sewage, garbage, or other waste materials of cities, towns and villages, offensive trades, hotels and labor camps, and the ventilation, warming, natural lighting and excreta disposal in public utilities, in public halls, churches, school houses, work shops, prisons and all other public institutions are such as to endanger the public health, the public health council shall have power to make and enforce rules regulating the same.

It shall promulgate and recommend regulations, not inconsistent with law, governing the disposal of excreta in coal mines, examine into and advise with the chief of department of mines as to the ventilation of coal mines and how to treat promptly accidents resulting from poisonous gases. Nothing herein contained shall be construed to give the state department of health the power to regulate or interfere with the drainage from any mine or manufacturing plant unless the drainage from said mine or manufacturing plant shall contain disease-producing bacteria in sufficient numbers to endanger health. The state department of health is empowered to establish and strictly maintain quarantine at such places as it may deem proper, and may adopt rules and regulations to obstruct and prevent the introduction or spread of smallpox or other contagious or infectious diseases into or within the state, and shall have the

power to enforce these regulations by detention and arrest if necessary. It shall have power to enter into any town, city, factory, railroad, train, steamboat or other place whatsoever and enter upon and inspect private property for the purpose of investigating the sanitary and hygienic conditions and the presence of cases of contagious and infectious diseases, and may, at its discretion, take charge of any epidemic or endemic conditions and enforce such regulations as it may prescribe. All expenses for guards, or other expenses incurred in controlling any endemic or epidemic conditions shall be paid by the county or municipality in which such epidemic occurs.

The state department of health shall provide at its discretion vaccine lymph, diphtheria antitoxin, tetanus antitoxin and other forms of serum or vaccine preventives of disease that it may deem necessary and distribute same free of charge to county and municipal health officers, to be used for the benefit of the poor and indigent, and in other cases where it may be urgently necessary to check contagions and control epidemics.

Section 8. The commissioner of health shall inquire into and investigate all nuisances affecting the public health in any county, city or village in the state, and is authorized and empowered to apply to the judges or to any judge of the circuit court for the county in which such nuisance shall exist, in term or vacation, for an injunction forthwith to restrain, prevent or abate such nuisances.

Section 9. When in the opinion of the public health council any local health authority shall fail or refuse to enforce necessary laws and regulations to prevent and control the spread of contagious or infectious disease declared to be dangerous to the public health, or when, in the opinion of the said council, a public health emergency exists, the commissioner of health may enforce the rules and regulations of the state department of health within the territorial jurisdiction of such local health authorities, and for that purpose shall have and may exercise all the powers given by statutes to local health authorities; all expenses so incurred to be a charge against the counties, cities or towns concerned. And in such cases the failure or refusal of any local health officer or local health body to carry out the lawful orders and regulations of the public health council shall be sufficient cause for the removal of such local health officer or local health body from office; and upon such removal the proper county or municipal authorities shall at once nominate a successor other than the person removed as now provided by law.

Section 10. The public health council shall make regulations to provide clean and safe milk and fresh milk products and when promulgated these regulations shall be the minimum requirements to be enforced by local health authorities throughout the state.

Section 11. The state department of health shall have the advisory medical supervision of the state tuberculosis sanitarium, and the state board of control shall have the control of the business and fiscal affairs thereof. The director of the division of preventable diseases, under the supervision of the commissioner of health, shall encourage measures for the suppression of tubercu-

losis, such as clinics, camps, open air schools, sanatoria, district nursing, anti-tuberculosis societies, diffusion of knowledge and other means.

Section 12. The public health council, consisting of the commissioner of health and six other members as specified in section three of this act, shall, in addition to the duties hereinbefore or hereinafter specified, examine all applicants for license for the practice of medicine and surgery in this state and issue certificates of license to all applicants who are legally entitled to receive same; and said certificates of license shall be signed by the president of the council and by the commissioner of health as secretary thereof. The examination of applicants and the issuing of certificates of license thereto shall be governed by sections nine, ten and eleven of chapter one hundred and fifty of the code of West Virginia, and the words "state board of health," wherever used in said sections, shall mean public health council as established by this act. The term "practice of medicine and surgery" as used by this act shall be construed to be treatment of any human ailment or infirmity by any method. To open an office for such purpose or to announce to the public in any way a readiness to treat the sick or afflicted shall be deemed to engage in the practice of medicine and surgery within the meaning of this act.

Section 13. The commissioner of health may, with the advice of the public health council, establish branches of the hygienic laboratory at such points within the state as he may deem necessary in the interest of the public health to insure prompt bacteriologic examinations, and for said purpose may expend annually a sum not in excess of one thousand dollars. The right of appeal from any order of the public health council or any of its officers or agents shall lie to the circuit court of the county where the property rights or personal liberties have been affected, and the right of appeal shall be limited to thirty days from the time a general order is entered.

Any two or more counties may combine to cooperate with the state department of health, either by special vote or by vote of their respective boards of health, and participate in the employment of trained health officers and other agents or in the installation and maintenance of a common laboratory and other equipment. Whenever such counties shall decide to so cooperate and shall appropriate a sum or sums of money for such joint or co-operative action, a sum equal to two-fifths of the total amount contributed by the co-operating counties shall be added thereto from the appropriation made for the state department of health; *provided*, that the general place of cooperation as well as the principal health officer, executive agent or laboratory director employed by such counties shall first have been approved by the public health council; and, *provided, further*, that no sum so paid to any group of counties shall exceed five hundred dollars in any one year; and provided such co-operation by the state department of health shall be limited to not more than three thousand dollars annually.

Section 14. All acts and parts of acts inconsistent with this act are hereby repealed.

Society Proceedings

AMERICAN PROCTOLOGIC SOCIETY.

(Continued from February issue of Journal.)

Hyperplastic Tuberculosis of the Colon—By J. M. Frankenburger, M.D., Kansas City, Mo.

The writer declared that this form of tuberculosis of the intestine differs from other forms of intestinal tuberculosis, inasmuch as it is amenable to operative interference. It is generally a local and primary lesion and is characterized by the formation of tumor masses composed of fibrous and tuberculous granulation tissue in the walls of the bowel. Primarily there is no involvement of the mucous membrane, but on account of the narrowing of the gut the irritation caused by the passage of feces may produce ulceration.

Symptoms are slight, constipation and diarrhoea sometimes alternating. Later the symptoms are those of gradually increasing intestinal obstruction. Differential diagnosis is between sarcoma, carcinoma, syphilis and chronic appendicitis with adhesions.

Treatment is purely surgical. If possible the entire growth should be removed, but failing in this a short circuiting operation should be performed to relieve the obstruction.

Two cases are reported with successful operations.

Pseudo-Intestinal Stasis and Real Intestinal Stasis, Demonstrated Roentgenologically.—By Arthur F. Holding, M.D., New York City.

Attention is called to many anomalies of visceral position and progress of the bismuth meal that have been interpreted as pathologic, and which are really physiologic or anatomic anomalies and completely compatible with health, laying especially stress upon the fact that the ileum enters the caecum normally at an angle, and unless associated with proximal distention a diagnosis of Lane's kink is not justified.

He emphasized the point that delayed progress of the bismuth meal is not significant of obstruction unless it is more than 6 hours behind the normal schedule and associated with marked distention of the viscus proximal to the locus of obstruction. Proximal distention with obstruction to the bismuth column are the two cardinal diagnostic points of real intestinal stasis. Intestinal obstruction, due to tumors, is much easier to diagnose than intestinal stasis, because the defect in the bismuth shadow made by the tumor is more definite than that made by adhesions, veils or membranes.

Local Treatment of Anal Fissure.—By James A. Duncan, M.D., of Toledo, Ohio.

The writer describes a treatment for anal fissure which he has employed successfully for the past thirteen years. The fissure is brought into view by separating the folds and the surface is lightly curetted, then thoroughly dried, and a drop of collodion applied. This takes only a moment or so. A recent ulceration requires but a single

application. A sharp stinging pain lasting for only a few minutes is caused, and then the patient is left perfectly comfortable.

Some Unusual Phases of Sigmoidoscopy.—By

Ralph W. Jackson, M.D., of Fall River, Mass. The diagnostic value of the sigmoidoscope has been the topic of much writing, and is increasingly appreciated by hospitals, but much less so by the profession and insufficiently in medical teaching. Explicit statements of its considerable therapeutic uses are not found in German, American or English literature. The instrument enhances the extent and accuracy of recto-sigmoidal therapeutics, and specifically it facilitates the use of certain other instruments, topical applications, the relief of high impaction and the treatment of stricture and many other lesions. Serious trauma from the sigmoidoscope is more liable to happen than some authorities admit, as illustrated by three cases of intestinal perforation cited from the German. Two personal cases are detailed, where the patients were in serious condition from occlusion of the bowel, but were relieved and saved by sigmoidoscopy done with diagnostic intent only. Pelvic visceroptosis, hypermobility of the sigmoid and the fixed and open rectal ampulla beneath predispose to invaginations and angulations which are fairly frequent in mild and chronic form and are potentially dangerous as a source of acute obstruction. Sigmoidoscopy, properly conducted, empties the pelvis by gravity (due to the position assumed) by intelligent introduction of the instrument and by the air pressure admitted through it, and therefore tends to undo such intestinal malpositions. The occlusion in the two cases related was unexpectedly relieved, and doubtless in this way. Greater prevalence in the use of the sigmoidoscope would bring to light a field for deliberate therapeutic use of the instrument along these lines.

Some Problems Before the American Proctologic Society.—By J. A. MacMillan, M.D., Detroit, Mich.

The writer states that (1) during the past decade proctology has come to include diseases of the colon, and that the extension is beneficial, inasmuch as it encourages and provides for a better diagnosis and for a more thorough search after etiology. (2) The effort should be made by the American Proctologic Society to standardize some of the well tried methods of treatment which have been proven effective and reliable. That, on the other hand, there are certain procedures in common use that are faulty and pernicious, and that it should be the aim of the society to begin a campaign of education against these. (3) That in regard to rectal cancer he recommends that statistics from the members of the society be collected annually and utilized to ascertain the prevalence and location of the disease, together with the extent of surgical interference or non-interference, kind of operation, and subsequent results.

The writer recommends that a cancer committee be appointed to take charge of this work

HARRISON COUNTY SOCIETY.

EDITOR WEST VA. MEDICAL JOURNAL.

A regular meeting was held in the meeting room of St. Mary's Hospital, February 25th, 1915. In the absence of Dr. Winfield, who is suffering with pneumonia, Dr. Willis, vice-president, presided. Fifteen members were present.

Dr. Matheny, who has undertaken the state managership of the Conservation of Vision propaganda, gave an interesting outline of the aim and purpose of this movement. This plan includes the examination of all school children to discover defects of vision; the universal use of Crede's method; ocular hygiene and the prevention of industrial accidents. The movement is to be carried on on a national scale by articles in the press, the distribution of pamphlets and by public lectures. The paper was discussed by Drs. Hood, Louchery, Slater, Ogden and Mason. The following new members were elected: Dr. Estalee Martha Chalfant, Shinnston; Dr. Edward Pendleton, North View; Dr. J. W. Livesay, Mount Clare.

Members present—Drs. Willis, Arnett, Hood, Shuttleworth, Louchery, Gaston, Ogden, Cherry, Mason, Slater, Kessler, Wilson, C. O. Post, Jarvis, H. H. Haynes. S. L. CHERRY, Secy.

MINGO COUNTY SOCIETY.

MATEWAN, W. VA.

EDITOR WEST VA. MEDICAL JOURNAL.

The Mingo County Medical Society met in the county court room, Williamson, W. Va., on the afternoon of February 16th.

Dr. S. D. Hatfield of Jaeger, W. Va., presented an excellent paper entitled "Valvular Lesions of the Heart: Their Diagnosis and Treatment." This being a very able paper and time being limited, the general discussion was postponed until the March meeting.

W. H. TRIPLETT, Secy.

State News

Dr. B. S. Preston of Charleston, who recently underwent an operation for appendicitis at the McMillan Hospital, has recovered and returned to his home.

* * * *

We are glad to see that the town of Montgomery is active in sanitary work. Recently a committee composed of F. E. Smart, O. K. Robinson and L. S. Montgomery was appointed to work in connection with the town board of health and the Civic League. This committee hopes to make the town clean at an early date, and then keep it clean. All citizens are asked to co-operate in this very worthy movement.

* * * *

In connection with the above we may here state that the Secretary of the State Board of Health contemplates inaugurating a movement for a clean-up week throughout the State. This will be some time in April. Full announcement will be made in the next issue of the Bulletin of the Board. Get ready for the event and try to stir up an interest in the cause.

* * * *

The Eastern Panhandle Society has announced a program for its meeting in Harpers Ferry on

March 3d, which contains an announcement of papers by Professor Lewellyn F. Barker of Johns Hopkins, Dr. T. D. Williams of Martinsburg and Dr. C. R. Foutche of Berkeley Springs. We hope to have a report of this meeting in our next issue, and will be glad to receive the papers read.

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At the recent annual meeting of the National Federation of State Medical Boards Dr. S. L. Jepson, Secretary of the West Virginia Board, was elected as Vice-President of that organization.

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Removal—Dr. S. F. Lawson from Wildell to Bower, W. Va.

Book Reviews

A Text-Book of Diseases of the Nose and Throat.—By D. BRADEN KYLE, A.M., M.D., Professor of Laryngology and Rhinology, Jefferson Medical College, Philadelphia. Fifth edition: thoroughly revised and enlarged. Octavo of 856 pages with 272 illustrations, 27 of them in colors. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$4.50 net.

The fact that this most excellent treatise has reached its fifth edition is of itself sufficient evidence of its worth and fully testifies to the appreciation accorded it by the medical profession. While it contains little that is new to one well posted in this branch of work, it has been thoroughly revised and brought right up to the present moment in everything worth while in the practice of rhino-laryngology.

The text is clear, lucid and direct. The author has displayed unusual care in the presentation of nasal and laryngeal pathology.

The chapter on vaccine therapy is a valuable addition to the work.

The chapter devoted to bronchoscopy is carefully written and follows closely the technic of Jackson.

Septal surgery is comprehensively treated; all the modern operations for sub-mucous resection devised by the leading operators are accurately described and illustrated.

In the treatment of epistaxis one important omission is noted, viz., that no mention is made of the use of normal serum in the nasal hemorrhage of hemophiliacs.

Considered as a whole the work represents the best and latest in everything pertaining to the diseases of the nose and throat, and at the same time it has the individuality of the author impressed on it by the expression of his own personal views based on a large experience.

The author is to be congratulated on the accomplishment of a task so meritoriously performed and the publishers on the splendid plates and illustrations, making a text-book to be commended as among the very best now in print.

H. R. JOHNSON.

Fecier: Its Thermotaxis and Metabolism.—By ISAAC OTT, A.M., M.D., Professor of Physiology, Medico-Chirurgical College, Philadelphia; Member of American Physiological Society; ex-President of American Neurological Association, etc.

Paul B. Hoeber, medical publisher, 67-69 East Fifty-ninth street, New York. Price \$1.50.

This little book is made up of three lectures, delivered by the author, in course, before his class in physiology in the Medico-Chirurgical College of Philadelphia. In discussing the phenomena of thermotaxis and the associated processes of thermogenesis and thermolysis he has given a very full exposition of the present knowledge on these subjects, much of which is the result of his own studies and research. The fruits of the labors of a large number of investigators in this field have been freely drawn upon, and the result has been a brochure that cannot but be a valuable source of reference to any one interested in the study of these phenomena. W.

A Manual of Diseases of the Nose, Throat and Ear.—By E. B. Gleason, M.D., Professor of Otolaryngology in the Medico-Chirurgical College, Philadelphia. Third edition, thoroughly revised. 12 mo. of 590 pages, 223 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$2.50 net.

Several years ago we gave a favorable review of a former edition of this work. Besides the anatomy necessary it gives methods of examination, diagnostic measures, the relation of one organ to the others and lays down definite forms of treatment. Different operations on the nose and throat are clearly described. The book contains a large number of formulas which have been found useful. Altogether it is a most excellent book for the general practitioner, while the specialist will want a more comprehensive work.

Worry and Nervousness, or the Science of Self-Mastery.—By WM. S. SADLER, M.D., Professor of Therapeutics in the Post-Graduate Medical School of Chicago; author of "The Physiology of Faith and Fear," etc. A. C. McClurg & Co., Chicago. Price \$1.50.

The author of this book is a well known writer, and his books are worthy of careful reading. This is one of the best of books addressed to nervous people. It contains much valuable advice, drawn from a large special experience, and while nervous people are not the most ready to accept advice, what is here given may be followed with advantage. The book can be safely put in the hands of that class of people for whom it was especially written. ff

International Clinics, Vol. 4, 24th Series—J. B. Lippincott Co. Price \$2.00.

This issue of this well known publication contains papers by about thirty different writers, who may be named Simon Baruch, Howard A. Kelly, James T. Walsh, I. H. Lloyd, A. L. Benedict and other well known writers. Diagnosis, medical treatment, surgery and medico-legal questions are discussed. Under the latter title are "Expert Testimony and Performing an Operation Without Consent." The book contains a number of illustrations. It is fully up to the standard set by former issues of this serial. ff

Local and Regional Anesthesia, including Anal-

gesia.—By CARROLL W. ALLEN, M.D., of Tulane University, New Orleans, with an introduction by Rudolph Matas, M.D., of Tulane University, New Orleans. Octavo of 625 pages with 255 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$6.00 net; Half Morocco, \$7.50 net.

This is a very comprehensive work on the subject of the greatest importance, especially to surgeons, who are too often careless as to the choice of an anesthetic and an anesthetizer. To study this book carefully will give him such information as will make him see the necessity of extreme care in the administration of anesthetics. The book opens with the history of anesthesia, and in twenty-three chapters the subject is discussed most thoroughly. Nerves and their sensations, osmosis and diffusion, the anesthetic effects of pressure-anemia are the titles of some chapters. Fifty pages are devoted to local anesthetics. Toxicology is discussed, also the principles of technic. A chapter is devoted to morphin and scopolamin anesthesia, just now prominent before the profession. Anoci-association also receives consideration. In short, every form of anesthesia is fully discussed. Possessing this book, we fail to see why it will be necessary for the practitioner to have any other on the same subject. It is very fully illustrated, and the mechanical work is unusually well done.

Progressive Medicine

SURGERY.

Dr. F. L. Hupp.

Intra-Abdominal Haemorrhage Complicating Normal Pregnancy.—Balch and Green (*Boston Medical and Surgical Journal*, Nov. 19, 1914).

In the most unusual case reported the bleeding, which all but ex-sanguinated the woman, was found due to a congenital diffuse angiomatous mass, equal in area to the palm of the hand, occupying the posterior surface of the uterus, one of whose venous plexuses had ruptured.

A rapid hysterotomy was done, and a dead seven-months foetus delivered, the bleeding arrested, patient transfused, recovery satisfactory.

The following interesting conclusions are mentioned:

1. Intra-abdominal haemorrhage complicating normal pregnancy is exceedingly rare, but, apart from trauma, may arise from various unusual causes.

2. In the presence of classic signs of internal concealed bleeding during the later months of pregnancy a diagnosis of such hemorrhage, from unknown cause, should unhesitatingly be made and appropriate treatment instituted.

3. Among the possible, rare causes of intra-abdominal haemorrhage complicating normal pregnancy may be congenital angioma or varix of the uterus.

4. The presence of such a varix may be a cause of habitual antecedent dysmenorrhoea for which no other evident anatomic or physiologic cause can be found, and which is unaffected by treatment.

5. In the grave ex-sanguination following in-

tra-abdominal haemorrhage associated with normal pregnancy, as in the commoner obstetric complications of placenta previa, post-partum haemorrhage, and ruptured tubal pregnancy, transfusion is a life-saving procedure of proved value and should be promptly employed as soon as the source of bleeding has been checked.

Surgery of Peptic Ulcer.—Dr. L. Eloesser (*California State Journal of Medicine*, September, 1914) presents the following conclusions: 1. Acute ulcer is not to be treated surgically unless: (a) perforated; (b) bleeding obstinately, or (c) intractable by medical means. 2. Hematemesis should not be made an indication for operation unless the presence of a bleeding ulcer can be made reasonably sure. A preliminary transfusion of blood will often give time for diagnostic examination and benefit the patient meanwhile. 3. Chronic callous ulcers suspicious of malignancy should be treated by resection and gastro-enterostomy. 4. Chronic ulcers of evident innocence should be treated by gastro-enterostomy with or without pyloric closure. The results of resection are not sufficiently better than those of gastro-enterostomy to compensate for the added risk. 5. Gastric procedures should not be carried out unless indicated by clearly demonstrable gastric lesions. 6. At all operations for peptic ulcer the abdomen should be carefully examined for extra-gastric irritative or infectious processes. The treatment of these may be more important causally than the treatment of the ulcer itself. 7. Our gastric operations are not causally but symptomatically therapeutic. Prolonged post-operative medical care is imperative.

General Anesthesia.—Dr. J. T. Gwathmey (*New York Medical Journal*, November 7, 1914) formulates the results of an exceptionally large experience on this subject in the following conclusions: 1. Most patients to be anesthetized, either locally or generally, should have the benefit of physiological doses of morphin before anesthesia and also of an alkali and carbohydrate treatment both before and after operation. 2. For very weak and feeble patients, for those in the extremes of life, or where exhaustion with acidosis is present, also where the patient is in a state of coma or has acute or subacute nephritis, or any respiratory affection, the morphin should be omitted and bromides or paraldehyde and olive oil, per rectum, should be substituted. 3. The essence of orange-chloroform-ether sequence, or the nitrous oxide-oxygen-ether sequence should be used instead of ether by the drop method or the "gas-ether" sequence. 4. Chloroform throughout is the anesthetic of choice for chronic alcoholics in fair condition. 5. Oil-ether colonic anesthesia is indicated for the very obese. 6. For office work and short operations it is both safe and satisfactory to use only nitrous oxide and oxygen, without any preliminary medication or the addition of ether. 7. For major operations in genito-urinary surgery patients can be narcotized with nitrous oxide and oxygen alone, if proper preliminary medication is given, and this combination should be more frequently employed.—Reviewed in *International Journal of Surgery*, December, 1914.

Roentgen Treatment in Surgical Diseases.—Dr. J. Oehler (*Munch. med. Wochenschr.*, October 6, 1914) gives the results of Roentgen therapy in the surgical clinic of Professor Kraske in Freiburg. Especially satisfactory effects were obtained in tuberculous glands of the neck. By its use it was often found possible to avoid disfiguring operations. Tuberculous lymphomata could be removed with greater care and certainty than by any other procedure, and in cases where operative intervention was indicated, as in cases where large, movable glands were present or abscesses had to be opened, the X-ray proved a valuable auxiliary. Hyperplastic scrofulous lymphomata reacted most promptly; the more caseation present the slower the effect; mixed infection in cases of fistula formation lost its terrors. Even the smallest nodes, which are often left behind in operations and give rise to recurrences, are caused to disappear, and scarring is avoided. Almost as good results were observed in tuberculous affections of the small bones and joints (spina ventosa, tuberculosis of the joints of the hand and of the ribs), healing taking place rapidly with cessation of pain and improvement of the general health. In the early stage of tuberculosis of the large bones and joints (head of humerus, knee-joint) marked benefit is frequently observed, especially as regards prompt relief of pain and return of function. To promote healing other conservative measures (puncture and injection of iodoform-glycerin, baths, orthopedic apparatus, etc.) are employed. Satisfactory results are also reported in tuberculosis of tendon sheaths. Of operable malignant tumors, only epitheliomata of the face in old persons were treated by the X-ray. It is also proved effective in several cases of recurrence of mammary carcinoma and had a direct curative influence in some instances of sarcoma. The author advises that all inoperable malignant growths and recurrences after operation should receive Roentgen treatment, while all operable ones, except epitheliomata of the face, should be removed by surgical means, followed by applications of the rays to the wound cavity. Except in the early stages of parenchymatous goiter, especially at puberty, the results were not encouraging in struma.—Reviewed in *International Journal of Surgery*, December, 1914.

Mortality After Prostatectomy.—Dr. Chute (*Boston Medical and Surgical Journal*, November 26, 1914).

In the last reports of three well known institutions the mortality varied from 9 to 26 per cent.

The low mortality—but a single death—in a series of 58 consecutive prostatectomies in the author's hospital and private practice is attributed by him to the recognition of the fact that the danger in this operation lies almost wholly in the renal condition; that with good kidneys properly functioning, or even with rather poor kidneys that have been gotten into good functional condition, these patients get well in the vast majority of instances. In his opinion, they usually die of renal insufficiency, though no signs indicative of this condition are ordinarily present. The two types especially dangerous are (1) those affected with pyelo-nephritis and (2) with a chronically overdistended bladder with non-in-

fectured urine ("renal embarrassment"). The latter cases are more dangerous than the others, because they are very often overlooked on account of the lack of symptoms pointing to the kidneys, and because they have not received the immunity granted by a chronic infection and almost any manipulation will be attended by infection. Such patients are in a condition where an ill-considered anesthetic may cause their kidneys to shut down. All prostatitis with a residual urine should be treated as though the kidneys were under suspicion. They should at least be kept under observation for several days prior to operation and the quantity of urine and its specific gravity determined. If the renal function is impaired operation should be postponed until it is good. The back pressure must be relieved, and that is most definitely accomplished by opening the bladder suprapubically and inserting a large-sized tube, the operation being done under local anesthesia (novocaine). It is advisable to wait one, two or more weeks before resorting to prostatectomy, the time depending upon the quantity of urine passed. Spinal anesthesia is being used with increasing frequency by the author in this operation. Bleeding is considered entirely secondary as a cause of operative mortality to the renal condition, even when excessive, although it should be carefully avoided. Moderate bleeding is more likely to be beneficial than detrimental, especially in persons with a high blood pressure.—Reviewed in *International Journal of Surgery*, December, 1914.

OBSTETRICS AND GYNECOLOGY.

Further Contributions to Our Knowledge of the Pernicious Vomiting of Pregnancy.—Williams in the *Glasgow Medical Journal* for December, 1912, reaches these conclusions:

1. The underlying factor in all cases of vomiting of pregnancy is probably an imperfect reaction on the part of the mother to the growing ovum.

2. In most cases this is only a predisposing cause, while a reflex or neurotic influence is the exciting factor, and cure usually follows its removal.

3. Williams still holds to the classification of reflex, neurotic, and toxemic vomiting. Of these the neurotic is the most and the reflex the least frequent type, while the toxemic is the most serious.

4. Pronounced toxemic vomiting is accompanied by characteristic lesions and profound changes in metabolism.

5. The significance of a high ammonia coefficient is not specific. It may be a manifestation of toxemic vomiting, of starvation following neurotic vomiting, or of an acidosis due to various causes.

6. It should be regarded merely as a danger-signal, while the differentiation between the various types is possible only after careful clinical observation. If improvement does not promptly follow appropriate treatment, the existence of toxemic vomiting should be assumed and abortion promptly induced.

7. In the absence of genital lesions, a low ammonia coefficient indicates neurotic vomit-

ing, which can be cured by suggestion and dietetic treatment, no matter how ill the patient may appear.

8. In primiparous women vaginal hysterotomy is the most conservative method of emptying the uterus. Nitrous oxide gas or ether should be used in preference to chloroform for anesthesia.

S. L. J.

The Treatment of Miscarriage.—Young and Williams, in the Boston Medical and Surgical Journal 22, give us the following views:

1. Spontaneous emptying of the uterus takes place in but about 13.2 per cent of all miscarriages.

2. The likelihood of a miscarriage to complete itself increases with the duration of pregnancy.

3. When it becomes necessary to use artificial means to complete the miscarriage, the finger followed by the curette in later miscarriages, and of the curette alone in the earlier months of pregnancy, has given uniformly satisfactory results at the Boston City Hospital.

4. Experience has shown that where the cervix is extremely rigid it is better to introduce the curette and break up the fetus and placenta and remove them piecemeal than to attempt to dilate the cervix sufficiently to introduce the finger.

5. Packing the vagina and lower segment of the uterus is an unsatisfactory and often unsuccessful method of emptying the uterus. No success whatever was obtained in treating incomplete miscarriages in this way.

6. Packing is, however, of great value in two classes of cases: First, in exsanguinated patients, to stop the hemorrhage and give the woman a chance to recover somewhat from the loss of blood before emptying the uterus. Second, when the cervix is very rigid, a tight cervical pack for twenty-four hours will soften it so that dilatation may be attempted with safety.

7. The results of artificial methods are as good, but not better than where nature has succeeded in emptying the uterus.

8. Artificial methods are necessary in a majority of cases, however, simply because nature has failed.

9. In infected cases the essential thing is to get rid of the infectious material by emptying the uterus, the particular method employed making little difference.

10. The later in pregnancy miscarriage occurs the smaller the liability to become infected, but the greater the likelihood of developing grave septic complications if infection takes place.

11. The mortality is practically the same at all periods of pregnancy.

12. Induced abortions have a greater mortality than accidental. The mortality of patients admitted to the hospital after criminal abortions was 10 per cent.

S. L. J.

PEDIATRICS.

Treatment of Scabies in Children—Gaston, in Paris Medical for August 30, 1913, per New York Medical Journal, is credited with the following combination to be employed in washing the child in the evening:

Saponis Castilienesis.....	5ivss
Potassii Sulphidi.....	5ii
Olei Olivae.....	5iss
Olei Thymi.....	mxiiii

Misce.

Potassium carbonate, two and one-half to five drams, should be added to the bath. After the bath the skin may be rubbed with a mixture of dilute camphorated oil, styrax and balsam of Peru.

On succeeding days the following ointment should be rubbed in:

Sulphuris Praecipitati.....	grn. xv.
Sodii Boratis.....	5ss
Zinci Oxidi.....	5iiss
Adipis Lanae Hydrosi.....	
Petrolati.....	aa 5ss

M. et ft. unguentum.

A starch bath should also be administered daily.

Where, as is frequently the case, scabies results in the production of eczema or impetigo, these may be treated by the application of balsam of Peru in oil (5 to 10 per cent) or by the following ointment:

Sulphuris Praecipitati.....	
Glyceriti Amyli.....	aa 5vi
Olei Cadini.....	mlxxx
Sodii Carbonatis.....	5ss

M. et ft. unguentum.

S. L. J.

Boiled Milk.—R. H. Dennett, New York (Journal A. M. A., Dec. 5, 1914), says the question of difference in the digestibility of boiled and unboiled milk as a food for infants has been overshadowed by the bacteriologic questions, and not sufficiently studied. Hence he gives the results of a series of observations on infants as to the comparative results of boiled milk substituted for unboiled or vice versa. He has among his records only a small series of infants who have been fed boiled milk over a sufficient length of time to be of much value. There were eighteen cases in which the patients received boiled milk for a period of from four to nine months, most of them for over six months, during the most critical period of their feeding history. Each of these infants was carefully observed and in only one case did they not do well. In this case the child was difficult to feed and had attacks of diarrhea when they stopped boiling the milk. None developed scurvy but all received orange juice. The various questions relative to the use of boiled milk are summed up by him, though more clinical study of the subject is desirable. Its prolonged use, if properly administered, is not conducive to nutritional disorders such as rickets, anemia, malnutrition or defective muscular development. Any danger of scurvy may be avoided by use of orange

juice. Boiled milk does not cause digestive disturbance in normal infants, hence it is not more difficult to digest, but it aids us in overcoming disturbances of digestion. It probably is more apt to cause constipation than unboiled milk but this may be overcome in certain cases without a change and it is not always overcome when boiled milk is stopped and unboiled milk used. The data as regards weight, increase, etc., are given in tabular form.

S. L. J.

The Early Treatment of Infantile Paralysis.—This subject is summed up in the *British Medical Journal* (May 30, 1914) as follows:

For all our increasing knowledge about acute anterior poliomyelitis or infantile paralysis its etiology, pathology and epidemiology, it must be confessed that our treatment of the disease during the acute stages makes but little advance. Flexner and his pupils in America and a number of workers in Germany have identified and cultivated virus of the disorder, while elaborate studies made in many lands have brought to light a quantity of interesting and important facts with regard to the ways in which the infection is caught and spread. Its prophylaxis can be compassed nowadays better than was formerly the case. The patients can be isolated; their infectious nasal, buccal and pharyngeal secretions can be appropriately dealt with, and the many healthy carriers of the disease can be rendered less harmful to others by the local use of antiseptics, such as urotropin or hexamethylene tetramine. But once the infection has been caught these antiseptics are comparatively powerless, and when it has reached the central nervous system the virus is almost inaccessible to drugs. It is true that a minute fraction of the doses of urotropin which a patient receives may reach his cerebrospinal fluid, and so may tend to inhibit the growth of the virus of infantile paralysis in the nervous system. So far as it goes this is, no doubt, an excellent thing; unfortunately, however, there is no good reason for believing that urotropin, the best antiseptic for the purpose at present known, possesses any great practical value in treating the complaint in its acute stages and cutting short its progress. This powerlessness in the face of an acute infectious disorder so dangerous and crippling as infantile paralysis is one of the reproaches of modern medicine.

Mr. Robert Jones does good service by laying down the lines on which medical treatment should be given to cases of poliomyelitis in their earliest stages, and by emphasizing the fundamental importance of beginning that treatment at the earliest moment possible. Mr. Jones would make it a general rule that in every case the head and spinal column should be kept at rest from the very beginning of the attack. If the child has much pain in the spine and limbs, as not rarely happens, fixation of the spine and limbs gives more relief than any other procedure. In any case, to keep the spinal cord and head at rest, so far as possible, is only to act in accordance with the general principles regulating the treatment of inflamed organs or areas in other parts of the body. It is important that this rest, continued through the acute and early convalescent stages, should be con-

tinued so as to prevent the adoption of faulty positions by the affected limbs, in order that the deformities that are likely to follow the paralysis may be minimized. Until the tender stage of the disease has passed away—a matter of from three to eight weeks or even more—no active treatment should be undertaken; it is argued that active agencies may be present throughout the tender stage, so that treatment by massage or electricity would be premature.

Having drawn attention to the importance of complete rest during the early stages of infantile paralysis, Mr. Robert Jones proceeds to point out the necessity for great care when active treatment is at last begun. It is not the nervous part only of the neuromuscular apparatus that is damaged in infantile paralysis. Everybody knows that the motor nerve cells in the anterior horns of the spinal cord are injured in this disease; but it is not so generally realized that the affected muscles may suffer doubly—first in their nerve supply and secondly by being themselves over-stretched while thus disabled. Hence it is of great importance that from the first they should not be stretched, and to avoid this attention must be given to the position of the limb; and, again, that when massage and active movements are prescribed care should be taken to avoid the possibility of straining or overstretching the injured muscles. The massage must be very gentle at first, the movements must be carefully limited, and the limb must be put up in an apparatus so as to keep the paretic muscles in a position of relaxation until they have improved in tone. The success of treatment depends upon the maintenance of this muscular relaxation continuously until there is evidence that the damaged muscles have begun to recover. When this occurs the position of relaxation may be gradually discontinued.

S. L. J.

Eczema in Infancy and Childhood.—R. G. Freeman finds that the causes of this condition are excessive food; a badly balanced ration, or irritating food, such as eggs, oatmeal, stewed fruit, cake, candy, preserved fruit or jam. The local treatment, as advised by C. W. Crary, is as follows: For facial eczema a mask should be worn, while on the limbs the application should be covered by lint and bound in place. Lassar's paste, made from one part zinc oxide, one part starch and two parts vaselin, is altogether the most useful application for the skin, especially of the face. It may be rendered somewhat antiseptic by the addition of 2 per cent. resorcin or eucosal. For the dry, chronic eczematous patches on the body or limbs of babies one part tar ointment to seven parts of Lassar's paste is most useful. For the scalp in some cases a diluted sulphur ointment has been found distinctly useful.—*Archives of Pediatrics.*

S. L. J.

Eczema and Neurodermatitis in Childhood.—Lechnert states that Vidal was the first to separate neurodermatitis from the eczemas. He termed the condition chronic circumscribed lichen because clinically it was a lichen and as such had been described by older authorities. It began as circumscribed papules which itched intensely and which tended to consolidate to form plaques.

Apparently there was no exogenous causation, and, since it occurred in neuropathic subjects and the itching was apparently subjective, the affection was later christened circumscribed chronic neurodermitis. Close study revealed special clinical and histological peculiarities, so that henceforth confusion with eczema or any other dermatosis seemed impossible. Its nearest congener appeared to be prurigo, from which, however, it should readily be distinguished. Neisser was nevertheless disposed to replace the affection within the eczemas, of which it constituted a sharply individualized form. Continued observation showed that it could occur in the mucosæ which were continuous with the skin, as the lips, conjunctivæ, genital mucosæ, also that it sometimes located itself on the palms and soles, causing verrucoid lesions. It even appeared as a moniliform dermatosis, like lichen planus—mere strips or single rows of papules. Of late years its presence has often been noted in children, even in scrofulous children. Differential diagnosis is the more difficult because eczema and neurodermitis readily develop in the same child. In the past two years nearly 300 children have been treated at the local clinic (Frankfurt a. M.) for one or the other affection or a possible association of the two. The proportion of eczema to neurodermitis was about 3 to 1. In 12 cases a diagnosis was impossible. In the undoubted cases of neurodermitis a neurotic substratum was by no means always in evidence. On the other hand a scrofulous component was often noticeable. The order of evolution in children agreed with that seen in adults: a primary, subjective itching, very violent and appearing in crises; the characteristic papules which form plaques; the increasing resemblance to a lichen, and chronicity. Tarry preparations are much used in treatment. S. L. J.

Bovina Human Milk.—Of course everyone knows that we are very far from discovering how to modify cow's milk so that it will resemble the normal food for infants, and that breast feeding is imperative for proper growth and development. When the child is deprived of its normal supply we can do fairly well, but in a certain proportion of cases we fail. It may not be known to all physicians that such cases will generally thrive if only a little human milk is given to the child—even as little as one feeding a day—but the more the better. Among primitive people an infant is usually killed if its mother dies. They probably know from experience that it will die anyhow. If the mother's milk fails, it was a custom for her to buy milk from other mothers, and this is sure to become a recognized traffic in civilization. Dr. B. R. Hoobler of New York City discussed the matter at the Section on Pediatrics of the New York Academy of Medicine, January 8, 1914, and described his experiences at Bellevue Hospital. The results were as follows:

- (1) We have shown that mothers are perfectly willing to sell their milk.
- (2) That certain mothers can spare a portion of their milk without detriment to their own child.
- (3) That human milk can be purchased at a reasonable price.
- (4) That its collection can be accomplished

without additional machinery than may be found in connection with any well-organized social service department.

(5) If needy mothers are chosen to furnish the milk a double charity is performed, viz., a struggling mother is helped to support herself and child and sick babies are furnished with the best food known. S. L. J.

EYE, EAR, NOSE AND THROAT.

Drs. H. R. Johnson and P. A. Haley.

An Intra-Nasal Operation with a Guide for the Cure of Dachrocystitis—Frank M. Hanger, Staunton, Va. (*Laryngoscope*, Vol. XXV, No. 1).

The writer, after reviewing the merits and demerits of the intra-nasal procedures devised by other operators for the cure of dachrocystitis, gives the following description of his method: A few drops of equal parts of 20% cocaine and adrenalin 1-1000 are injected into the lachrymal sac. A small lachrymal probe, moistened so powdered cocaine will adhere to it, is passed into the sac and worked down as far as the stricture. After a few minutes wait the entire canal will be anesthetized, so that a Theobald probe No. 13 may be passed into the nose with little or no pain.

The probe is left in situ and forms a guide for the opening of the canal within the nose.

The inferior turbinate and the site of the opening of the nasal duct is thoroughly anesthetized with cocaine and adrenalin, the interior third of the inferior turbinate is resected, bringing into view the probe in the inferior meatus.

If the lower anterior surface of the bone covering the duct is hard it may be necessary to chisel this away in order to use the punch forceps with which the operation is completed.

It is more easily performed with right and left right-angle forceps. As the probe is slowly withdrawn upward the male blade of the forceps follows, biting away as much of the inner wall of the duct as may be found necessary, which should extend slightly beyond the point of stricture. After through and through irrigation the nose is lightly packed with gauze which completes the operation.

While the operation is more easily accomplished with the right-angled forceps, it can be done with the chisel or gouge.

The author's claim for this operation is, that it is not difficult to do and yields results as good as the more elaborate ones requiring more than ordinary technical skill.

H. R. J.

Relation of Rheumatic Diseases of the Eye and Secondary Tuberculosis—By Wirtz, Abstract in *Annals Ophthalmology*, Vol. XXIII, No. 11.

Patients suffering from rheumatic affections show with the diagnostic tuberculin test general reaction strikingly often.

Wirtz examined a series of twenty-one cases of which six were episcleritis, fourteen iridocyclitis and one sclero-keratitis. General examination showed tuberculosis in nine cases. Twelve cases remained in which no active tuberculosis

could be found. In eleven of the twelve tuberculosis bacilli were found in the blood, the twelfth was not examined.

Wirtz uses the term secondary tuberculosis in the sense used by recent investigators who describe a primary, secondary and tertiary stage. Primary represents the stage of infection; secondary, the interval from the stage of infection to the beginning of the tertiary or fully developed case of tuberculosis.

Tuberculin treatment in these eye affections has not proved satisfactory, but Wirtz thinks that a combination of anti-rheumatic and tuberculin treatment will often yield results when either by itself would fail.

H. R. J.

Glaucoma, Iridectomy. Trephine—R. Denig, N. Y. in the *Ophthalmic Record* reports twenty-one trephine operations done by himself and has witnessed the results of fifteen others.

He thinks the trephine operation is easier to do than iridectomy, but the danger of late infection in the trephine is serious, as fourteen cases have been reported.

For this reason he favors iridectomy in acute and sub-acute glaucoma, except in those having a very shallow anterior chamber, using the trephine for simple and hemorrhagic glaucoma. Denig does not excise the iris unless it prolapses into the opening. He considers grasping and pulling the iris through the opening a dangerous procedure.

H. R. J.

Multiple Laryngeal Papillomata Treated by Tracheotomy and Fulguration—Case presented by Dr. John McCoy before the N. Y. Academy of Medicine. Reported in *Laryngoscope*, Vol. XXV, No. 2.

Case. Child was first seen in 1912. Was then 5 years old. Was brought to the clinic with a history of having been hoarse for past two years, and had been very dyspneic two months. Examination showed the larynx to be almost completely blocked with typical papillomata.

Under general anesthesia all the growths were thoroughly removed by the direct method. The rapid recurrence of the growths was remarkable, and in ten weeks the larynx was again cleared of all the growth and the tonsils and adenoids removed.

After two weeks the papilloma was again recurring, and tracheotomy was done for the purpose of putting the larynx at rest, and the growth again removed. The tube was worn for three months, at which time the growth was as large as ever. The larynx was again cleared by the direct method and fulguration applied. Since then the growth has been removed and fulgurated eight times up to June, 1914. These procedures at first seemed to have no effect in retarding recurrence, but in May, 1914 a decided change was observed. Instead of the soft succulent excrecence it became firm and solid. Whether

this was due to the rest afforded by the tracheotomy or to the fulguration cannot be determined, but there has been no disposition to recurrence evident since. There is, however, considerable thickening of the laryngeal tissues—hypertrophic laryngitis. The child breathes without effort through the larynx and can speak in a strong whisper.

In the discussion Dr. Harmon Smith called attention to an electrode devised by Yankauer for the application of fulguration to the larynx, a description of which appeared in the December, 1914, issue of the *Laryngoscope*.

With this electrode a strong fulgurating spark can be obtained and brought in closer contact than with any other.

Dr. Smith believes the drying influence of the air produced by the fulgurating spark upon the moist surface of the papilloma aids materially in the effectiveness of the treatment.

In these cases surgery is absolutely unavailing. Rest, which can only be secured by tracheotomy, followed up by fulguration offers the best prospect for permanent cure.

Many cases have stubbornly resisted all efforts, but in view of the means now afforded by the Yankauer electrode for applying a more intense heat to the interior of the larynx than could heretofore be obtained, drying the surface of these growths more thoroughly, he is indulging the hope that many of the difficulties incident to the permanent removal of laryngeal papilloma will be overcome.

H. R. J.

GENITO-URINARY AND DERMATOLOGY.

Dr. A. P. Butt.

The Present Status of Genito-Urinary Surgery—It is a highly gratifying sign of the times to see the department of genito-urinary surgery assuming the conspicuous position in medicine which its importance really merits.

In past years this specialty had been held in bad repute by reason of the multitude of men posing as genito-urinary specialists when really their work began and ended with the treatment of venereal diseases. To them the diagnosis and treatment of bladder and kidney lesions were sealed books. The title of genito-urinary specialist and the designation "clap doctor" were synonymous even in the medical mind; and to be known as a genito-urinary specialist, with many, was a reproach. The specialty was at the lowest round of the surgical ladder.

The explanation of this unhappy state was not hard to find. It lay in the proneness of certain undertrained young men, sportily inclined, to cultivate a practice among gonorrhoeics. Such young physicians arrogated to themselves the dignity of specialism and soon began to be known as "G-U" specialists. Furthermore, a large por-

tion of the income of these "G-U" specialists of a decade ago, originated in the superficial examination of friendly prostitutes, and the issuance of health certificates to be shown cautious patrons. This prostitution of professional knowledge and authority naturally did much to degrade these men, and as they suffered in professional and lay esteem, so did the specialty they assumed to represent.

But a happier time is upon us. A more cultivated and a better trained class of men have taken up this branch of surgery, men whose ambitions reach far beyond the treatment of acute urethral disorders.

This latter-day genito-urinary specialist is a specialist in fact as well as in name. To him the wonderful strides recently made by genito-urinary surgery are to be credited. To him is due the credit of having regained professional confidence, and forced the recognition of genito-urinary surgery as a definite and worthy department of surgery. And, also, to this new type of "G-U" specialist should honor be given for the advances made in the management of chronic gonorrheal lesions, the seriousness of which has finally been accepted by both physician and layman.—*The Urologic and Cutaneous Review*.

Chronic Leg Ulcers—Sonnensehein observes (*New York Medical Journal*) that hyperemia in any form has been recommended and is highly successful in the treatment of slowly healing chronic leg ulcers, the old but efficacious method of immersing the part in a pail of very hot water being a good illustration. Passive hyperemia by means of an Esmarch bandage is another example.

The writer uses to very good advantage baking of the part by means of an electric dry air oven, the usual treatment consisting of raising the temperature to 250° or 300° and maintaining it for twenty minutes or one-half an hour, depending upon the case and the patient. The number of treatments averages three a week.

Whenever pain is present in these cases it disappears after two or three treatments. Sluggish granulations become healthy and active and healing goes on with astonishing rapidity.

Pyelitis in Children: A Cause of Obscure Fever.
F. H. Smith (*Old Dominion Journal*).

This author brings out a very important point in the introduction of his article, viz., that until the urine has been examined no case of febrile illness in children should be regarded as obscure. In some children the cause of the unexplained fever is revealed as pyelitis. In a predisposing etiology he mentions three points of importance. (1) The preponderance of pyelitis in female children. (2) It occurs most frequently under 12 months of age, which fits in with the theory suggested by the sex; that the causation depends

upon the soiling of the vulva with feces, the feces passing thence into the bladder, ureter and pelvis of the kidney. (3) The colon bacillus is in the largest majority of cases the exciting cause—a further substantiation of the belief that the infection comes from the bowel.—*Genito-Urinary Surgery*.
IRVIN S. KOLL.

Carbolic Instillation in the Treatment of Bladder Tuberculosis.—E. L. Keyes, Jr. (*New York Medical Journal*).

While nephrectomy is the essential part of the treatment of tuberculosis of the bladder, and many cases get well without any additional procedure, there are a certain number of cases in which the bladder lesions persist until relieved by local applications.

Three principles must be recognized in the treatment of such cases: (1) An instrument must not enter the bladder—a relative prohibition. (2) The bladder must not be distended—an absolute prohibition. (3) The injection must give relief in proportion to the pain it inflicts—also absolute. The best preparations for application to a tuberculous bladder are thallin sulphate, 3 per cent to 20 per cent, gomenol, bichloride of mercury, 1:20,000 to 1:500, used as an instillation, and carbolic acid.

This last named drug may be used in solutions of from 1:200 to 1:20, 5 to 10 drops of it being instilled into the posterior urethra, and allowed to flow back into the bladder. The author has found this treatment the most effective. In two obstinate cases he injected with benefit one or two minims of a 50 per cent emulsion, formed by drawing a few minims of phenol and then an equal quantity of water into the syringe.

S. W. MOORHEAD.

A slowly distended bladder may contain an enormous quantity of urine without causing pain.—*Urologic and Cutaneous Review*.

In examining a genito-urinary case always palpate the suprapubic region to determine if the bladder is distended.—*Urologic and Cutaneous Review*.

A harsh dry skin with loss of hair and perhaps some modification of the voice, should suggest a course of thyroid medication.—*Urologic and Cutaneous Review*.

An instrument heated to the highest point the patient can bear has been known to pass a stricture impassable to the same instrument cold.—*Urologic and Cutaneous Review.*

* Make a careful urethroscopic examination in a case bleeding each time an easily introduced sound is used. There may be a papillomatous growth.—*Urologic and Cutaneous Review.*

Solid carbonic acid should be used with caution in cases of lupus erythematosus upon the face; the exposure should seldom be longer than ten seconds.—*Urologic and Cutaneous Review.*

Kelly enumerates at least eight possible sources of a hematuria. This is all the more reason for a precise examination of each case.—*Urologic and Cutaneous Review.*

INTERNAL MEDICINE.

(*New York Medical Journal, Jan. 2, 1915.*)

Almost none of the problems of pneumonia can be considered as formally solved.

I wish to consider the problem of epidemiology. Most cases are due to the diplococcus pneumoniae. All the cases that are apparently due to the pneumococcus do not have an identical etiology. Ten years ago Schottmuller described a variety of streptococcus associated with certain cases of pneumonia. These have large capsules and the growth on agar is sticky and mucoid. When injected into animals, the inflammatory exudate is sticky and tenacious. So is the lung exudate in patients dying from infections of this organism. Schottmuller called them streptococcus. The name pneumococcus inucosus therefore seems preferable. The cases associated with it are extremely severe, and it is probable that in these cases the epidemiology is quite different from those caused by the diplococcus pneumoniae.

Four years ago Neufeld and Handel showed that an immune serum produced against certain races of pneumococci was not effective against all. Against many races this immune serum was found inactive. The hospital of the Rockefeller Institute has made a study of the different races of pneumococci. By immunizing rabbits it was found that numbers of the races were similar and all these showed agglutination by the same serum, and such a serum protected mice against any of the group.

A second smaller group showed distinct characteristics from the first group.

Finally, a considerable number of races were found that had no common immunological features; each race seemed distinct.

Cole therefore names the largest group No. 1; the second group not quite so large; the third comprise the pneumococcus mucosus. The fourth, those having no common characteristics.

In the last two years each organism from 150 cases has been investigated as to its immunological reactions. The results, 38 per cent. belong to group I; 30 per cent., group II; 11 per cent. to group III; 21 per cent. to group IV.

Very similar results have been obtained by Neufeld in Germany, by Walker at the Peter Bent Bingham Hospital, Boston, and Lewis in the Pennsylvania Hospital in Philadelphia. From these studies we are no longer justified in considering all cases the same.

Cole's percentages were as follows: group I, 25 per cent.; II, 36 per cent.; III, 47 per cent.; IV, 6 per cent.; Lewis's I, 29 per cent.; II, 27 per cent.; III, 67 per cent.; IV, 11 per cent. The type due to group III is relatively infrequent, very severe and with high mortality. Group II, less severe; group I, slightly less severe, while quite a large group, IV, with no fixed type, in which the cases are relatively mild and nearly all recover. The prognosis would depend upon the determination of the type of infection.

It is important to Kum whether the organisms of the more fixed types of pneumococcus occur in normal mouths. 20 cases of normal individuals not in contact with pneumonia patients were examined; in none were types I, II, and III found.

While some of the persons in contact with pneumonia patients showed the pneumococci of the fixed type, this would show that contact infection may be concerned in the epidemiology of pneumonia.

Studies of the mouths of 50 tuberculous patients showed the presence of pneumococcus of the IV type in a great number of the mouths. Studies of the mouths of patients recovering from pneumonia from groups I, II, III, show that they disappear in about two weeks. They are replaced by group IV, which seems to be present in 80 per cent. of the mouths of normal individuals. In one case pneumococcus of the fixed type remained for 90 days. These studies would seem to show that those persons who harbor the fixed types after convalescence, those who are in contact with cases, and those who harbor such organisms and are not sick, are carriers of the infection.

* Cole considers the number of cases too few to justify any conclusions as to the best practical measures for the prevention of pneumonia.

Nature of the Intoxications.

Unlike the organism for diphtheria or typhoid, which produces both inside and outside of the body a definite poison, the pneumococcus seems not to do so, and so the results can not be ascribed to a toxin. The substance seems to be in the bacterial cells and is set free whenever the bacterial structure is injured, and the bacterial substance goes into solution. It is called anaphylatoxin. The exact nature of the intoxication remains to be explained.

J. N. S.

(To be Continued).

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THE RIGHTS AND DUTIES OF THE PHYSICIAN IN COURT.

Judge H. C. Hervey, Wheeling, W. Va.

(Read at meeting of Ohio County Medical Society, February, 1915.)

In discussing this subject I assume that it refers to the physician as a witness in court. If he is there in any other capacity—as, for example, a party to litigation, he occupies the same position as any other party. If he is called as a witness to testify to ordinary facts which have come under his observation, and which bear upon the case on trial, he is not to be distinguished from other witnesses who also have knowledge of facts which are proper to be presented in that case. He tells what he saw and heard, and the force which is attached to his story depends, as it does in the case of other men, upon his intelligence, his means of knowledge, the closeness of the observations he has made and all the other factors which add to or detract from the weight given to the testimony of witnesses. But I assume that physicians are usually concerned with the position which they occupy when they are called into the court room to tell about those things of which they are qualified to speak because of their professional training and experience as physicians and surgeons. In a paper which I read before this association some years ago upon "Compensation of Expert Witnesses" I undertook to show that the State has not only a legal right, but a right well founded in justice, to com-

pel the physician, whether he be a general practitioner or a specialist in some particular branch of his profession, to come into court and give, for the benefit of the judge and jury, testimony based upon such knowledge as he may possess as will help them to solve the problems they are called upon to dispose of in that case. And I further tried to show that for the service thus exacted from him he could demand no greater fees than those paid to the ordinary witness. But if the physician is compelled to come into court and aid in the settlement of the matter in dispute by giving such information as he possesses, is he not entitled to that consideration at the hands of the counsel conducting the examination which will make him feel that he has been fairly and courteously treated? A second question growing out of this duty to appear in court is this: Should a medical witness be permitted to state the facts in his possession or the opinion he is prepared to give in his own way without being hampered by technical limitations or objections which may be thrown in his way and which hinder the elucidation of his subject? Perhaps answers to these two questions will be welcomed by many medical men. These questions may suggest some of the reasons for many of the complaints made by physicians concerning their experiences on the witness stand.

Before I proceed to consider these questions let me call your attention to the marked difference as to freedom of action between the physician and surgeon as to the practice of his profession and the lawyer and judge in the conduct of a case in court. This difference arises from the fundamental

distinctions that mark the two professions. The physician's profession and science is based upon a knowledge of the human body and of nature's laws. The study of nature and nature's laws furnishes him with his professional knowledge and skill. Therefore the practice of his profession is bounded by no rules or limitations, except those which nature prescribes, but he is at liberty to use those means which his own investigations or the experience of his professional brethren show to be the best suited to the treatment of any case requiring his attention. And as continued investigation is broadening the field of his knowledge he is ever learning new things and putting into practice new methods. A physician once told me that the members of his profession do not acquire large libraries of medical works, because many of them are soon rendered obsolete by new discoveries and the introduction of new methods. For the reasons given a physician feels at liberty to use all the new information or to adopt any new method which he believes to have been sufficiently tested to demonstrate its worth. In the possession of such broad and liberal ideas the physician, when he comes into the court room, faces a profession whose methods are the very opposite of his own. The law is not a natural science in that it is not founded upon natural law. It is a system of principles and rules of human conduct, being the aggregate of those commandments and principles either prescribed or recognized by the governing power in an organized society as its will in relation to the conduct of the members of that society. While the law is flexible in the sense that it expands and grows to meet new conditions, yet the rules that are applied settle and harden into rigid requirements that only change when the law-making power intervenes for that purpose. The practice of medicine as applied to a particular class of cases may be revolutionized in a very short time, but you cannot so change and revolutionize society. Men cling to their customs, their conceptions of right and duty, their rules of conduct and the ideas of the relations which they sustain to their fellows; these things are not changed by new discoveries; they can only be changed by that gradual development of new ideas and views of conduct and responsibility, and such changes are necessarily slow. This

may be illustrated by the experience of Dr. Grenfell in Labrador. On one occasion he was called to treat a man with an abscess or ulcer of the hand. He could easily have cured the trouble by the use of the knife, but this man held the view that it was wrong to use the knife upon the human body. He would not permit the operation, and his ignorance and prejudice cost him his life. It was the custom or law of the man's conduct which stood in the way of his recovery. The physician's scientific knowledge enabled him to cure the hand, but he could not change his patient's view of right and wrong. So it may happen that the lawyer may see the need of changes and improvements, but he cannot, like the physician, adopt them and put them into practice. And in the effort to apply the rules of law to particular cases by means of a court trial the lawyer and the judge find themselves bound by certain well settled rules of procedure which they can neither change nor ignore. The law and the practice in the courts change but slowly because they are interwoven with the whole fabric not only of the government but of human conduct. Years ago when but a beginner in the practice of law I had this view brought home to me by an experience in the trial of a criminal case. A woman was on trial for causing the death of a child, and medical testimony was being introduced to show that certain dark marks on the body which the State contended were made by blows inflicted by the woman might have resulted from other causes. Among the medical men summoned was a country doctor of many years' practice, but of limited experience as a witness. He prepared himself (as I afterward learned from one who happened to overhear it) by a lengthy rehearsal of what he was to say in his room at the hotel the night before his appearance on the stand. In the morning when he was called he appeared with a large book in each hand, and upon being questioned he began to give a lecture upon the subject which he thought would enlighten his audience, but he was promptly stopped by objection from the lawyers; and, as often as he began, he met the same trouble until he left the witness stand in disgust without having given any evidence. He was heard to say after he had gotten out of the court room that the people in there either did not want to

know anything about the subject or they did not know how to go about getting the information they needed. I suppose that many physicians have left the witness stand thinking, as he did, that the court did not know how to go about getting the desired information.

Opinion evidence arises out of the necessity of supplying information which jurors cannot have because of the limited experience of men. All classes of men and all kinds of disputes are brought before the courts, and for that reason the practice of the lawyer in the settlement of these disputes is broader than any other business. We sometimes think that a man is remarkable and versatile if he ventures into several lines of business or takes up two or three professions and pursues them all successfully. And so he is, but the court must, in a way, cover every field of human endeavor and enterprise and settle the rights of parties therein. One day a court may try the question of damage caused to a land owner by the improper drilling of an oil well, calling for the investigation of oil-bearing strata. The next day it may have to deal with the acts of a board of directors in conducting the affairs of a band, and on the third day try out the question whether a physician properly treated a patient under his care. As these matters are to be heard before a jury of common men who have no special knowledge that fits them for the task of properly deciding the questions in dispute, the necessity arises for calling in the expert. But let us have in mind that the object is not to get all the information which the witness may possess on the general subject, and that the first aim of a jury trial is to have the disputed questions of fact passed upon by the jury, and that, so far as it is possible, under the circumstances of each case, this exclusive right of the jury to decide these questions must not be infringed upon. I am not here to discuss the wisdom of this method of settling disputed questions. Years of experience have led me to believe that in many cases, particularly in the trial of civil cases, the jury system is unsatisfactory. But this opinion is of no consequence here because a jury trial is the method everywhere provided in this country for the trial of questions of fact. Because of this exclusive right of the jury to determine disputed facts it follows that

the medical witness, like all others, must be so guarded when giving his evidence that he will not intrude upon the jury's exclusive province. Let me illustrate this by referring to another class of experts. Suppose that a workman sued the company which employed him, claiming that it was negligent in putting him to work upon a machine which was defective, and because of the defect he was injured, and on trial of this case a mechanical engineer of wide experience and expert knowledge is called upon to speak as to the machine. He may say whether the machine is of approved or bad construction and whether it is defective in its operation, but he cannot say whether the company was negligent in using the machine. The reason back of this distinction is that the jury is not made up of mechanics and they are not qualified to tell whether the machine is a good or defective one, and they must get that information from expert witnesses; but as the ultimate fact for the jury to decide is whether there was negligence in permitting the use of the machine, they alone must pass upon that question, taking into consideration the evidence of the expert as well as the other witnesses.

The application of this rule calls for the placing of limitations upon the evidence of the medical witness. He cannot be permitted to take the place of the jury and substitute his judgment for theirs, even though his judgment in the particular matter under consideration might be much better than theirs. He may tell them the facts, and he may, in certain cases, draw conclusions from those facts which they could not draw themselves, but he cannot, by the statement of his opinion, settle for them the question which they are to decide by their verdict. For this reason the physician upon the witness stand cannot talk on the general subject he has in mind as he might to a class of students, but he can speak only of those facts which are pertinent to the case on trial. Adherence to this rule is necessary in order that the jury may not lose sight of the issue before them; and, if not adhered to, the trial may be led away into by-paths that will confuse and obscure the very matter to be decided. The physician often has his mind upon the subject as to which he is called to speak and not upon the questions involved in the trial, while the lawyers and the judge have in their minds the particular

thing to be tried in that case. But the rule I have given is not an inflexible one, and the case in which it is relaxed and the medical witness is permitted to speak upon the very issue that is before the jury is one where a physician is sued for damages growing out of the negligent treatment of a patient. In such a case the liability of the physician to pay damages is settled not by the evidence of other witnesses, but by that of his professional brethren. To illustrate, let us assume that a surgeon is sued for the negligent setting of a broken limb. Other surgeons who have examined the limb and who are informed as to the facts may testify whether the method of treatment used is a proper one, and the extent to which the treatment has disabled the patient. Now these are the two important facts upon which the jury is called to pass in making up its verdict. The jury can get at these conclusions, which are drawn by the witnesses, in no other way, because, however carefully the treatment may be described, they cannot tell whether the limb was properly or improperly set, except as that information is given to them through the testimony of the surgeons.

Another rule of evidence that sometimes interferes with the statement the physician is prepared to make as a witness is that which excludes hearsay. If a witness called to testify about an accident began to state what some one who was injured in the accident told him, he would be interrupted and the statement excluded. The physician, when he is called to treat a patient who has suffered an injury in such an accident, in addition to making a physical examination of his patient, gathers such information as he can from his patient or from others as to the manner in which the injury was received. This constitutes part of what he calls the history of the case. It is hearsay. The physician does not know anything of these facts except as they have been given to him by others. If he was permitted to put into the case as part of his testimony this history he would introduce by a side-door method evidence which was not admissible. These facts given to him by others may have been considered by the physician in making up his opinion as to the extent and nature of the injury and its probable effect upon the future of the patient. It is difficult, and in some cases perhaps im-

possible, for him to separate in his mind the things which he actually observed from the things which were a part of the history, because they have all been considered in making up his opinion; and if that opinion is to go to the jury they will have a conclusion based, in part, upon hearsay evidence—the evidence of witnesses who have not been called before them, of whose credibility they have had no opportunity to judge, and who have not been tested by a cross-examination. A few years ago a man brought suit against a street railway company, claiming that his back was seriously injured by a collision between a street car and a wagon which he was driving. The case was tried in Hancock county in this State. Basing his opinion upon the complaints made by the man, a physician stated that he thought the plaintiff's back had been seriously sprained. But the evidence of the man was to the effect that he was thrown over the rear wheel of the wagon—a thing that could not possibly have occurred under the circumstances as given by himself. His own testimony demonstrated conclusively that the injury did not occur, and that he was deceiving his physician, and that the history of the case was manufactured. The physician who has attended the injured person is permitted to state as a witness what his patient has said as to his symptoms and sufferings, and he may give an opinion as to the nature and cause of the bodily or mental condition of such patient based in part upon his own knowledge, and in part upon these statements, and *after the facts which go to make up the history are properly proved by witnesses who know them*, the physician may base his opinion upon these facts; for they have then come before the jury not in an indirect, but in a proper way. In guarding against the violation of this rule as to hearsay evidence the lawyer interested may often have the evidence of a physician stayed. Because he has in his mind the case he treated as he sees it in all of its aspects, including the statements of persons made to him, and has not sifted out the facts of which he has personal knowledge from those which have come to him in some other way, he may be giving his opinion of a case which is not before the jury.

(To be continued.)

CONSERVATION OF VISION.

B. F. Matheny, M.D., Clarksburg, W. Va.

(Read before Harrison County Medical Society,
February 25, 1915.)

Societies for the conservation of vision have been formed in various portions of the United States. They exist under different conditions. The membership in some is medical and in others lay and medical.

In Pennsylvania, Indiana, Missouri, etc., the organization exists as a committee of the state medical society; in New York, Illinois, etc., independent associations have been formed; in Ohio the "Commission," as it is called, is a part of the state government. There is also a National Association, independent in its nature and mixed in its membership. Some of these associations, such as those in New York, Maryland, Ohio, etc., are doing energetic work, while others are inactive and almost useless.

At the 1913 meeting of the American Medical Association the Council on Health and Public Instruction appointed a committee on Conservation of Vision consisting of E. M. Alger, New York City; W. E. Bruner, Cleveland, Ohio; H. D. Bruns, New Orleans, La.; J. J. Carrol, Baltimore, Md.; E. C. Ellett, Memphis, Tenn.; Harold Gifford, Omaha, Nebr.; Ward Hulen, San Francisco, Cal.; W. B. Lancaster, Boston, Mass.; F. Park Lewis, Buffalo, N. Y.; Wm. C. Posey, Philadelphia, Pa.; W. H. Wilder, Chicago, Ill.; Casey A. Wood, Chicago, Ill.; Hiram Woods, Baltimore, Md.; and Frank Allport, of Chicago, Ill. Of this committee Frank Allport, of Chicago, Ill., was appointed chairman. The object of the committee was to produce interest and action in conserving vision, and endeavor to concentrate, under the auspices of the American Medical Association, activities calculated to preserve the sight of this and coming generations.

The members of the committee began their work by utilizing the machinery of the American Medical Association. The Council on Health and Public Instruction sends out each week a sheet called the Press Bulletin. This is sent free to nearly six thousand newspapers, and the printed matter upon its face can be used by the papers as editorials, news matter, etc. The printed matter consists of short, plainly written ar-

ticles on health topics. They are unsigned. The Council employs clipping bureaus, and through them it is ascertained that these articles are very extensively used. They are shaping public thought along medical lines in this country. The Conservation of Vision Committee has an appropriate article in the Bulletin each week and its articles on "The Eyes and the Movies," "Face Powder and the Eyes," "Cross-Eyes," "Illumination in Homes, Offices, Schools, Etc.," "Golf Accidents to the Eyes," "What is Cataract," etc., have been extensively copied all over the country. The committee feels that this is a most important part of the work, as it reaches so many people and is under direct control.

The next work of the committee was to write, print and circulate twenty pamphlets on popular eye topics. These were called "The Conservation of Vision pamphlets," and were numbered from one to twenty. They are handsomely gotten up, in uniform style. The author's names are given. They are short and plainly written, so that non-medical people can easily understand them. They are well illustrated. They are sold at 5c each or one hundred copies for \$3.50. They are freely given away on proper application to either Dr. Frank Allport, Chairman of the Committee, or to Dr. F. R. Green, Council on Health and Public Instruction, American Medical Association, 525 N. Dearborn St., Chicago, Ill. Sets of these pamphlets have been sent to public libraries, women's clubs, teachers institutes, state legislatures, health boards, etc., all over the United States, and the sale and distribution has been extensive. Some of the pamphlets are already in the third edition. Arrangements are being made to distribute Dr. Carroll's pamphlet on the "Eyes of Transportation Employes," to every railroad surgeon in the United States. I give here a list of the pamphlets:

The Conservation of Vision Pamphlets.

1. School Children's Eyes, by Dr. Frank Allport, Chicago.
2. Industrial and Household Accidents to the Eyes, by Dr. H. Gifford, Omaha.
3. Wearing of Glasses, by Dr. W. B. Lancaster, Boston.
4. The Relation of Illumination to Visual Efficiency, by Dr. E. M. Alger, N. Y.
5. Trachoma in Eastern Kentucky, by Dr. J. A. Stucky, Lexington.

6. Auto-Intoxication and the Eye, by Dr. H. D. Bruns, New Orleans.

7. Eye-Strain, by Dr. Hiram Woods, Baltimore.

8. Lenses and Refraction, by Dr. Frank Allport, Chicago.

9. The Eye and Its Functions by Dr. Frank Allport, Chicago.

10. Care of the Eyes, by Dr. Frank Allport, Chicago.

11. Infant Blindness, or Ophthalmia Neonatorum, by Dr. F. P. Lewis, Buffalo.

12. Ordinary Eye Disease, by Dr. L. W. Deen, Iowa City.

13. Usual and Unusual Eye Accidents, by Dr. E. C. Ellett, Memphis.

14. The Eye of Transportation Employees, by Dr. J. J. Carroll, Baltimore.

15. Ocular Hygiene in Schools, by Dr. S. D. Risley, Philadelphia.

16. Whiskey, Tobacco and Drugs and the Eyes, by Dr. E. Jackson, Denver.

17. The Oculist and the Optician, by Dr. Melvin Black, Denver.

18. Preparation for Blindness, by Dr. F. Park Lewis, Buffalo.

19. What to do for Blind Children, by Dr. F. Park Lewis, Buffalo.

20. Blindness from Wood Alcohol, by Dr. Casey Wood, Chicago.

For this year some new pamphlets are being published which will be out in a short time on the following subjects: "What Gonorrhoea and Syphilis will do for the Eyes" (I cannot say who the author is, but he will be a high-grade man, who has had much experience with this subject), "The Proper and Improper Illumination of Transportation Cars, and Its Relation to the Eyes," by Dr. Nelson Miles Black of Milwaukee, who has given much time and attention to the matter, and who is especially qualified to speak on this very important subject. The third pamphlet will be on "The Effect of the Bad Printing of Papers, Books, Magazines, etc., and Bad Paper on the Eyes," with suggestions for relief; by Mr. J. R. Cravath of Chicago, the well known illuminating engineer. The fourth will be on "Eye-Strain and Crime," by a competent author. The fifth will be on the unsolved problem, "The Relationship Existing between Oculists and Opticians, and the Medical Profession and the Laity," by Dr. Edward Jackson of Denver. This is a big subject. What are we going to do with the

optician problem? We cannot evade this question; it has got to be solved. Let us hear what Dr. Jackson has to say on the subject—let us read his pamphlet with open minds. I would like to go into these subjects thoroughly, as they are so very interesting, but will say that I have presented a copy of each that is out, for the Medical Library of our Society.

I would suggest that these are excellent pamphlets for doctors to keep in their offices and on their reading tables for distribution and education. The pamphlet topics are sufficiently varied to fill the wants of most people. Besides this, it often happens that an oculist desires to instruct a certain patient on a particular subject. Almost all eye subjects are mentioned in these pamphlets and are plainly and understandingly discussed, and it would be far easier to give such patient an appropriate pamphlet or two than to take the time to explain the subjects personally.

It seemed desirable to the committee to create a national sentiment in favor of conservation of vision, and for this purpose it was determined that lectures on this subject should be delivered in each state. A lecture bureau manager was appointed in each state who was willing to superintend the work in his state. Where a state organization for the conservation of vision existed, one of its officers was selected to carry on the work; but where no such state organization existed the committee selected some one to carry on the work. The plan is about as follows:

The state manager, as he is called, should enlist the assistance of all the oculists he could to aid him in this work, acting wherever possible, in harmony with the state and local medical societies, both special and general. Prominent and energetic oculists should be found who are willing to lecture on the conservation of vision, on invitation. Such lecturers should reside in different portions of the state, so that long and expensive journeys should not be necessary. The state manager should correspond with local medical societies, women's clubs, teachers institutes, boards of education and health, etc., and secure invitations for a lecturer to go to the different cities to talk on the Conservation of Vision. Lectures should, if possible, be arranged one month in advance, to give time for preparation and

necessary ethical advertising. The lecturers' expenses should, if possible, be paid for by the persons issuing the invitation. The lecture should last about an hour and should be given in plain and unscientific language. A discussion should follow. In order to make the lecture easy to deliver, the committee prepared a box of slides which is sent to each state manager, to be loaned to his associates in the work whenever a lecture is to be delivered. In addition to this a pamphlet is prepared, entitled "A Plan of Campaign for the Conservation of Vision." This pamphlet contains a full description of the plan, and what it is proposed to accomplish. Besides this, each lecturer is placed on the mailing list for the Press Bulletin. While these lectures are intended to cover all the methods of vision conservation, it is especially hoped that they will result in the use of the Crede treatment of the eyes of new-born babies; in the lessening of shop accidents; and in the annual and systematic examination of all school children's eyes by school teachers; for it is reasonably certain that if these three procedures could be universally adopted, 80 per cent. of all blindness could be eliminated from this country. The Crede treatment for new-born infants, the providing and using of goggles and other shop safety devices for eyes, and the annual, systematic examination of school children's eyes, ears, noses, and throats by school teachers in the United States could be accomplished at an annual cost which would not exceed \$250,000.00 per annum. It costs \$15,000,000.00 a year to care for the dependent blind in this country alone; in the State of West Virginia it cost \$15,995.49 to care for the blind at the state institution where there were only 59 inmates in 1911. Last year it cost \$17,000.00, almost one dollar a day for each inmate, to say nothing of those children more or less incapacitated by defective or diseased ears, noses and throats. Inasmuch as the examination of ears, noses and throats is provided for in the questions annexed to the vision chart, for the teachers' use, and as abnormal conditions of these organs can be investigated easily and speedily, at the same time that the eyes are examined, and as the benefits to be achieved by this addition are enormous, it is earnestly recommended that teachers will include

the ears, noses and throats in their investigations.

Emphasis should be laid on several points connected with these annual systematic examinations of school children's eyes, etc., by the teachers.

1. The examinations are simple and require no medical education.

2. Teachers are not required to make a diagnosis. They merely ascertain the fact, through their questions, that something is wrong and leave the rest to the doctor selected by the family for consultation.

3. A child can be easily examined in five minutes and each teacher should examine the children attending her own room. By subdividing the work in this way, all the children in any city of any size can be easily examined in one day—a definite day in the early autumn of each year should be set aside for these tests in all cities.

4. These tests not only benefit the children by leading to the correction of their eye, ear, nose and throat defects, but the correction of these defects benefits the teachers, because it usually adds materially to the intellectual and moral character of the children, thus rendering them much easier to teach, and amenable to discipline. Teachers should therefore be glad to do this work without grumbling, both for selfish and unselfish reasons.

5. There is no objection to these examinations being made by doctors or school nurses. This, however, would cost large sums of money and Boards of Education and Health are never allowed enough money for even ordinary purposes. This is a fact that might as well be frankly recognized and acted upon. Let the teachers, therefore, devote one day in the year to do this work and have it finished. They are easily capable of doing it. It takes no extra time for them. It is a benefit to themselves as well as to the children. It costs practically nothing. Therefore let it be done.

In the course of a survey for trachoma in this state made by Taliaferro Clark, Surgeon United States Public Health Service, (Public Health Report, January 22, 1915), he found a marked prevalence of this disease in several of the counties of the state. In 17 schools 10 per cent of the children were afflicted with this disease. In 4 schools more than 20 per cent of the pupils

had trachoma, in 2 schools over 30 per cent, in 3 schools over 40 per cent, and in one school over 45 per cent of the pupils had trachoma. The control of trachoma, a communicable disease of the eyes potentially damaging to vision, can best be brought about by the inspection of school children and their education in the principles of sanitation.

The question may be pertinently asked, what has been the results of the state lectures? This has been varied greatly in different states. No man is compelled to accept the position of state lecture bureau manager. The acceptance is voluntary and is decided after the work and ideas have been thoroughly explained. After a promise of conscientious work he is given the box of slides and printed matter is sent, which represents an outlay of about \$25.00 for each state. In some states this (at least, as far as results are concerned) has ended the matter. So far as I know, in some states no work whatever has been done, no lectures have been delivered, and nothing has been accomplished. Up to the present time such a state of affairs has existed in the State of West Virginia. A very prominent man in the medical profession and member of our State Medical Society was appointed as state lecture bureau manager and was sent the necessary equipment and instructions and after Dr. Allport of Chicago, Ill., had written him time and again in regard to the work, he did not answer the letters and he sent him a telegram without reply. Then he wrote him again requesting him to send back the box of slides at their expense, but still he never got any reply from him at all. Dr. Allport had me to write him also in regard to the slides but still no reply. He must be a dead one.

I was asked to take the lecture bureau managership, and so far have done but little. I have written all the secretaries of the county medical societies of the State and asked their assistance in this matter, and a report as to the feeling of the members of their societies in regard to having some member of the society prepare a suitable paper to be read and discussed before the society, and to have some one prepare a lecture to be delivered to the laity, at which lecture a large attendance should be urged. As yet I have received only a few replies.

There have up to the present time been reports from 30 states—Georgia, South Carolina, Alabama, Oregon, North Carolina, Kansas, New Hampshire, Wyoming, Tennessee, New York, Arkansas, Missouri, Utah, Maine, North Dakota, Connecticut, Washington, Maryland, Ohio, Kentucky, Delaware, Idaho, Virginia, Minnesota, Iowa, Wisconsin, Washington, D. C., Michigan, Indiana and Nebraska; 339 lectures have been delivered by 190 lecturers in 283 cities to audiences aggregating 69,425.

When this is added to the hundreds of thousands of people who have been reached by the newspaper articles, by the distribution of the press bulletins and the thousands of people who have been reached by the Conservation of Vision pamphlets, it is seen that the work of the committee has not been in vain. I also desire to add that probably through the agency of the lectures in the various states school inspection of eyes, ears, noses and throats has been established in at least 200 cities.

I would suggest that this matter be thoroughly discussed here, as I am anxious to have the sentiments of our local society in this matter, as well as their assistance in getting this subject properly before the public.

437 Hornor Ave., Clarksburg, W. Va.

LABORATORY WORK AND THE GENERAL PRACTITIONER.

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The Clinical Laboratory of Today.—The existence of the modern clinical laboratory is the best answer to those who claim the greater advance of surgery over clinical medicine. It covers so wide a field that even a man who devotes all of his time to it can only cover a certain portion of it. As an aid to diagnosis it has the first choice of the physician. How far it is of help to him depends upon himself and the skill and judgment of the laboratory man.

Laboratory Findings Should Be Looked Upon Merely as Symptoms.—A few findings are absolutely pathognomonic, but the great majority must be considered along with the other features of the case. Only

by following this rule can there be a feeling of confidence between the physician and the laboratory.

The physician should insist that his work be done with reasonable accuracy and without bias. The attempts of many workers to increase the delicacy of various tests to such an extreme point is without reason, and the mistakes have brought doubt and mistrust in the minds of physicians. There should be a wide margin of safety, and when the test is doubtful the laboratory should be willing to repeat it.

On the other hand, when a finding has proved its worth, the physician should not disregard its presence if it does not fit in with his views. For example, if a case that appears to be an almost typical case of typhoid fever has a marked leucocytosis, there are but two possibilities—either it is not typhoid or it is typhoid with a complication.

I intend in the following remarks to point out such findings as have, in the experience of most men, proved their worth.

FINDINGS WITHOUT WHICH A DIAGNOSIS CANNOT BE MADE SURELY.

Diseases of the Blood.—The leukemias can be diagnosed from blood smears alone. The same is true of pernicious anemia when severe; when mild a complete count is necessary.

In malaria we find the plasmodium. If quinin is given the plasmodia may not be found, but smears will show a normal white count and a relative increase in the large mononuclear cells.

New Growths, etc.—Stained sections of various tissues, together with the history, give the diagnosis.

The reaction for sugar in the urine in diabetes. Pyuria in pyelitis. The finding of the spirocheta pallida in doubtful sores. These are a few examples of positive findings; but some of these are not absolutely positive by themselves. The relative value of common findings will now be pointed out.

Findings in Syphilis.—The initial lesion can be diagnosed as soon as it appears by finding the spirocheta with the dark-ground illuminator. The Wassermann test is positive in every case by the time secondary symptoms develop. Finding the spirocheta gives the earliest possible diagnosis, and the best treatment is early treatment. The effects of treatment can be followed by the

Wassermann test. When the Wassermann test is rendered more or less permanently negative a small proportion of cases still react to injections of luetin, and these are still diseased. In obscure cases, seen for the first time, a positive Wassermann should be considered diagnostic only if it is very *strongly positive*. If it is weakly positive, the laboratory man should, for his own sake as well as that of the patient, ask to be allowed to repeat the test. A negative test deserves a certain amount of weight; it must be recalled that the intensity of the reaction is apt to vary from day to day, and that it may entirely disappear for a time after the ingestion of alcohol.

Findings in Gonorrhoea.—The gonococcus is constantly present in the urethral discharge in this disease. In late stages it may not be found. Obscure cases of arthritis may be proved to be gonorrhoeal by finding a positive complement-fixation test. This test follows the exact lines of the Wassermann test for syphilis. It has demonstrated that about twenty per cent. of cases pronounced "clinically cured" still harbor contagion; that 80% of stricture cases are still gonorrhoeal. A large percentage of cases of "pus-tubes" gives a positive reaction. The test is absolutely specific. It is best performed about eight weeks after treatment has been suspended, to give time for the excretion of specific antibodies.

Findings from Other Serum Tests.—The Widal test is positive, at some time, in the course of typhoid fever in 95% of the cases. About 70% only are positive about the tenth day. In the presence of a normal leucocyte count the Widal should be repeated. If the count is high typhoid is practically always excluded. Some clinically certain cases of typhoid give a negative Widal, but react with strains of the paratyphoid bacillus. There is still another group of cases, as pointed out by Riesman, which run a typhoid course and give none of the usual laboratory findings—febris entericoides.

Findings in Blood Counts and Blood Smears.—Aside from the pathognomonic findings mentioned above many of only relative value are frequently available.

Thus the low count in typhoid fever, influenza, early tuberculosis, tuberculous peritonitis and other diseases is a valuable pointer. When signs are localized around the appendix the presence of a leucocytosis

with an increase of the polynuclear cells to 85% or more always means a gangrenous or purulent process. If the appendix ruptures and peritonitis supervenes, myelocytes make their appearance; in far advanced cases the myelocytes persist even though the count drops back to normal. This does not mean that pus will not be found if the count is not as above. I have seen more than one case with abscess and a normal or nearly normal count. But if the count is over 85% *there is pus.*

In pneumonia there is always a leucocytosis except in the mildest and severest cases. The rise is mainly in the polynuclear cells, which average between 80 and 85%. In central pneumonia and in the pneumonias of the very young and very old, the count is a valuable aid. Identical blood pictures are seen in meningitis, epidemic as well as tuberculous. The absence or the presence of only a trace of chlorides in the urine points to pneumonia.

The disease most often confounded with typhoid fever are ulcerative endocarditis, pyelitis and concealed suppuration. Osteomyelitis is often called typhoid before the symptoms become localized. In all there is a leucocytosis. Endocarditis may be proved by blood culture; pyelitis is easily diagnosed from the urine; osteomyelitis may be suspected if the polynuclear percentage is over 85. An increase in the number of eosinophiles should prompt the examination of the feces for ova or parasites. A marked eosinophilia is one of the characteristic findings in trichinosis.

A relative lymphocytosis is found in goiter and in neurasthenic conditions as well as in patients who are "run down."

In interpreting blood findings it is important to remember that they are most characteristic in early stages of a disease. For example, a purulent appendix is operated upon and drained; the count drops, but after a week or ten days there is still a little elevation of temperature and the patient is not doing as well as could be expected. Exploration of the abdominal cavity reveals a concealed pocket of pus, yet the count may be only slightly raised.

In children the count is apt to be higher after than before a meal. Due allowance must be made in their cases owing to the fact that normally the polynuclear percentage is only about 30 during the first year of

life and gradually rises to about 70 at about puberty. In general, case for case, a child will react with a higher count than an adult.

Findings from the Spinal Fluid.—The information to be derived from examination of the spinal fluid more than offsets the slight danger inherent in lumbar puncture. If the fluid withdrawn is cloudy, anti-meningitis serum should be injected at once, regardless of later findings. If the meningococcus is found, valuable time has been saved; if not, no harm has been done. In tuberculous meningitis the fluid is clear, but soon throws out a thin stalk of fibrin, in which the tubercle bacillus can nearly always be found. Less frequently are found the pneumococcus, bacillus mucosus capsulatus, influenza bacillus, etc.

A normal fluid shows a negative Noguchi test, a positive Fehling test and no increase in leucocytes. In meningismus the fluid is withdrawn under increased pressure, but shows no abnormalities. The spinal fluid gives a positive Wassermann test in the great majority of cases of cerebro-spinal syphilis and paresis and in about half the cases of tabes.

It is claimed that the "Gold test" is an almost unerring test for syphilis.

Findings from Analysis of Gastric Contents.—These analyses are valueless in themselves. It cannot be too much emphasized that a careful history is the best means of diagnosis in stomach cases. The most wished for test is one that will show carcinoma of the stomach early. Probably every physician is on the lookout for this condition, but when he thinks he has one the chances are he hasn't. Many such diagnoses are based on the absence of free hydrochloric acid in gastric analyses. It is worth while mentioning that, if free hydrochloric acid is absent and there is no sign of retention of food and no blood in the stool, cancer is very unlikely. Probably the best single point is the presence of occult blood in the stool. To repeat, it is far easier to exclude cancer than to include it. It is claimed that in "hour-glass" stomach free hydrochloric acid is always absent.

In gastric and duodenal ulcer free hydrochloric acid is usually increased, but may be normal in amount or even below.

Findings from Examination of Feces.—As mentioned above, it is important to demonstrate occult blood in suspected cases of

ulcer or carcinoma; in the latter a stage is reached after which blood is constantly present. Rather than search for delicate tests emphasis should be placed on selection of proper material for examination and the use of great care. Relatively large amounts of stool should be used and should be rubbed up in a mortar with acetic acid and extracted with ether. The ordinary guaiac and turpentine test is good enough, but the guaiac should be fresh. The benzidin and phenolphthalein tests, if negative, prove the absence of blood, but they are too delicate to be relied on when positive. Ova can be found more easily after a purge. If Charcot-Leyden crystals are present ova are usually found, too.

Findings from the Urine.—Albuminuria will be mentioned only to remark that its presence does not always mean nephritis nor does its absence exclude it. It must be considered with the history, blood pressure and the findings of a physical examination. It is best not to rely on one test alone. The best tests for sugar are the Benedict and Nylander tests. The urine tested should be fresh and slightly acid. In doubtful cases add yeast to the urine in a fermentation tube. If gas is formed sugar is present. In the hands of many physicians the Fehling test often gives rise to doubtful reactions, because the urine is not acid or too much has been added or it has been boiled too long. Large amounts of indican point to stasis in the small intestine. Many cases of pyelitis pass as typhoid or malaria unless the urine is examined microscopically. In pyelitis the urine is characteristic. It is cloudy and does not clear up on standing; it is acid; it contains large numbers of pus cells and myriads of bacteria. A few red corpuscles are usually present and occasionally a few hyaline casts. Usually a trace of albumin only is present. The benefit of early diagnosis in this condition lies in the fact that urotropin is more effective then than later.

The presence of pus in the urine should merit the strictest investigation. If it is found without an accompanying bacilluria, tubercle bacilli should be searched for. In renal tuberculosis the earliest signs are polyuria, then signs of irritation of the neck of the bladder (dysuria) and later pyuria. The pus at first is sterile (with the usual culture media) and the presence of blood is uncommon. If the urine has been carefully

obtained by catheter, acid-fast bacilli present are tubercle bacilli, especially if the above signs are present.

By ureteral catheterization the affected kidney can be determined; by the aid of phenolsulphonephthalein the functional capacity of the other kidney can be determined and operation advised or condemned according to findings. In doubtful cases resort must be had to inoculation of guinea pigs; this reaction requires from ten days to two weeks.

Secondary infection is much more frequent when the kidney is the seat of stone or tumor than in tuberculosis. For this reason a pyelitis may mask for a time one or the other of the former conditions. It is well to remember that in uncomplicated pyelitis red corpuscles are scarce and casts even scarcer; visible blood or marked albuminuria point strongly away from it.

Periodic bleeding may occur from one or both kidneys; the passage of clots may give rise to renal colic. From all appearances the cases are clearly due to stone, yet no shadow is thrown on the plate nor are stones ever found in the urine. So far the only sure means of diagnosis seems to be direct inspection. In a recent case one kidney was affected; it excreted 10% of phthalein compared to 42% by the healthy one. Sections showed a glomerulo-nephritis. Many other such cases are now on record.

(To be continued.)

ETIOLOGY, PATHOLOGY, AND TREATMENT OF VALVULAR HEART LESIONS.

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(Read before Eastern Panhandle Medical Society
at Harpers Ferry, W. Va., March 3, 1915.)

This subject is a very large one and one about which much has been said, but still I feel that a few remarks would be of advantage, even though they do nothing more than to start the mind to thinking.

I consider this one of the most, if not the most, important diseases that confront the general practitioner of today. This is one of the maladies where the physician can and must impress on the minds of his patients the value of carrying out the orders given;

also the results that may follow if they are not properly carried out.

There are certain diseases more dangerous to life than valvular heart lesions, but many of them are completely recovered from and others are not. The valvular lesions seem to leave a permanent disability.

While in this paper I wish to consider all of the valvular lesions, I desire to lay especial stress on diseases of the mitral valve.

Etiology.—Simple endocarditis does not constitute a disease of itself, but is invariably found associated with some other affection. The diseases with which valvular lesions are most frequently associated are acute rheumatic fever, tonsillitis, chorea and the exanthemata.

In rheumatic fever a large per cent. of the cases are complicated by heart lesions, and especially of the mitral valve. It is therefore necessary to watch the patient carefully during such attacks and guard against such complications if possible. Unfortunately this cannot always be avoided, but the number of such complications can certainly be much reduced.

Many times the tonsils are responsible for heart lesions. Although they seem to be small and not suspected of causing trouble, still these are the kind, many times, that give the most trouble. A tonsil that is small and imbedded does not mean that it cannot be diseased. It is of the utmost importance to examine carefully the tonsils before looking elsewhere for a possible source of infection. It is not uncommon to find valvular lesions in an individual suffering with chorea. These cases seem to be rather common, and one should not be surprised to find a heart lesion in any individual who has had this disease.

It is believed that all cases of valvular heart lesions are of infectious origin.

The malignant form of endocarditis is usually seen in acute fevers, but sometimes it is seen where there has been no apparent cause. This form is seen in pneumonia, typhoid fever, smallpox, diphtheria, gonorrhoea and many of the other acute infections.

Pathology.—Simple endocarditis is characterized by the presence on the valve or on the lining membrane of the chambers of minute vegetations, ranging from 1 to 4 m.m. in diameter, with an irregular and fissured surface, giving to them a warty or verrucose appearance. Often these little

cauliflower-like excrescences are attached by very narrow pedicles. They are more common on the left side of the heart than the right and occur on the mitral more often than on the aortic valves. The vegetations are upon the line of closure of the valves, *i. e.*, on the auricular face of the auriculo-ventricular side of the sigmoid valves, festooned on either half of the valve from the corpora aurantii. It is rare to see any swelling or macroscopic evidence of infiltration of the endocardium in the neighborhood of even the smallest of the granulations or of redness, indicative of distention of the vessels, even when they occur upon valves already the seat of sclerotic changes, in which capillary vessels extend to the edges. With time the vegetations may increase greatly in size, but in what may be called simple endocarditis the size rarely exceeds that mentioned above. It has been shown experimentally that they may form with great rapidity, even in a few hours.

The earliest vegetations consist of elements derived from the blood and are composed of blood platelets, leucocytes and fibrin in varying proportions. At a later stage they appear as small outgrowths of connective tissue. The transition of one form into the other can often be followed. The process consists of a proliferation of the endothelial cells and cells of the sub-endothelial layer which gradually invade the fresh vegetation and ultimately entirely replace it. The blood cells and fibrin undergo disintegration and gradually they are removed. The whole process has received the name of "organization." Even when the vegetation has been entirely converted into connective tissue it is often found at autopsy to be capped with a thin layer of fibrin and leucocytes.

Micro-organisms are generally, even if not invariably, found associated with the vegetations. They tend to be entangled in the granular and fibrillated fibrin or in the older ones to cap the apices.

Subsequent Changes.—(a) The vegetations may become organized and the valve restored to a normal state. (b) The process may extend and a simple may become an ulcerative endocarditis. (c) The vegetations may be broken off and carried in the circulation to distant parts. (d) the vegetations become organized and disappear, but they initiate a nutritive change in the

valve tissue which ultimately leads to sclerosis, thickening and deformity. The danger in any case of simple endocarditis is not immediate, but remote, and consists in the perversion of the normal processes of nutrition which results in sclerosis of the valves.

While this is a rather brief description of the pathology, and much more could be said, I feel that the most important points have been touched upon, and certainly enough to make one feel that it is worth while to try to protect his patients, as far as possible, from developing the disease.

I feel that the care of the patients when suffering from some predisposing disease is very important, and I will have a word to say on that when I take up the treatment.

Treatment.—This is possibly the most important phase of the discussion of heart diseases. For the sake of simplicity I shall take up the treatment under four heads:

(1) Prophylactic, (2) Rest, (3) Dietetic, (4) Drug.

Prophylactic treatment consists in the proper care of the patient during an attack of rheumatism, tonsillitis, chorea and the exanthemata. In most of these diseases it is necessary to keep the patient quiet and in bed during the height of the disease, and especially is this true of acute rheumatic fever. In this disease it is wise to make a careful examination of the heart at every visit so that any abnormal condition may be noted and immediately treated before it goes too far.

The giving of salicylates in acute rheumatic fever is supposed to keep down heart complications, and their use is advised.

Rest.—The rest treatment during an attack of broken compensation is of vast importance, as, while it rests the body as a whole, it certainly decreases the amount of work thrown on the heart. I think it a wise rule to put the patients to bed and keep them there until the lesion has completely disappeared and then keep them there just that much longer. Under this head would come the question of advising patients about the care of themselves between attacks. One of the most important things is to caution them about sudden exertion, the eating of heavy food and excitement. Many patients cannot understand why they have to be so careful about what they do when they are not sick. This is the place where it is necessary to explain to them about the re-

serve force of the heart and how under such conditions the reserve force is gone. When there is slight overexertion, the reserve force being gone, the result will be another breakdown and a return of the symptoms.

In the treatment of the attack it is necessary to put the patient up in Fowler's position. It often happens that in the country and general practice one does not have a Fowler spring. Here it is necessary to provide a substitute. One of the best and most convenient is to take an ordinary straight back chair and turn it with the back down to the middle of the bed and the legs up to the head of the bed, then place pillows over the chair for the patient to rest on. In order to prevent the patient from slipping down in bed place a pillow or bolster under the buttocks.

Don't allow the patients to get up out of bed for anything, and don't allow them to turn from side to side without aid. This is especially necessary during the acme of the disease.

The dietetic treatment consists principally of a soft diet, and the one usually given is a typhoid diet or one similar to it. The reason for using a diet of this kind is that it is not wise to give heavy food of difficult digestion, another reason being that it does away with the very objectionable overloading of the stomach. Anything that tends to raise the blood-pressure aggravates a diseased heart and should be avoided. Therefore it is necessary to give food at short intervals and in small quantities.

The diet should consist of milk, soft boiled eggs, toast, custards and other similar foods. Food should be given at about three-hour intervals during the worst stage of the disease, and when the heart begins to compensate again the intervals can be made longer and the amount of food taken may be increased, but it must still be of a character easily digested. Fluids may be taken in moderation, but never in large quantities, as this would tend to an overfilling of the blood vessels and thereby increase the blood-pressure.

The drug treatment of valvular heart lesions is one which has been much discussed, and almost every drug in the realm of materia medica has been tried, some with apparently good results and others with little or none. It would seem from the literature that most authorities rely on the salicylates

more than any other one drug. This drug is best given in the form of sodium salicylate, about 10 to 15 grains every 3 hours. Along with the salicylates about twice its weight of sodium bicarbonate must be given.

Quinin in large doses has yielded good results in many cases. The dose must be large and continued for a long time.

Autogenous vaccines made from the focus of infection is of great assistance and should be used where the tonsils, throat, nose, teeth, ear, etc., are diseased and absorption is likely to take place. Such points of infection must be looked for in every case of cardiac disease, and usually such a focus can be found.

The use of the ice bag over the heart is a good thing and should be used in every case, as it seems to lessen the action of the heart and prevent extra work for that organ. The ice bag should not only be used during an attack, but it is often of great service in preventing an attack where the patient is suffering with such diseases as predispose to this disease.

The applications of blisters over the heart during an acute attack may be of much service where there is precordial pain and distress.

It is always necessary to watch the patient for bed-sores, as is true of any disease which requires a long stay in bed.

I believe that the most essential thing about the treatment of valvular heart lesions is to give the patient absolute rest in bed, with proper diet and good nursing.

THE SURGICAL TREATMENT OF DISTURBED MENSTRUATION.

J. A. Guthrie, M.D., Huntington, W. Va.

(Read before Cabell County Medical Society, December 10, 1914.)

In the subject under consideration tonight I have done my best to confine it as nearly as possible as I carry out the work in my own practice. I have classed the subdivisions of the subject arbitrarily, and as I see them in the ordinary run of practice.

We will first consider the subject of endometritis. The most important thing first to consider is the etiology of this particular case of endometritis; this taxes the diagnostic skill of our best men. I will classify

this condition under two heads—bacterial and mechanical. The surgical treatment of endometritis is to be considered only after all forms of local treatment have exhausted themselves. Eliminating the possibility of this discharge being a drainage from some pelvic abscess or pus tube, if we have glairy mucous discharge it is usually confined to the cervical canal. The actual cautery applied to the cervical canal until we have a deep burn, destroying all the superficial glands and epithelial tissue, usually gives results. If we have a muco-purulent discharge it usually comes from the fundus of the uterus. These cases respond to thorough dilatation and curetment with sharp curet and swabbing entire cavity and canal with compound tincture of iodine.

I have not forgotten our discussion of last month in which I was severely criticised for condemning the local treatment of the uterine cavity in the office. I have looked up the subject with a number of our best authorities and find that they condemn it positively. Not only that, but since the last meeting of this society I have tried several times under the most favorable conditions to make applications to the uterine cavity, but have found it very difficult to accomplish and have had very little, if any, results. Although it may have proven very satisfactory in the hands of my colleagues, I feel I shall not attempt to use it to any extent.

The mechanical form of endometritis is usually due to some form of retro-displacement, and some form of uterine suspension is necessary, and I will take it up further on in the paper.

I shall now classify dysmenorrhea, metrorrhagia and menorrhagia under same head for treatment. It is often impossible to make a differential diagnosis between these conditions. The causes are often associated closely together. The most common causes of these conditions are uterine displacements, displacements of tubes and ovaries, endometritis, hypertrophic endometritis, fibroid tumors, salpingitis, cystic ovaries, polypi of the uterine cavity, broad ligament cysts, stenosis of the cervix.

First we will take under consideration ante-flection. This is a rare condition; we have had a typical case in the last few days. The cervical canal was bent into two acute angles, requiring 15 minutes to dilate.

These cases are dilated slowly and carefully to prevent tearing of the external os, and then curetted lightly; a roll of gauze as large as can be introduced is inserted to the fundus of the uterus and left for 48 hours. This often causes considerable pain and discomfort to the patient. This roll of gauze is made by laying two strips of sterile gauze, 4 inches wide and 12 inches long, on the sterile dressing table and repeatedly rolling with the palm of the hand until we have a compact roll as large as a lead pencil. This will hold its position when introduced into the cervical canal until removed. In cases where we are unable to introduce a roll of this nature we pack the entire canal with tape $\frac{3}{8}$ inch wide and leave it about the same length of time. For the retro-flections and retro-versions the only satisfactory treatment has been some form of round ligament suspension. I have two operations of choice. In patients from 16 to 21 years of age who have never borne children most displacements are due to some fall or accident. The modified Baldy operation has proven very satisfactory. The round ligaments on each side are picked up about one-third the distance from the uterus; they are brought around behind the uterus to the internal os. The tubes and ovaries are now lifted and dropped over the round ligament, and this gives a splendid suspension to these organs and does not restrict them when there are no inflammatory conditions. A chronic catgut ligature now encircles the round ligament at the point where they are held by the forceps, and a fairly good bite is taken in the posterior uterine surface about the internal os and tied. The peritoneal covering of the short end of the round ligament is now picked up and laced together up the posterior surface of the uterus. This gives us a support of the uterus very much like a hammock. There is no suspension to the abdominal wall and no after pulls and discomforts. The only objection to this operation is that the pubic end of the round ligament is used for support, which is not supposed to be the stronger end.

The Gilliam operation is used in cases of large and boggy uteri in women of middle age who have borne a number of children. Of course all cases in which there are perineal tears or cervical tears are to be repaired at the time of operation to relieve all irritation and give a good pelvic floor. In

cases of uterine fibroids of sufficient severity to cause troublesome hemorrhage hysterectomy is usually required. Occasionally we find a large cystic ovary which has dropped down in the cul de sac will often cause dysmenorrhea. A suspension of an ovary in this condition relieves the symptoms.

The treatment of diseased ovaries has been a very interesting one to me. We find a number of ovaries in operating that are cystic and diseased. I have adopted the following plan in treating all forms of diseased ovaries: If I find the ovary cystic and possibly a part of it in good condition, we protect the abdomen with gauze and with cutting needle puncture and squeeze out all serum; then suspend the ovary. We do this by introducing a catgut ligature through the pedicle of the ovary and as near the ovary as possible and anchor it near the uterine cornu of its side. If we find the ovary is so diseased that resolution is not likely to take place, and the ovary of the opposite side is in good condition, the diseased ovary may be removed. But we feel that a large number of inflamed and diseased ovaries have gone through the stage of resolution and practical recovery after being suspended and the inflammatory condition removed. We would like to condemn the removal of the ovary if there is any possibility of saving it. We have not found resection of a diseased portion of an ovary satisfactory.

I might say here that chronic appendicitis has a large part in keeping up pelvic inflammation. I have a patient at present who gives a history of having had eight different operations performed, and she is now only 29 years of age. She is suffering intensely from headaches, and is a subject for the West Virginia Asylum. At present she is taking corpus luteum with no results so far.

We have a form of endometritis that presents itself as a typical menorrhagia and metrorrhagia. I refer to hypertrophic endometritis, usually seen in women near the menopause. There is a constant leakage of blood for two or three weeks at a time with only a few days intermission before it starts again. This is due to a proliferation and growth of the endometrium; the dilatation and curetment of this diseased endometrium give perfect results. The uterine scrapings are to be examined for cancer cells. Of

course in all cases in which there is pelvic abscess it should be removed before we can expect any relief. Stenosis of the cervix is often found and it usually occurs at the external os; it may be congenital or due to repair of the cervical canal or child birth. Thorough dilatation usually is all that is required. Occasionally atresia of the cervix is found; may be congenital or acquired. An amputation of the cervix may be required or bilateral incisions with formation of a new cervical canal, to be packed with gauze until the sinus develops.

ENORMOUS DOSES OF ANTI-TOXIN IN AN INFANT

C. A. Flegler, M.D., Seth, W. Va.

Am sending you a report of a very unusual case of diphtheria, thinking that perhaps it may be of benefit to other physicians. I give you case record made at the time of treatment.

Male child, 13 months old, was noticed to be ill on Monday morning, January 18. As child grew worse I was called Wednesday, the 20th. Failed to properly diagnose the case. Was called the 22d, and at 8 P. M. gave 5,000 units antitoxin; Jan. 23 at 5 P. M., 4,000 units; Jan. 24 at 1 A. M., 3,000 units; Jan. 24 at 7 A. M., 2,000 units; Jan. 25 at 10 A. M., 2,000 units; Jan. 26 at 12 noon, 4,000 units; Jan. 27 at 11 A. M., 4,000 units; Jan. 28 at 2 P. M., 4,000 units; Jan. 28 at 11 P. M., 5,000 units; Jan. 30 at 11 A. M., 10,000 units; Feb. 8 at 10 A. M., 10,000 units. Total, 53,000 units.

The reason for length of time between doses was the distance from my office to patient's home. Was unable to get larger doses. Temperature at beginning of the administration of the antitoxin was 105° and dropped slightly after each dose of serum, but failed to reach normal until after giving the first 10,000 unit dose. The membrane filled the nostrils, fauces, covered the tonsils, uvula, and a patch was on the palate just posterior to incisors. The membrane was not much affected by the small doses and was removed entirely by the last dose of 10,000 units. Child is now well and throat does not show any inflamed surfaces whatever.

Correspondence

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION, 27TH ANNUAL SESSION.

Dr. J. E. Cannaday, Charleston, W. Va.

(Continued from March issue of Journal.)

Dr. S. J. Mixer read a timely paper on the subject of intestinal obstruction, in which he said, do not drain the obstructed bowel for too long a time, as the results are better with an early closure. In instituting drainage of the bowel bring up your loop so that when the opening is made it will be of the double-barrelled gun type. Later on you can cut through between the barrels with a long clamp and thus allow most, if not all, of the fecal stream to pursue its natural channel. Make free use of the trocar to empty loops of distended bowel, then close the small opening with a purse string suture. Do but little mopping and sponging of the inflamed peritoneal cavity, as it causes severe shock. If it becomes necessary to make an artificial anus, make it as near to the umbilicus as possible. Dr. J. Shelton Horsley said if we handle the bowel very much in such cases the patient will die. Use a trocar to empty distended bowel loops; sometimes he empties heavy bowel loops through a tube. Do not bring the loops of bowel out of the abdomen at all. The peritoneum can be soiled at such times with less impunity than usual. Resect for gangrene or near gangrene. Dr. Sherrill said gastric lavage was especially useful in case of beginning acute dilatation of the stomach. Dr. W. B. Coley reported a case of giant sigmoid successfully treated by the permanent use of a silver tube for the escape of gas. Dr. McGlannan says that if these cases of obstruction are toxic, and most of them are, we often have to drain the bowel. He advises the use of salt solution and adrenalin.

Dr. Judd said that one in eight or ten cases of enlarged prostate was cancerous. In the course of time all these cases develop pain. This is due to increased tension in the capsule and increases with age. In many cases the early symptoms are due to hypertrophy and the late to cancer, which is often engrafted onto the hypertrophied

prostate. If the surface of the prostate is rough and hard, we suspect cancer. The benign prostate is oftener soft and smooth. The chief clinical diagnostic signs are a hard irregular feel to the prostate. Pain is not a certain sign. If in operating the prostate is hard to shell out, we suspect cancer. Cancer of the prostate is not a suitable condition for the operation of enucleation. The complete operation destroys bladder function. Palliative operations are advised, so that the catheter can be passed readily. I had such a case recently, in which there was an undoubted cancerous invasion extending into the rectal wall and seminal vesicles, with lateral outgrowths into the pelvis as well. A small knob-like protuberance of the prostate extended into the bladder, and not only obstructed the urinary outflow by ball-valve action, but acted as a bar to the passage of the catheter as well. After the enucleation of the ball valve catheterization could be accomplished with the greatest ease. These cases cannot live very long, and we should do all we can for their comfort.

Dr. Carroll W. Allen of New Orleans discussed the removal of the prostate gland under local anesthesia, and reported a great deal of satisfaction by the use of that method. He advocates anoci-association methods, especially in old men, not able to bear well the shock of general anesthesia. Practically all of these cases will require the two-stage operation and many will need the three-stage procedure; particularly is this true of extensive bladder infection. In these cases make the primary incision down to the bladder and pack it, wait a few days and open the bladder, suture a drainage tube in tightly; about a week later remove the prostate. By following this method the bladder infection can be lessened; you do away with the dangers of wound sepsis; the kidneys have time to recuperate. Make the bladder incision away from the vesical neck and as near to the peritoneal fold as possible. The fistula will then heal rapidly, whereas if the fistula leads down under the pubes into the prevesical space and near to the neck of the bladder, closure will be slow. With the same end in view have the bladder moderately filled with fluid at the time of the operation; if it is greatly distended, the tendency will be to get the fistu-

lous opening too far downward and forward for prompt healing.

In making needle punctures into the neck of the bladder use a fine sharp needle and make a quick stab into the vesical structures. The patient will not feel nearly so much pain as when the needle is slowly pushed in. Inject the vesical neck, both anteriorly and posteriorly. One hour before the operation starts pass a suppository containing a local anesthetic in the rectum and give a hypodermic of morphin. Have one finger in the rectum as a guide when injecting from above. By following this method closely you can inject the prostate and its capsule without in the least endangering the rectal wall. Dr. Allen uses $\frac{1}{2}$ of 1% solution of novocain with 10 minims of fresh suprarenal solution added to the ounce of novocain solution. Most of the injections should be made between the prostate and its false sheath. After this injection there will be but little bleeding, due to physiological action of the supraenal solution. Bleeding may come on later, when the constriction period has passed off. This can be easily controlled by packing. A piece of gauze is attached to a catheter which has been passed through the urethra and the gauze is then easily drawn into the bladder and against the bleeding point by traction on the catheter. Leave one end of the gauze projecting through the suprapubic opening.

Dr. Francis Hager of Washington thinks it is best not to operate on cases of cancer of the prostate; these patients usually do not have more than a year to live. He advocates the use of nitrous oxide oxygen anesthesia in his prostatic work.

Dr. Bransford Lewis opposes any radical operation for cancer of the prostate. He thinks a partial operation may at times be useful as a palliative procedure. He esteems very highly the self-retaining catheter for the bladder drainage. He says the anesthesia for prostatic work must be brief. It is best to do the work rapidly, as the shock will be much less.

Dr. Joseph Taber Johnson of Washington reported a case of fibroid tumor of the ovary. This condition is quite rare and does not occur in more than one per cent of cases. Dr. Kelly reported several cases of fibroid tumors of the uterus that he had

treated with radium. Radium causes a complete temporary amenorrhea and a marked shrinkage of the tumor. Kelly finds that massive doses and short exposures give the best and most pleasant results.

Dr. Guy L. Hunner of Baltimore thinks well of the use of the thermo-cautery in the treatment of old chronic ulcers of the bladder walls. He has not had satisfactory results with fulguration in the treatment of bladder ulcers. In some cases he excises the ulcerated area.

Dr. E. P. Richardson of Boston thinks that the perirenal infections often come through the blood stream. He reports two cases of perirenal infection following attacks of erysipelas, two following sore throat and one following bronchitis.

Dr. Cullen reported some abscess cases which came from the colon, but which nevertheless were in the usual kidney location. One case of septic infarct of the kidney in his practice followed a carbuncle of the neck.

Dr. W. P. Carr of Washington recommended the use of autogenous vaccines in the treatment of the chronic sinuses left after draining kidney abscesses.

Dr. Louis Frank of Louisville said that there had been some cases of fatal anuria due to calculi of one kidney or ureter. The anuria of nephrotomy sometimes ended in the same way. A reflex congestion sent too great a volume of blood to the unaffected kidney and anuria was the result. The congested kidney is overwhelmed just as if there had been a ligation of the renal vein or ureter. A number of these cases have been relieved by ureteral catheterization. This procedure may push a stone backward into the pelvis of the kidney. Large quantities of water and digitalis are remedies to be deprecated in such conditions. He prefers opening the kidney pelvis by use of the catheter rather than the bisection of the kidney in such cases.

Dr. Bransford Lewis of St. Louis described his method and reported some cases of successful removal of stone from the ureter through the urethra and bladder.

Dr. Rudolph Matas of New Orleans reported a case of hair ball of the stomach successfully removed by operation. This ball filled almost the entire stomach and represented the accumulation of years of

hair chewing on part of the patient, who had had this habit from childhood.

Dr. John Young Brown of St. Louis says that many deaths are due either to too much or too little surgery. The main symptoms of duodenal ulcer are vomiting, tenderness, severe burning pain, occurring from one to three hours after meals. Six hours after the bismuth meal we will find a residue in the stomach and there will be occult blood in the feces.

Dr. Mixer of Boston, in discussing perforated duodenal ulcer, said that some of these openings would close spontaneously, provided they had suitable drainage. Dr. Brown sutures the bowel opening and then covers the area with an omental graft.

Dr. Henry O. Marcy told how Boston saves the kitchen grease from the city sewage and sells it for \$15,000 a year.

Dr. Charles H. Mayo spoke of the rarity of stomach diverticuli. He said that jejunostomy was one of the very best methods for building up a weakened ulcer case for radical operation.

Dr. Brown reported a case in which a child had developed an obstruction of the bowel, due to the formation of a large mass, due to eating a large quantity of persimmons.

Dr. LeGrand Guerry of Columbus, South Carolina, reported a case of obstruction of the bowel due to a hair ball.

Dr. McGlannan of Baltimore considers closely the blood pressure and the phthalein test before operating on cases of large umbilical hernia. The two-stage operation may be necessary in some cases of hernia with gangrene. Fat patients suffering from hernia have a greatly increased amount of work thrown on the heart after operation, and many of these will have a tendency to dilation of the stomach; these will require stomach washing.

Dr. Davis of Birmingham reported several cases of traumatic diaphragmatic hernia. Prompt operation is the salvation of these cases. They may be mistaken for blood effusion into the chest. He advises the thoracic route. The external wound is a guide. There are two objections to the transpleural route, and they are pneumothorax and the inability to explore the peritoneal cavity.

Dr. Stuart McGuire called attention to the fact that the X-ray and the bismuth

meal made the diagnosis of diaphragmatic hernia easy, and reported a case.

Dr. Kelly spoke of his lipectomy for fatty abdomen and calls it the watermelon operation. He advises the Mayo overlapping operation. He undermines to the outer margin of the recti. He says that in the middle of the fat there is a considerable layer of fascia-like tissue that bears suturing well. He uses buried silk sutures. Dr. Shelton Horsley mentioned the use of the fascia lata transplant in large hernias.

Dr. George W. Crile of Cleveland says the human body is a transformer of energy. Normally the body composition is slightly alkaline. Exertion creates acidity. He thinks hyperthyroidism is a form of acidosis. The inhalation of an anesthetic greatly increases acidosis. Vomiting and thirst after anesthesia are generally due to temporary acidosis. All infections exhaust the brain. Dr. Crile thinks morphin unquestionably confers some benefit in peritonitis.

Dr. Barr of Nashville advises the use of glucose or dextrose in peritonitis, given in solution by rectum.

Dr. Wm. P. Carr of Washington thinks morphin of value in shock. Dr. Crile says all dark blood is acid and that when the blood is very dark the patient should not have morphia. He gives large quantities of water in acidosis, as it exists in peritonitis and other conditions, thus the value of the Murphy drop method is confirmed. Dr. Charles H. Mayo says the lymph glands near the gall bladder always enlarge if infection is near about.

Dr. McCarty of Rochester discussed cancer from the viewpoint of the pathologist and as regards its origin, etc. Incision of neoplasmata is a very bad procedure. Classify clinically all tumors as benign, doubtful and malignant. Just at this point some one came in and asked the privilege of the floor for a moment. He wished to announce that the German fleet had shelled the English coast, and that one of the greatest naval engagements of modern times was taking place. The dispatch was received quite coldly. A little later a report (false, as we learned later) was received to the effect that three German cruisers had been sunk. Wild cheering greeted this announcement.

Dr. McCarty advocates wide excision in all doubtful tumor cases. Reserve operation until we are certain as to the nature of

the growth. In a great many cases the pathologist cannot tell from what part of the tissue the malignancy originated.

Dr. Francis Hagner of Washington reported a case of an alkaline infection of the urinary bladder cured by the local use of the Bulgarian bacillus. Similar claims were made by some for the local use of yeast. Dr. Hagner also injects the Bulgarian bacillus into the kidney pelvis after failure to cure with argyrol and silver nitrate.

Dr. Bacon Saunders of Fort Worth was elected president and Cincinnati was selected as the place for the next meeting. Dr. Saunders made a few remarks and quoted Mark Twain, who, on being presented to some silent official, said, "Mr. President, I am embarrassed, aren't you?"

Dr. Hodgson of Atlanta gave a moving picture demonstration of some of his orthopedic cases.

Dr. Caldwell of Cincinnati said he was afraid the end results of knee arthroplasties, especially in working men, were not altogether satisfactory. He thinks in such cases a stiff knee is better than a rather unstable though movable joint.

Dr. Francis Reder of St. Louis detailed his experiences with the use of boiling water injections in angioma. One to three injections cure most cases. He uses a glass syringe with an asbestos plunger and heavy cloth gloves while making the injections. In one case he had to make five injections. For the fourth injection he used alcohol and had a slough.

An angioma near the ear will cause terrible noises in the ear. Dr. Herman Boldt of New York reported a case of angioma of the uterus, which he said was very rare. Dr. Mayo said the principal danger was of getting too much water in making the injections. Too much water in one point causes sloughing. He recommends radium for this condition, as it leaves no scar. In making the hot water injections there is some danger of embolism, but that danger is slight. The operator should protect his hands with heavy duck gloves. In making the injections be sure to inject into the body of the tumor; when a gray color is noted the action of the hot water has gone far enough. Make the injection slowly.

Dr. E. Jones of Atlanta discussed the comparative rarity of mesenteric cyst and reported a case occurring in his practice.

This cyst caused intermittent attacks of pain and vomiting.

Dr. John Staige Davis discussed the treatment of chronic leg ulcers by means of skin grafts. These cases get on most unsatisfactorily when treated in the usual way. Rest and immobilization give fair results, but this sort of treatment cannot, as a rule, be applied to the average dispensary patient, who has to work for his living. Most of the failures experienced were due to infection, which prevented the grafts from taking. The results obtained from these cases by skin grafting were gratifying. Some of them were in very bad condition, and the tibia was at times exposed from the prolonged ulceration.

Capital City Bank Bldg.

Selections.

THE TREATMENT OF DRUG ADDICTIONS.

[The Harrison Anti-Narcotic Law, which went into force March 1st, will prove a great hardship to those who have become addicted to the use of habit-forming compounds. We have had a number of inquiries from physicians asking what course to pursue in cases of this kind. Our uniform answer has been "to put the patients under careful treatment, administering the drug only with a view to a final cure and making an effort to reduce it as rapidly as possible consistent with the patient's welfare." Below are extracts from the *American Medical Association Journal*, giving various forms of treatment, which are perhaps the best that have been presented to the profession.—EDITOR.]

The Harrison antinarcotic law, which became effective March 1, deprived many addicts of their drug and has caused much suffering. Numerous methods have been devised to wean the patient from the drug habit.

THE LAMBERT-TOWNS METHOD.

The Lambert (sometimes referred to as the Lambert-Towns) method of elimination and rapid withdrawal has proved quite satisfactory. This method has been described by Dr. Alexander Lambert in *The Journal of American Medical Association*, but in view of the numerous recent inquiries in regard to it the essential details are here repeated. This must not be regarded as a cure for drug habits, but is intended to obliterate the terrible craving which these patients suffer when deprived

of their accustomed drug. Vigorous elimination is the most important feature of the method and is secured by the administration of compound cathartic pills and blue mass or some other form of mercury. The other essential measure is the persistent use of the following belladonna mixture:

	Gm. or c.c.
℞ Tincturae belladonnae (15%)-----	62
Fluidextracti xanthoxyli-----	
Fluidextracti hyoscamii, aa-----	31

With these two prescriptions as a basis the following steps in the treatment are to be observed:

A patient addicted to morphin is given five compound cathartic pills and 5 grains of blue mass. Six hours later, if the bowels have not moved, a saline is given. After three or four abundant movements of the bowels (and not until then) the patient is given by mouth or hypodermically, depending on his habitual method of taking the narcotic, in three divided doses, at half-hour intervals, two-thirds or three-fourths of the total daily twenty-four-hour dose of morphin or opium to which he has been accustomed. Observe the patient closely after the second dose, when about half of the total twenty-four-hour dose has been taken. A few patients cannot comfortably take more than this amount. Six drops of the belladonna mixture dropped with a medicine dropper are given in capsules at the same time as the morphin or opium, and should be repeated every hour for six hours. At the end of six hours the dose of the mixture is increased 2 drops. This dose is then continued at hour intervals for another six hours, when the dose is increased by 2 drops, and again continued at the same interval, increasing the dose each six hours until it reaches 16 drops. It is then continued in this amount, but is diminished or discontinued at any time if the patient shows belladonna symptoms such as dilated pupils, dry throat or redness of the skin or mental symptoms. It is begun again at reduced dosage after these symptoms have subsided. Unusual sensitiveness to belladonna will usually be manifest in six or eight hours, when the dose can be cut down 2 to 4 drops and then raised by 1 drop every six hours. On the other hand, if after twelve hours the 16 drops have not produced dryness of the throat the dose may be increased to 18 or 20 drops every hour until

the dryness occurs, and then the amount may be reduced.

At the tenth hour after the initial dose of morphin five compound cathartic pills and 5 grains of blue mass should again be given. If they have not acted in six or eight hours, give some vigorous saline. When the bowels have acted vigorously, which is usually at about the eighteenth hour, give half the original dose of morphin—that is, one-half or three-eighths of the original total daily dose. The belladonna mixture is still continued, and ten hours after the second dose of morphin five compound cathartic pills and 5 grains of blue mass are again given, if necessary followed by a saline seven or eight hours later. After the bowels have acted thoroughly, at about the thirty-sixth hour, the third dose of morphin is given, which should be one-sixth or three-sixteenths of the original dose. This is usually the last dose of morphin. Ten hours after the third dose of morphin, the forty-sixth hour, again give the five compound cathartic pills and 5 grains of blue mass, followed seven or eight hours later by a saline. After the bowels have moved thoroughly a bilious green stool should be expected, and after its appearance 2 ounces of castor oil should be given to clear out thoroughly the intestinal tract. It is sometimes found necessary to continue the belladonna mixture over one or two additional cathartic periods before giving the oil. After giving the last dose of compound cathartic pills, and before giving the oil, the patients will have their most uncomfortable time, and may be relieved by 5 grains of codein hypodermically. This should not be kept up long after the oil is given. Beginning about the thirtieth hour the patients should be given strychnin or digitalis or both every four to six hours.

Withdrawal pains can sometimes be relieved by ergot and strychnin, by massage, sodium salicylate or by some salicylic compound combined with coal tar products, such as antipyrin, acetphenetidin or pyramidon. Indiscretions in eating or exercise two or three days after stopping the drug may cause a recurrence of the withdrawal pains, due to exhaustion or indigestion. This trouble will quickly disappear without narcotics.

Insomnia may be troublesome and may be treated by bromids, chloral or other hyp-

notic. Lambert's experience is that veronal acts badly in these cases. Muscular fatigue is the best hypnotic, and regular exercise may be carefully taken within a week after the discontinuance of the drug. It is important to build up the patients physically.

Morphin and alcohol addicts should be treated for the morphin addiction and the alcohol may be tapered off gradually. The gastritis usually found may cause difficulty in retaining medicines or food. Sodium citrate in doses of 5 to 10 grains every hour will relieve this condition, and if necessary may be supplemented by 10 to 20 grains of cerium oxalate.

Cocain and morphin addiction make a difficult combination to treat, but the procedure should be that for morphin, with plenty of strychnin or other stimulant. The cocain should be withdrawn at once. The patients may become delirious and unmanageable after the effect of the morphin wears off.

The cocainist should be treated like the alcoholic, by withdrawing the cocain, giving the belladonna mixture every hour, increasing as with the morphin patients, and the five compound cathartic pills and 5 grains of blue mass, the first doses being taken simultaneously. At the end of the twelfth hour repeat the cathartics and the saline, and likewise at the twenty-fourth and thirty-sixth hours. After the last cathartic the bilious stools will appear, and at the forty-fourth or forty-fifth hour the castor oil is given. Unless the bilious stools appear it may be necessary to continue the treatment over one or two more cathartic periods.

Though each patient presents an individual problem, Lambert insists that the plan must be adhered to closely. The cholagogue action of the mercury is essential and the persistent repetition of the doses of the belladonna mixture so as to produce the physiologic effect is required to prevent the craving for the drug.

PETTEY'S METHOD.

The method of Pettey in morphin addiction also employs active purgation as one of its principal features, with sedation in the form of scopolamin after the drug is withdrawn, with large doses of strychnin in the purgative to increase peristalsis and also afterward for its supporting effect.

The steps in the treatment may be described as follows:

On the day treatment is begun the patient may take his usual doses of the drug. He is required to abstain from dinner and supper, and at 4, 6, 8 and 10 P. M. he is given the following purgative prescription divided into four capsules:

R	Calomel -----	
	Powdered Extract Cascara Sa-	
	grada aa-----	gr. x
	Ipecac-----	gr. i
	Strychnin nitrate-----	gr. 1/4
	Atropin sulphate-----	gr. 1/50

No opiate and no nourishment are to be given the following morning until the bowels have moved thoroughly. In order to insure the movement of the bowels six or eight hours after giving the last purgative capsule 1/20 grain of strychnin should be given hypodermically and a half hour later 2 ounces of castor oil or a bottle of citrate of magnesia. Both the strychnin and the oil or saline should be repeated every two hours until the intestinal canal has been thoroughly emptied, and no morphin should be given during this time. The thorough elimination will afford relief from the discomfort of abstinence from the drug, and this should be taken advantage of to postpone the morning dose of the narcotic. When the demand for the drug becomes insistent it may be given in not more than one-half or two-thirds the usual dose at the same intervals at which the drug was formerly taken. After the purgation liberal feeding may be allowed until within six or eight hours before the next purgative course. This should be forty-eight hours from the beginning of the first purgative course, and may be more or less active, according to the effect obtained from the first, but none of the purgative ingredients should be left out, and large doses of strychnin are insisted on. The morphin in reduced dose, sufficient to keep the patient comfortable, may be continued until the last dose of the second purgative course, when the drug is to be discontinued and no other opiate should be given. Six or eight hours after the second purgative course has been completed, strychnin hypodermically and the oil or saline should be repeated as after the first course, until free bowel movements occur. The patient will now be able to go longer before feeling the effect of

abstinence from his morning dose, especially if he remains in bed, which he should do. Within six or eight hours after the time for the morning dose the patient's demand for relief from discomfort should be met by giving, instead of the opiate, 1/200 grain scopolamin hypodermically, and this should be repeated in thirty minutes. If the patient has not fallen asleep after the second dose a third may be given in a half hour, which may be of the same size or double the previous dose, depending on the effect. This will produce either sleep or mild intoxication, in either of which conditions the patient will not suffer. Immediately he awakes another dose of scopolamin, 1/200 grain should be given, and repeated to keep up a mild belladonna intoxication and to maintain the patient free from pain. This impression from the scopolamin should be kept up for thirty-six to forty-eight hours after beginning it, and then should be discontinued. During the scopolamin period and for twenty-four hours afterward, 20-grain doses of sodium hyposulphite may be given every two hours, which will supplement the effect of the calomel purgative and the patient will have small, bilious stools, unattended by colic or griping.

Convalescence will be reached on the fifth or sixth day and no further medication is indicated as far as the addiction is concerned and the patient will be comfortable. Deficient heart action during or after treatment may be treated by spartein sulphate in doses of 2 grains every four to six hours.

JENNINGS' TREATMENT.

The treatment of Oscar Jennings consists in giving dionin in place of the morphin, accompanied by spartein sulphate, the doses of dionin being rapidly reduced as conditions warrant. Hygienic measures and good feeding are also employed with vichy, stimulants, cola and other drugs to meet indications. He lays stress on the reeducation of the patient in self-control.

THE METHOD OF SCELETH

This method was described first in THE JOURNAL as follows:

To the Editors—The Chicago House of Correction and the Emergency Hospitals have, during the past fifteen years, been

called on to treat over 3,000 cases of narcotic drug addiction, principally morphinism. The large number of cases has given an opportunity for developing a treatment which we have found worth while. Many physicians have requested us to publish our formula, and, with the introduction of the Harrison law, the largely increased demand for such a treatment has caused us to describe the treatment. This must be regarded as a preliminary report.

When patients are received in the hospital they are given a preparatory dose of saline cathartic. The basis of the medical treatment is the following:

Scopolamin hydrobromid-----	gr. 1/100
Pilocarpin hydrobromate-----	gr. 1/12
Ethyl-morphin hydrochlorid—	
(dionin)-----	gr. ss
Fluid extract cascara sagrada	m xv
Alcohol -----	m xxxv
Water-----	qs. ad 5 i

The dose is varied according to the extent of the addiction. Patients vary from 1 or 2 grains to as many as 60 to 90 grains a day of morphin. When more than 10 grains of morphin per day are being taken, 60 minims of the above mixture is given every three hours day and night for six days. On the seventh day the dosage is reduced to 30 minims, the eighth 15 minims, and on the ninth 15 minims three times a day instead of every three hours day and night. On the tenth day the mixture is discontinued and strychnin nitrate, one-thirtieth of a grain, three times a day, is used. On the eleventh day strychnin nitrate, one-sixtieth of a grain, is given, and this is continued for a week. During the first five days only light diet is given, but patients are encouraged to take liquids freely.

If a patient is using less than 10 grains of morphin a day, the dose should be 30 minims of the mixture to begin with. If he is using less than 5 grains, 15 minims is used as a starting dose. During the first three days the patients suffer from insomnia, and in about 10 per cent. of the cases vomiting; this is to be expected. If the pulse goes below 40 or over 120, the mixture is stopped for a single dose. If there is collapse, one-half grain of ethyl morphin hydrochlorid or one-fourth grain morphin is given hypodermically. In about

4 per cent. of the cases a scopolamin delirium may develop. In such instances the mixture should be given without scopolamin for two doses, and then continue with scopolamin in one two-hundredth grain doses.

During the treatment no other drugs should be used. After the fifth day the patients will have no further desire for morphin. Up to this time they care very little for food, but after the fifth day they develop a ravenous appetite and will gain weight rapidly. Extremely emaciated patients will gain a pound a day for the first thirty days.

As stated, the results of the treatment have been, to our mind, quite efficient, and have been found in comparison to secure more lasting results than the Lambert-Towns atropin treatment. The patient should be directly under the physician's care, but after eleven days, the strychnin treatment of seven days may be safely entrusted to the patient.

The final results are, of course, dependent on the cause of the addiction. If, since the beginning of the habit, the cause has been removed, the patients are permanently cured and do not return to the habit. Where the cause persists, whether it be functional neurosis, a degenerate mentality or criminality, the patient occasionally returns to be treated anew. The treatment of the cause should be borne in mind at the time any corrective treatment is undertaken.

CHARLES E. SCELETH, M.D., Chicago.

[COMMENT.—Dr. Sceleth is medical superintendent of the House of Correction and Sceleth Emergency Hospitals, Chicago. In these two institutions, which are practically one, all police cases in the city of Chicago are handled, and cases of drug addiction are referred practically and invariably by other hospitals to them. Ethyl-morphin hydrochlorid is the hydrochlorid of the ethyl ester of morphin. The product was first introduced by Merck & Co. under the trade name "Dionin." See *New and Nonofficial Remedies*, 1914, p. 209.]

If the administration of thyroid extract to a patient suspected of exophthalmic goiter increases the symptoms the diagnosis is more probable.—*American Journal of Surgery*.

TRACHEOTOMY: A NEW RE-TRACTOR AND TUBE PILOT FOR THE EMERGENCY OPERATION.

(Surgery, Gynecology and Obstetrics, November, 1914, pages 671-673.)

Dr. Frank Le Moyne Hupp of Wheeling, in this journal gives a historical review of the subject and comments on the indications for tracheotomy. He speaks of O'Dwyer's priceless legacy, intubation, and how this operation cannot be expected to relieve every case of laryngeal asphyxia. He says:

This tube pilot or emergency tracheal-wound retractor is fashioned like a miniature Sims speculum, as may be seen by the photograph, terminating in a probe point, grooved on its convex side like the Sims instrument, but fashioned so that the two sides converge toward the probe point. The retracting device is placed at right angles to the handle, and for convenience we have added a three-prong retractor at the other end of the shaft.

When the tracheal ring or rings have been cautiously divided, it too frequently happens, just as an effort is made to pass the cannula, that the severed rings, either through aspiration or pressure, are inverted, or, perhaps, as we have more than once observed, the cannula has slipped into the cellular tissue, or the imperfectly divided fascia outside of the trachea, and the patient quits breathing. In just such an emergency this probe-pointed guide and tracheal wound dilator may be quickly, but with precision and in a deliberate way, carried along the finger, and forced through blood, if present, into the windpipe wound. The tracheal incision is now wide open, and with an expulsive cough the asphyxiated patient is relieved.

If there is no tracheal cannula at hand, and no other cutting instrument but a penknife, with the aid of this instrument a patient may be kept alive and comfortable indefinitely until the metal cannula arrives or a cannula may be improvised from rubber tubing, the vital necessity of making an opening into the trachea and letting the air enter at once having been accomplished. patient already cyanosed to the last degree and all but shocked to death.

GENERAL RULES IN TRACHEOTOMY

1. Local anæsthesia if possible, or combined ether inhalation and local infiltra-

tion of novocaine and adrenalin, adopting Crile's assumption that inhalation anæsthesia does not prevent injury impulses from reaching the brain-cells and making them discharge their nervous energy, in a patient already cyanosed to the last degree and all but shocked to death.

2. While the vital necessity is to open the trachea and let in air, remember your anatomy, avoid hurry, be calm and keep your head.

3. Shoulders raised, head extended and immobilized by the two hands of an assistant.

4. Chin rigid and in line with episternal notch (Treves [5].)

5. Even retraction mid-line.

6. Remember that the hæmorrhage from venous engorgement and blocked right heart are relieved the moment the trachea admits air.

7. When suffocation is imminent, be satisfied with touch; do not wait for a sight of the white rings before tracheal incision.

8. While desirable to control bleeding before opening the trachea, delay in accomplishing this may sometimes block the heart and cost a life.

9. Cut cautiously the soft collapsible rings of an infant's trachea; it is but a line or two from the œsophagus.

10. After-treatment of tracheotomized patients is of imperative importance; no case should be left without skilled care. In diphtheritic stenosis the danger time is within forty-eight hours after the exhibition of antitoxin, when membrane begins to loosen.

CLAIMS FOR THE NEW RETRACTOR.

1. Laryngeal asphyxia from any cause may be relieved with this instrument and a penknife.

2. It will guide a cannula quickly, safely, and with accuracy into the trachea, in the presence of copious venous bleeding.

3. In a short, fat neck with suffocating dyspnœa, relief may be given with expedition.

4. It is a useful and safe instrument in the hands of the general practitioner.

5. Where a second operation must be done in the presence of cicatricial tissue and through inflamed tissues, with the aid of the retractor one can enter the windpipe without difficulty.

6. Where the tracheal tube has been coughed out or has slipped for any reason,

this retractor is an ideal instrument for a quick and painless replacing of the cannula without anæsthetic or cutting.

We earnestly trust that this little life-saving instrument will give proof of our object in devising it; that is, to lessen the difficulties of others as it has lessened ours, and prevent the tragic ending of some emergency tracheotomies.

The Clinical Aspects of Renal Infection.—D. Eisendrath, in *Interstate Medical Journal*, July, 1914.

The subject of kidney infection has been brought home to a number of the members of the West Virginia State Medical Association. For this reason, if for no other, the scholarly article of Dr. Eisendrath will be read with interest, an abstract of which is herewith given:

1. Infection of the kidney may take place by one or more of four routes, a combination of several routes not being an exception. The first is the blood route (hematogenous); second, the so-called urogenous, along the interior of the ureter, the micro-organisms being carried up into the pelvis of the kidney with the stagnant urine; third, the lymphogenous route—that is, from the lymphatics of the bladder to their communication with the lymphatics of the ureter up along the latter to the pelvis and into the lymphatics of the kidney. From the writer's observation this is not at all a rare form of infection. The fourth, the connection of the lymphatics of the colon with those of the kidney. This route has not been proved, but seems a plausible explanation for some of the cases, especially those occurring in infancy and childhood.

2. Many of the cases of renal infection are dependent upon the presence of a calculus blocking the ureter, oftentimes the pelvic portion, or at the ureteropelvic junction. For this reason a routine examination with the X-ray of every case of renal infection should be made if possible.

3. Many of the cases of renal infection are masked by the pseudo-malarial chills and fever or the typhoid-like course of the temperature. In every case of temperature in which a negative Widal or malarial test has been made one should always think of the kidney as the possible source of the infection.

4. The symptoms of renal infection are oftentimes so indistinct that the kidney is not thought of as the source of obscure fever. Tenderness and other local signs are not infrequently absent, even though the general symptoms are of the most septic character.

5. Both acute and chronic hematogenous and urogenous forms of infection may be unilateral, and their early diagnosis may greatly assist in removal or other methods of treatment of the infection.

6. The best method of eliciting tenderness over the kidney is either by bimanual palpation or by palpation at the costovertebral angle. The most reliable evidences clinically of renal infection are, however, those obtained by the use of the cystoscope and the ureteral catheter.

7. Pelvic lavage is of more assistance in the

cases of chronic than those of acute infection of the renal pelvis. At times in the pyelitis of pregnancy and of the puerperium, if they do not yield to conservative treatment, the pelvic lavage will often cut the disease short.

8. Reformation of renal calculi in kidneys which are the seat of chronic colon bacillus infection is not infrequent, and must be considered in giving the prognosis of any case in which a stone has been removed, where the kidney is the seat of a long-standing infection. The calculi will reform as long as infection is present. Not infrequently such infection is bilateral, necessitating the avoidance of a nephrectomy on account of the advanced condition of the disease in both kidneys.

9. In children with high temperatures, especially of the remittent type, the kidney should be thought of immediately as the possible source of infection.

10. In the most severe types, both of urogenous and hematogenous infection, the general septic symptoms in the form of bacteriemia may mask the local condition completely. The longer the obstruction of the urinary passages exists, with infection of the kidney, the more advanced are the pathological changes in the latter.

11. Primary nephrectomy, if the opposite kidney is capable of doing the work of both, is to be preferred in advanced cases of renal infection to a conservative method. A secondary nephrectomy is exceedingly difficult, on account of the very firm adhesions and the danger of hemorrhage. The term pyelitis is often mistaken in its application. The majority of cases belong to the type of pyelo-nephritis, both the parenchyma and the pelvis of the kidney being involved.

12. Cases of mixed infection of tuberculosis and pyogenic micro-organisms are very difficult to diagnose, and must be thought of in the majority of cases of renal infection of the chronic type. The bladder symptoms, which are often so marked in the ordinary type of tuberculosis, are entirely absent or are not present in sufficient degree to lead one to suspect the presence of tuberculosis.

13. Conservatism should be the rule in all cases of renal infection except those of the hyperacute type. In the latter nephrectomy should be performed as early as possible.

The Preparation of Dry Bony Areas for Skin Grafting.—Charles H. Mayo, Rochester, Minn., *Annals of Surgery*, September, 1914 (*American Journal of Surgery*, October, 1914).

Mayo here describes a method, which he has practiced successfully for many years, of shortening the period of healing of large bony surfaces laid bare by burns, infection or the removal of malignant periosteal growths. He recommends that, by means of a drill, the entire bone area be perforated at intervals of a quarter of an inch apart and penetrating to the diploe of the skull or to the blood supply of the long bone, as the case may be. These perforations cause granulations to come to the surface and unite, with ample blood supply for skin-grafting. Until the protecting granulations appear the wound must receive excellent care to prevent infection. The cases which Mayo thus treated included large areas of the skull left after the excision of carcinoma, sarcoma or infection with pneumococci.

A CALL.

As the time for our annual meeting draws near all the progressive physicians of the State are aware of the fact that all roads lead to Huntington, W. Va., in May.

The plans for the meeting of the West Virginia State Medical Association to be held in Huntington, May 12, 13 and 14, have about been perfected, and from all indications this promises to be one of the best, if not the best, meeting, from an educational as well as a social standpoint, ever held in the State. A number of shining lights from some of our larger cities as well as quite a number of our own will be there to give you the best they have.

Prominent among those from out of the State who will entertain you will be that great investigator, Dr. George W. Crile of Cleveland, who will have as his subject "The Newer Conceptions Regarding Surgery of the Stomach and Duodenum." This paper, together with numerous others of equal merit, will make the scientific program a wonder, insuring for you a vast amount of knowledge not easily obtained elsewhere.

We desire your presence at this meeting, feeling you will be amply repaid for the time spent, and ask you to come to Huntington and help make this the greatest session of the West Virginia State Medical Association socially and scientifically.

H. P. LINSZ, President.

Editorial

THE HUNTINGTON MEETING.

Thoreau once said: "In the long run men hit what they aim at. Therefore they had better aim at something high." The medical men of Huntington, the second city of our commonwealth, have aimed high and are hitting hard to make the coming meeting the best in the history of the society. It is therefore the solemn duty of every member of the State Association to perfect his plans now. Mark your calendar early, come and meet your old friends, renew past acquaintances, make new ones among those whose sympathies and work and thought are in your chosen profession.

We have been told that the scientific program is about complete. Many of the brightest and best men in the State have indicated their intention of being present, bringing with them the best fruits of their labors for the year past, and papers have been promised by prominent scientists and celebrities from other states.

The lamented Beebe of Cincinnati, with his interesting discussions, ready wit and smiling face, whom we have been accus-

tomed to meet, will not be there; he has crossed the Great Divide. Peace to his memory.

We are glad to announce that the surgical program is practically complete, and judging from the men and the live subjects they have presented this section bids fair to constitute a notable part of the coming convention, as it will present the very best specimens of scientific work that our programs have ever contained since the origin of our beloved association.

We are permitted to print the following list of authors and papers which have thus far been announced:

- The Surgical Spleen-----Dr. J. E. Cannaday
Charleston, West Virginia
- Indication for Splenectomy----Dr. O. O. Cooper
Hinton, West Virginia
- Gun Shot Wounds of the Abdomen-----
Dr. Charles F. Hicks
Welch, West Virginia
- The Operability of Cancer---Dr. Ross J. Hunteer
Hansford, West Virginia
- Caesarian Section-----Dr. R. J. Reed
Wheeling, West Virginia
- Ilius-----Dr. R. H. Powell
Grafton, West Virginia
- Etiology, Diagnosis and Treatment of Pericolic Membranes-----Dr. T. K. Oates
Martinsburg, West Virginia
- Occlusion of the Mesenteric Vessels-----
Dr. W. W. Golden
Elkins, West Virginia
- The Surgical Treatment of Gastric Ulcers
Dr. William S. Fulton
Wheeling, West Virginia
- Dislocation of the Hip Joint-----
Dr. Charles S. Hoffman
Keyser, West Virginia
- Bone Transplantation-----Dr. R. A. Haynes
Clarksburg, West Virginia
- The Surgical Treatment of Typhoid Perforation-----
Dr. Hugh H. Carr
Fairmont, West Virginia
- Artificial Pneumothorax----Dr. R. U. Drinkard
Wheeling, West Virginia
- Uterine Displacement with Special Reference to Collapse of Uterine and Vaginal Walls-----Dr. A. P. Butt
Davis, West Virginia
- Biographical Sketch--Professor Samuel D. Gross-----Dr. Frank LeMoyne Hupp
Wheeling, West Virginia

We have as yet received no intimation as to the number or character of the papers for the medical section, but no doubt they will be equal in value to those printed above. It would be well for any who contemplate reading papers to send the titles at once to Dr. J. C. Anderson, Secretary, Marytown. Every member of the society is cordially in-

vited to present a paper whenever he desires to do so, but there must be a limit to the number of papers, otherwise time will not be allowed for the reading of all. The editor has had some difficulty this year in securing papers of a good quality sufficient to fill the JOURNAL for the last two months of the volume, so that he is personally interested in having quite a full program. There are always a few papers printed on the program which fail to appear at the meeting, and this is another reason why the program should be rather full. We have in the society a number of competent men who have as yet not been heard from. Such men will be heard with greater interest than those who have been more active in the society, and to whom the society is greatly indebted for their efforts in its behalf. We hope to hear from some of the younger men this year.

It is a constant source of surprise to us that there still remain many excellent physicians in the State who have never joined the ranks of the organized profession. The newer men are necessarily better prepared than were those who entered the profession many years ago because of the higher preliminary requirements of the medical colleges and the State Board of Health. Every man who enters the profession these days should at once associate himself with a medical society, and this we have taken occasion to advise at the recent examinations of the State Board of Health. There is no standing still in medical practice. A physician must advance or retrograde. The chances are great that he will do the latter unless he joins a medical society. So we say to the younger men of the profession, "Come and join us and we will do you good."

To the Secretary of the State Association we suggest that a program of the coming meeting be sent to every reputable physician within his knowledge now outside of the association, with an urgent invitation to attend this meeting and join a county medical society.

Listen to this from the *Ohio State Medical Journal*:

He who ignores the meetings of his local and state organization is headed for the pool of stagnation as sure as fate. Such a person will soon find his practice drifting to his more progressive neighbor. He will soon be stranded upon the "Island of A-Has-Been," and the rut in which he has traveled will be too deep for him to turn

out. Time is yet yours to avert such a catastrophe if you will but participate in the work of the organized profession and regularly attend its meetings.

Under the stimulation of the "Commission on Cancer of the Medical Society of the State of Pennsylvania" fifty medical journals have consented to make the July issue of the journal a cancer number. We desire to join this campaign, and to this end invite from our members papers on some phase of the cancer problem for the July issue of our JOURNAL. If we cannot find space for all in the July issue we will not permit them to go to waste.

We can save a little money for any who may be contemplating taking a post-graduate course in medicine in New York city. Write us.

A CORRECTION.—In the last Bulletin, page 14, the printers omitted several words and thereby spoiled the sense of the paragraph. The first three lines of this paragraph should read:

"I appeal to you to endorse the proposed program of legislation. I appeal to you first on the ground of self-preservation. It matters not how scrupulous you and your families may be," etc.

THE SEVENTH PAN-AMERICAN CONGRESS will meet in San Francisco, June 17-21 inclusive. It assembles pursuant to invitation of the President of the United States issued in accordance with an act of Congress approved March 3, 1915.

The countries and colonies embraced in the Congress number over thirty. The organization of the Congress is perfected in these countries and the majority of them have signified their intention to be represented by duly accredited delegates.

All members of the organized medical profession of the constituent countries are eligible and are invited to become members. The membership fee is \$5.00, and entitles the holder to a complete set of the transactions. Advance registrations are solicited and should be sent with membership fee to the Treasurer, Dr. Henry P. Newman, Timken Building, San Diego, California.

The general railroad rate of one fare for the round trip, good for three months is available for the Pan-American Medical Congress.

The Palace Hotel will be headquarters.

CHARLES M. SHERMAN, President,
Union Central Building, Cincinnati, Ohio.

HARRY M. SHERMAN, Chairman,

Committee of Arrangements, 350 Post St., San Francisco.

RAMON GUIERAS, Secretary General,
80 Madison Avenue, New York City.

PHILIP MILLS JONES, Special Committee on Hotels, 133 Stockton Ave., San Francisco.

INTERSTATE ASSOCIATION OF ANESTHETISTS.

The Interstate Association of Anesthetists will hold its organization meeting in conjunction with the Ohio State Medical Association in Cincinnati, Ohio, May 4-5, 1915, at which time an elaborate scientific program devoted exclusively to recent advances in anesthesia and analgesia will be presented.

Anesthetists, surgical and dental, as well as interested surgeons and general practitioners who wish to participate in the proceedings are cordially invited to attend. For further information and dinner reservations address

F. H. McMECHEN, M.D., Sec'y.
1044 Wesley Ave., Cincinnati, Ohio.

MAJOR-GENERAL GORGAS.

For the first time in our history a physician holds the rank of major-general. Regenerator of Havana, preserver of the Panama Canal, surgeon-general of the army, president of the American Medical Association, scientific physician and knightly gentleman, congress could honor General Gorgas only by creating a new precedent. In fitting company with Goethals, who dug the canal, stands Gorgas who kept the men alive while they dug it. With this new rank goes the thanks of congress and a life appointment as surgeon-general. The reward, unprecedented as it is, is in due proportion to the magnitude of the work. A canal has been completed, uniting two great oceans, realizing the dreams of civilization for four hundred years. A pestilential tropical swamp has become a health resort. Not only the nation, but the world has been taught the value of scientific sanitation. The toils, the struggles, the difficulties of the past are forgotten, the work is completed, the honors are fairly and equally awarded to the two men who made the canal possible. All honor to Major-Generals Goethals and Gorgas and to the men and the professions they so nobly represent.—*Journal American Medical Association.*

POETICAL TRIBUTE TO MEDICAL HEROES.

Judge Malone of the U. S. Court of Tennessee, recently paid the following gracefully phrased tribute to medical men, in connection with their Panama sanitary work:

That nation can not stray afar that keeps
Ever before its mind the simple worth
And courage unadorned of those plain men
Who freed this land from pestilence—those men
Of unromantic lives, in days of prose,
Who yet braved death, giving themselves to stings
Of poisonous insect pests that bore the seeds

Of foul plague. Not pompously they went
Into the jaws of Pestilence, and yet
How glorious was their battle! Overthrown,
The enemy they met shall nevermore
Reap his dread harvest. And these heroes died.
Or, hovering near the iron-grated tomb,
Were snatched from death by heaven. Their
names obscure

No poet sings, no magic legendry
Is woven round their story. In their lives
No bugle urged them on, no banner streamed,
No high-born lady from her castle-tower
Waved them adieu. Above those who are gone,
No marble cenotaph, no eulogy
From lips of oratory, and no shout
From fervent multitudes uplifts in praise.
Yet never rode a knight through Arthur's realm,
Seeking the Holy Grail, that wore a plume
Whiter than their devotion; never a king
Taking his throne on coronation morn
Wore ermine that was purer!

DEATHS OF PHYSICIANS IN 1914.

During 1914, 2,205 physicians have died in the United States and Canada. Reckoning on a conservative estimate of 153,000 physicians, this is equivalent to an annual death-rate of 14.41 per thousand. The average annual mortality for physicians from 1902 to 1914 inclusive was 15.71 per thousand. The chief death causes in the order named were: senility, heart disease, cerebral hemorrhage, pneumonia, accident and nephritis. The age of death varied from 23 to 99, with an average of 60 years, 11 month and 6 days. The general average of age at death since 1904 is 59 years, 9 months and 19 days. The number of years of practice varied from 1 to 75, the average being 33 years, 9 months and 29 days.

Sixty-one were between the ages of 23 and 30; 199 between 31 and 40; 319 between 41 and 50; 432 between 51 and 60; 477 between 61 and 70; 404 between 71 and 80; 183 between 81 and 90; while 21 were more than 90 years of age. The greatest mortality occurred at the age of 62, when 68 deaths were recorded, at 70 with 61 deaths; at 59 with 59 deaths; at 54 and 55 with 58 deaths each; at 74 with 54 deaths, and at 69 when 51 died. There were 7 deaths each at 91 and 92; 3 at 95; 2 at 93, and 1 death each at 94 and 99.

During the year, 275 died who had served in the Civil War, and of these 90 had followed the Lost Cause; 83 were medical officers of United States Volunteers, 2 were medical cadets, 10 served in the hospital corps and 2 had been army nurses. There were 2 veterans of the Mexican War; 2 had served in campaigns against the Indians; 17 had been in the Spanish-American War and 7 had been medical officers in foreign wars. The Army lost 9 officers, one of whom was surgeon-general, 3 members of the Medical Reserve Corps and 8 contract or acting assistant surgeons. The Navy lost 12 medical officers, the Public Health Service 10 officers, and the Organized Militia 28 medical officers, of whom 9 had attained the grade of surgeon-general.

Medical colleges lost 146 professors, lecturers, instructors and demonstrators; hospitals lost 290

members of staffs; municipalities, townships and counties, 165 health officers, and school boards or boards of education, 57 members. There were 29 deaths of members of state boards of health, medical examination and registration and charities; 29 of coroners and medical examiners and 84 of railways surgeons.

Of those who died, 1 had been a member of Congress; 1 an ambassador; 7 members of state senates; 39 members of the house of representatives; 39 had been mayors; 25 aldermen; 39 had served in various civil positions; 14 had been postmasters; 20 editors of medical or lay journals; 11 had been clergymen, of whom 2 were foreign missionaries, and 6 had been attorneys. These figures are from the annual summary of deaths in the medical profession, compiled by *The Journal of the American Medical Association*.

Society Proceedings

AMER. PROCTOLOGIC SOCIETY

Crude and Careless Diagnostic Methods and Results of Same in Some Recto-Colonic Conditions.—By John L. Jelks, M.D., Memphis, Tenn.

The author criticises the busy doctor and surgeon who too hastily yields to a conclusion and treats recto-colonic diseases without sufficient investigation to warrant or obtain a correct diagnosis.

Reference is made to cases operated on for appendicitis, which disease may be an extension of an infection and inflammation originating in the rectum or colon.

Cases are cited to show the frequency and at all times the liability of mistaking a condition for an infection or ulceration of the colon, specific in character, when a coloptosis or pericolic membranes, or both, were the true etiologic factors. Stress is laid on the importance of urinalysis, microscopic examinations and the X-ray in recto-colonic cases.

A harder nodular calcareous degeneration of the outer zone of the mamma has been observed as a sequence of coloptosis and defective drainage. In another case, in which was found a cecum cradled in pericolic membranes, and a coloptosis, a duodenal ulcer was diagnosed. In this case the urinalysis, the history and general toxic appearance of the patient pointed to true etiology.

Case reports are given in which diarrhoea was the dominant symptom, though impactions, pericolic membranes and ptosis were the true etiology.

The author calls attention to his prior reference to and work of establishing the importance of conserving the ilio-cecal valve: also to the syphonage of a ptosed colon after short circuiting operations, which he accomplished by a second anastomosis between the blind colon and the sigmoid or rectum below the first anastomosis.

Importance is claimed for a microscopic examination of the intestinal contents of patients who suffer from attacks of appendicitis and of the contents of the removed appendix, and the author insists that in the event that pathogenic amebae

are found appendico-cecostomy should be performed instead of appendectomy.

The author refers to his observation of quite marked congestion of blood in the visceral vessels themselves in these cases of ptosis and defective intestinal drainage.

The author refers to the frequency with which he encounters cases of inoperable cancers of the rectum and intestines, the neglect of which is most often due to the fear of examination of those suffering with symptoms in the regions referred to.

Reference is made to the operation of appendico-cecostomy as being practically free of danger to life. In his opinion this operation would save almost every life that is today caused by the ravages of amebic colitis.

Abscess Originating in a Pilo-Nidal Sinus.—By Louis J. Krouse, M.D., Cincinnati, Ohio.

The writer states that a pilo-nidal sinus is a congenital defect due to a faulty development of the foetus. It is usually located in the median line over the coccyx or the sacrum. Inflammation developing in the sinus is followed by burrowing of pus into the neighboring tissue. Inflammation of this sinus must be differentiated from necrosis affecting the sacral or coccygeal bone; from abscess originating in the sebaceous gland of this region, and from true fistula-in-ano. The treatment consists in the complete obliteration of the walls of the sinus.

Abnormalities of the Colon, as Seen With the Roentgen Ray: Lantern Slide Demonstration.—By W. I. LeFevre, M.D., Cleveland, Ohio.

The entire alimentary tract can now be successfully examined with the X-ray, some parts more readily and successfully than others, according to the degree of satisfaction arranging themselves in the following order: Colon, Stomach, Oesophagus, Small Intestine. Two methods of examination are used. First, Roentgenoscopy, which is the examination with the fluoroscope. Second, Roentgenography, the making of X-ray plates. The colon is also accessible from either end—that is, it can be examined by following the bismuth meal through from the stomach, or by giving an opaque enema of barium sulphate. In the former method the motor phenomena of the colon can be observed, in the latter the size, position and contour can be seen.

The action of atropin, adrenalin, pilocarpin and physostigmine as affecting the action of the bowel is briefly discussed.

The normal colon is described in detail, with radiographs showing different types. Many vary from the "ideal" type and still are normal for that individual.

Abnormalities of the colon may be produced by congenital defects, disease or injury to the bowel proper, from pressure, constriction or relaxation of other organs in close proximity. Colontosis, owing to its frequency and importance, is first discussed with radiographs showing these conditions. Other abnormalities consist of stenosis, malignant growths, tuberculosis, kinks, twisting, hernias, diverticulae and megacolon or Hirschsprung's disease. All these conditions can be recognized by aid of the X-ray.

HARRISON COUNTY MEDICAL SOCIETY.

TO THE EDITOR:

A regular meeting was held at St. Mary's Hospital, March 25th, with sixteen members and one visitor present.

Dr. S. L. Cherry read a short paper covering four cases of Vincent's angina. The disease is usually limited to one tonsil in the form of an ulcer, which tends to spread into the substance of the tonsil, so that on examination a distinct concavity is found filled in by a greenish, necrotic material. The chief complaint is pain on swallowing; there are slight constitutional symptoms. Its chief diagnostic point lies in the examination of a stained smear; the large number of fusiform bacilli and spirillæ gives the diagnosis. Of the four cases two had been diagnosed as diphtheria and two syphilis. The treatment is limited to simple antiseptics used locally. The prognosis is good.

Dr. S. M. Mason was to have completed the report of a case of enlargement of the epididymus and testicle; the probable diagnosis was tuberculosis at the last meeting. Dr. Mason could not be present, but sent over the removed testicle, together with slides showing the correctness of the diagnosis.

In discussing the Harrison law the following points were brought out. All cocain and morphin used at the office must be recorded. If small quantities of a solution of cocain are used frequently, in the nose, eye, etc., only the amount and date of the preparation of the stock solution need be recorded. Preparations administered personally by the physician to the patient at the patient's home need not be recorded, but any morphin or cocain left to be taken in the absence of the physician must be recorded. The physician need not keep a record of prescriptions for morphin or cocain; the druggist keeps these.

Physicians can buy these preparations only by making out their order on blanks furnished by an internal revenue commissioner.

Dr. J. McCue Bowcock was elected to membership.

Dr. E. F. Wehner moved that Dr. N. R. Peck be transferred to honorary membership in accordance with chapter I, section 10, of our by-laws. The society guarantees his membership in the State Society.

The members then adjourned to the dining room, where a little feast adorned the board. After the plates were cleaned Dr. H. H. Haynes brought in a case of primary syphilis. The living spirocheta pallida was demonstrated to many of the members with the dark ground illuminator.

Members present: Dr. L. K. Korman, presiding officer; S. L. Cherry, J. E. Wilson, E. F. Wehner, B. F. Matheny, D. E. Ritter, C. O. Post, J. Folk, A. T. Post, E. Pendleton, C. T. Arnett, Dr. Gaston, B. F. Shuttlesworth, H. H. Haynes, W. T. Gocke, P. C. Showalter. Visitor, H. H. Esker.
S. L. CHERRY, *Secretary*.

EASTERN PANHANDLE SOCIETY.

TO THE EDITOR:

The last meeting of this society was held in Harpers Ferry and proved to be one of the larg-

est and most interesting sessions the society has held. The chief address was that on "Some Typical Disorders of the Glands of Internal Secretions," by Dr. Lewellys Barker of Johns Hopkins. Dr. D. T. Williams of Martinsburg read a paper on the "Etiology, Pathology and Treatment of Valvular Heart Lesions," and Dr. C. R. Foutche of Berkeley Springs read one on "Eclampsia." Various important matters were discussed, one of them being the new Harrison anti-narcotic law. A dinner was served in the Hotel Conner. Drs. J. McKee Sites, J. M. Miller and A. L. Grubb were chosen as delegates to the annual meeting of the State Association. Those present were:

Drs. Hawkins and Gracie of Cumberland and Dr. Stewart of Winchester, visitors, and the following members: Drs. A. J. Lemaster of Bedington; W. W. Brown, C. C. Johnson, Shenandoah Junction; C. J. Foutche, J. S. Coughlan, a new member; A. L. Grubb of Berkeley Springs, James H. Shipper of Gerrardstown, Max Hoffman, George W. Swimley of Bunker Hill, B. B. Ranson and J. H. Hodges of Harpers Ferry, G. W. Banks, S. T. Knott of Shepherdstown, Howard Osburn of Rippon, M. C. Scott, F. M. Phillips, J. M. Miller, J. J. Pittman, C. L. Skinner, R. E. Venning of Charles Town, J. McKee Sites, T. K. Oates, D. T. Williams, E. H. Bitner and Secretary-Treasurer A. B. Eagle of Martinsburg.

J. McK. SITES, *Secretary*.

Book Reviews

Differential Diagnosis—CABOT (Volume II). Presented through an analysis of 317 cases. By Richard C. Cabot, M.D., Assistant Professor of Clinical Medicine, Harvard Medical School. Octavo of 709 pages, 254 illustrations. Philadelphia and London: W. B. Saunders & Co., 1914. Cloth, \$5.50. Half Morocco, \$7.00.

This volume is published in conformity with Volume I of this series, and in print and binding is all that could be desired. The presentation of the subject matter—the detailed history and analysis of the great wealth of clinical cases, often confirmed by post-mortem findings—is unique and impresses the reader with the vast amount of information obtained by first hand experience and patient research and the general knowledge necessary for the production of such a work.

The broadest general lesson taught throughout the work is that to become a successful diagnostician one must not only examine the patient physically, but must avail himself of every known laboratory method; examination of the blood, the feces the test meal, the bismuth and guaiac tests, the X-ray, the microscope, etc., which means co-operation of physicians in general practice with the pathologist.

To the student of chronic diseases this work is invaluable. Its subdivisions of nineteen chapters covers the diagnosis of disease from the standpoint of the *most prominent symptom. e. g., vertigo, diarrhoea, hematemesis, blood in the stool, haemoptysis, fainting, etc.*

The book is a monument to the author, a credit to the publisher, and will be a satisfaction to the physician possessing it.
S. S. W.

Nervous and Mental Diseases.—By Archibald Church, M.D., Professor of Nervous and Mental Diseases in Northwestern University Medical School, Chicago, and Frederick Peterson, M.D., formerly Professor of Psychiatry, Columbia University. Eighth edition, revised. Octavo volume of 940 pages, with 350 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$5 net. Half Morocco, \$6.50 net.

The new eighth edition of this work comes to the profession modern and practical in every respect. The text is clear and plain but forcibly written, and at once impresses the reader with the profound knowledge of the authors touching the matters in hand. A notable feature of the work is the wealth of illustration supplied, adding much of interest and practical value. Neurology and psychiatry are both presented here concisely and in a way that must appeal to the busy general practitioner as well as to specialists in those lines. Each author, experienced and a master in his specialty, treats separately his subject—Dr. Church neurology, Dr. Peterson psychiatry. The work is especially commended to the general practitioner.

C. W. H.

Diagnostic and Therapeutic Technic.—A manual of practical procedures employed in diagnosis and treatment. By Albert S. Morrow, M.D., Clinical Professor of Surgery, New York Polyclinic. Second edition, thoroughly revised. Octavo of 834 pages, with 860 illustrations. Philadelphia and London: 1915. Cloth, \$5 net. Half Morocco, \$6.50 net.

This is the second edition of a book that in its first edition met with pronounced favor. The diagnostic methods here presented are very largely applied to surgical conditions. The first two chapters of over 100 pages deal with anesthetics, general and local, and the information in every respect is full and up-to-date. Blood pressure, the transfusion of blood, the application of physiological salt solution are fully considered and different instruments described, as is the hypodermic method of injecting drugs for various purposes. Bier's hyperemic treatment is fully described, with the principles involved. A chapter is given in the collection and preservation of pathological specimens and material for examination for diagnostic purposes. Various forms of exploratory puncture are given and well illustrated. Chapters on the nose, the ear, the larynx, trachea and esophagus, with methods of diagnosis and treatment are given, as also on the stomach, bladder, prostate and kidneys. Methods of diagnosis and methods of application for various forms of treatment are fully set forth. The book is rather novel in its make-up, but exceedingly interesting and practical.

Principles of Hygiene—For Students, Physicians and Health Officers. By D. H. Bergey, M.D., First Assistant, Laboratory of Hygiene and Assistant Professor of Bacteriology, University of Pennsylvania. Fifth edition, thoroughly revised. Octavo of 531 pages, illustrated. Philadelphia and London: W. B. Saunders Co., 1915. Cloth, \$3 net.

This book has gone through four editions, the

last of which was favorably reviewed in this JOURNAL not many months ago. While the present edition does not contain many changes, they are in the right direction and present the advances in sanitary science, now one of the most progressive of sciences. The book is one worthy of careful study by all those who are engaged in public health work. It closes with a chapter on quarantine and one on vital statistics, which the health officials of West Virginia would do well to study.

Cancer: Its Cause and Treatment.—By L. Duncan Bulkey, A.M., M.D., Senior Physician to New York Skin and Cancer Hospital. Paul B. Hoeber, New York. Price, \$1.50.

This book is the result of lectures that were delivered at the New York Skin and Cancer Hospital for the benefit of graduate physicians. The author has some peculiar views on the subject of cancer, and here sets forth some general principles, upon which he bases an explanation of these views. He advocates a dietetic and medical consideration and treatment of cancer. The nature of cancer, its frequency and geographical distribution, the relation of the diet to this disease and its medical treatment are some of the themes discussed. The author holds that the dietetic and medical treatment of cancer have never yet been given a fair and full trial. With the very pronounced recent tendency toward very early operative interference in all forms of cancer there is little hope of the author's views being accepted, which are based upon his opinion that "deranged metabolism is the only possible etiological element; this acts by inducing changes in nutrition, which latter depends on diet," etc., which view leads the author to say that "the total achievements of surgery are insignificant compared with the general ultimate mortality."

International Clinics—A quarterly of illustrated clinical lectures and original articles. Vol. 1, 25th series, 1915. J. B. Lippincott Co., Philadelphia. Price, \$2.

This volume, while not quite so large as many former issues, contains the usual variety of papers covering the different departments of medicine. The first paper is by Wm. Osler on the diagnosis of polycystic kidney. In addition to a number of other valuable papers on various subjects in medicine and surgery is a most valuable chapter of eighty pages by Drs. Cattell, Watson and Wilson, giving the progress of medicine during the year 1914. The volume is fully up to the high standard set by this publication.

New and Non-Official Remedies, 1915. American Medical Association, publishers. This duodecimo volume of 425 pages contains descriptions of the articles which have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association prior to January 1st, 1915. This volume marks the tenth year of the existence of this council, which has done so much valuable work. All the worth-while proprietary and non-official remedies now on the market are described in this book. Every physician should have a copy of it, which can be had from the American Medical Association in paper bound edition for 50 cents; cloth bound, \$1.

Progressive Medicine

SURGERY.

Dr. Frank L. Hupp.

Cyto-Diagnosis of the Stomach.—Loeper and Binet (*Archives des Maladies de l'Appareil Digestif et de la Nutrition*) say this report is based upon 160 examinations; 21 of the cases were followed to operation or autopsy. The patient is examined after a 12-hour fast. An ordinary stomach tube is gently inserted and the stomach washed by siphonage. There is then introduced 300 c.c. of 0.7 per cent. salt solution, and within a minute this is allowed to siphon back. This fluid is centrifuged for ten minutes and the sediment smeared on a slide, dried, fixed in alcohol and stained with eosin-hematoxylin.

The authors claim a characteristic picture for each of the gastric diseases.

1. Normal—A few pavement cells of the mouth or esophagus, large, rectangular or polygonal, with small, dark nuclei; a small amount of debris. In cases of sialophagy these large cells with small nuclei are very numerous; they are usually covered with bacteria.

2. Dyspepsia—The same as above. Cystology here most useful in ruling out an organic lesion.

3. Gastritis—Pyotologically, four types are recognized:

(a) Mucous Gastritis—Characterized by an abundance of mucus; frequently yeast cells.

(b) Hypergenetic and Desquamative Gastritis—Very numerous, small, rounded polygonal cells; protoplasm is indistinct, granular, pale eosin color and frequently escapes from the cell borders. Nuclei are relatively large and deeply stained blue. Differentiation between chief and border cells is impossible.

(c) Diapedetic Gastritis—Characterized by the large number of leucocytes, polymorphonuclear, eosinophilic and lymphocytic.

(d) Congestive Gastritis—Large number of red blood cells are present, besides the leucocytes. The red blood cells are dispersed and pale, in contrast to the findings in ulcer, in which rouleaux formation and fresh, bright blood cells are seen.

In general, the findings of the authors tend to increase the number of cases of gastritis at the expense of the dyspepsia cases.

4. Ulcer—A few small epithelial cells, many polymorphonuclear cells and a variable number of red blood cells. Infected ulcers give a larger percentage of leucocytes. The process of healing may be followed by the disappearance of this cytological formula.

5. Cancer—Pyloric tumors give cylindrical and elongated cells; those of the fundus and borders small round and polygonal types. These latter have an indistinct protoplasm, light though large nuclei. The whole cell is smaller in size than a leucocyte.

Cells from colloid carcinomata show vacuolated protoplasm taking strong eosin stains.

Infection of an ulcerating growth is easily identified.—*Charlotte Medical Journal* October, 1914.

Necessity for a Systematic and Complete Exami-

nation of the Nervous System in Medico-Legal Cases.

To the readers of the JOURNAL who are called upon to examine the plaintiff in a damage suit against a railroad or corporation because of some injury sustained as the result of an alleged accident these wise suggestions from the pen of Sir John Collie, as they appeared in the *Practitioner* for July, 1914, and reviewed in the *New York Medical Journal*, August 29, will be a great help:

It is a matter of great importance to get into the habit of making a thorough and complete examination. Many medical men show considerable diffidence in controverting statements, often made in courts, to the effect that a plaintiff is suffering from an obscure organic disease as the result of an accident, but if one will systematically carry out a definite method of examination one can confidently affirm the presence or absence of an organic nerve lesion. A very full description of the method he recommends follows, which is a thorough systematic examination of the entire body. If anything is found which directs attention particularly to one symptom, a more exhaustive examination may be made along that line. Assuming that the result of the examination is negative, the medical report should be written so that laymen can understand it. Plain, simple language must be used, which will make it clear that a searching examination did take place and that no disease was found. In a normal person it might be stated: The pupils are equal and react to light and accommodation. Vision is good. All of the eye movements are of full range, and there is no weakness and no involuntary movements of the muscles of the eyes. The face muscles act well, and the nerves of the face show no changes. Hearing is normal. The palate movements are normal. The tongue is protruded normally and shows no wasting. In the upper extremities there is no weakness or wasting. There is no inequality of balance or of adjustment of the muscles. No defect in power of localization is present. All the principal nerve responses to stimuli are equal and normal on the two sides. There are no sensory changes. In the lower extremities there is no weakness or wasting. When asked to stand with both feet close together and to shut his eyes the patient does so quite readily. There is no loss of sense of position. All the principal nerve responses, such as those of the knees, ankles and great toes, are normal and equal on both sides. There are no sensory changes. When asked to walk along a straight line the patient walks steadily. His memory is normal. His speech is normal. He has therefore no organic nerve disease.

(Additional Surgery p. 351.)

OBSTETRICS AND GYNECOLOGY.

Retraction Following Confinement.—Flint (*American Journal of Obstetrics*) found that of 272 patients, retroversion was observed in 58—21.3 per cent. These figures, he believes, represent very closely the actual proportion of retroversions that may be expected after confinement, unless special measures are taken to prevent its occurrence. If involution is not progressive and regular, if the uterus is large and flabby, the pa-

tient should be given ergot, or a combination of ergotin, quinin and strychnin three times a day, in addition to the hot daily vaginal douche. The knee chest position also is of great value. S. L. J.

New Method of Loosening Placenta.—A method has been devised in the Gynecological Clinic of Buenos Ayres which avoids altogether the introduction of the hand or any instrument in the uterus. It consists of the injection of sterile saline solution into the retained placenta through the vein of the umbilical cord. The vessels fill, and the placenta gradually becomes enlarged in all directions, like erectile tissue. Finally, the vessels of the chorionic villi burst, allowing the injected fluid to run out from the uterine surface of the placenta. This is not the chief factor in the loosening of the placenta—although it lessens the area of attachment—but the organ, as its size increases, tears away the small bridges of tissue that have been holding it in place. The fluid accumulation behind the placenta forces it away from the uterine wall and stimulates uterine contractions which expel it.—*Critic and Guide.*

S. L. J.

Potassium Iodid in Prophylaxis of Eclampsia.—Gutbrod's patient was a iv-para, with a history of eclampsia at every childbirth except the third. The absence of eclampsia at the third delivery is ascribed by Gutbrod to his prophylactic administration of potassium iodid. The course of the pregnancy and delivery was normal under the influence of this drug administered according to Lomer's technic, with rest in bed at the periods at which menstruation would have occurred in the absence of pregnancy. As the course of the childbirth was so smooth, the family assumed that the fourth pregnancy would have an equally favorable natural outcome and omitted the potassium iodid and rest. Severe eclampsia developed at the seventh month, requiring artificial delivery, and amaurosis persisted for several days. The case is reported as unusually convincing testimony to the value of potassium iodid in the prophylaxis of eclampsia. The drug permeates the tissues of both mother and fetus and acts on the toxin causing the eclampsia, while it stimulates the secretion of urine and strengthens the heart. Gutbrod makes a practice of giving potassium iodid in every case of abortion to promote absorption of any infarcts that may form in the uterus. He also gives it when the fetus had been delivered putrefied in previous pregnancies or the after-birth had been unduly retained. His experience now includes 120 patients for whom he has ordered potassium iodid regularly from the beginning of pregnancy. The ordinary dose never caused any disturbances in mother or child. The results have been so universally good that he is tempted to give it systematically in all pregnancies, not merely in the pathologic, as a means of aiding the maternal organism during the stress of childbearing, at least during the last two months, and of averting any possible tendency to eclampsia. He mentions as another argument Caspari's favorable experience with potassium iodid in chronic and acute nephritis.—*Journal of American Medical Association.*

S. L. J.

Pituitrin: Its Abuse and Dangers.—A. J. Rongy, M.D., and S. S. Arluck, M.D. (*New York Medical Journal*, May 2, 1914). Conclusions:

1. Pituitrin does not induce labor pains.
2. It should not be used in the early part of the first stage of labor, for its action is too transient.
3. It should not be used in complete inertia because of danger of rupture of the uterus.
4. It is contraindicated in cases of dystocia due to malposition or contracted pelvis.
5. It should never be used in cases in which a sudden rise of blood-pressure may prove dangerous.
6. A single dose of pituitrin may be used as an adjuvant in cases in which pregnancy is interrupted, either by catheter or bag, and only when contractions of the uterus have already set in.
7. It should be used only in cases in which the cervix is dilated or dilatable and the presenting part engaged in the pelvic outlet.
8. It should be used cautiously in cases in which the fetal heart sounds are feeble or irregular.
9. It should never be used unless a general anesthetic is within easy reach, for the contractions may become so violent that rupture of the uterus becomes imminent.

Finally, the conclusions reached in this paper are based purely on our personal observations of the action of this drug in a very large series of cases. We feel that it may not be in accord with the experience of many other observers, still we maintain that in order to obviate many complications, which at times may become very dangerous, this drug should be used conservatively.

We appreciate its value when properly used; we realize its dangers when given injudiciously, and we cannot but advise the general practitioner to be conservative in its use.

S. L. J.

The Radical Operation in Uterine Cancer.—A. v. Rosthorn, Heidelberg (*Journal American Medical Association*).

Rosthorn sees hope in the researches as to the nature of cancer and recognizes future therapeutic possibilities, but admits that our present resource is in surgery, and since cancer is, in its beginnings, a local disease, the importance of early operation is self-evident. We cannot assure ourselves of the absolute restriction of the disorder, even when first recognized, hence the need of thoroughness in operation and the advantages of the abdominal method in securing this. There are certain limitations even to this operation, and the author goes at length into the discussion of the method by which the cancer extends itself by way of the lymphatics. In the future, he thinks, we must direct our efforts to the selection of cases that give promise of favorable results, for surgery will be of no avail when the disease has extended beyond certain limits. The system should be thoroughly built up before operating. The narcosis should be shortened as much as possible. The danger of infection during operation must be carefully guarded against. Cases of cancer must be examined more carefully as regards their morphologic characteristics and their clinical types, and we should investigate further the

conditions and phenomena of recurrence. He concludes with the following suggestions: "1. The abdominal operation is the most rational for the treatment of carcinoma of the cervix, since by its employment the most extensive removal of the parametric tissue is made possible. 2. The view that glands are involved only in later stages of the disease must be dismissed, and the fact that we sometimes find participation of the glands in the very early stages of uterine cancer has convinced me of the necessity of removing the glands in all cases, as I have always done. 3. Based on my own experience, I urgently advise it as our duty to operate in cases of recurrence which have not advanced too far for such procedures. On this account alone it is important to re-examine at frequent intervals (every eight weeks) after the primary operation."—*American Journal of Surgery*. S. L. J.

PEDIATRICS.

The Insanity of Youth.—Dr. Bayard Holmes thus concludes a recent paper in *American Medicine*:
Conclusion.—(1). It is our contention that the opportunity of solving the problems of insanity is in the hands of the state, and that politically organized society is under an obligation which the administrative and legislative officers of the state have not adequately provided for, but must, for economic reasons, ultimately assume. There is no private endowment which is undertaking the study of these problems on such a scale as to give us confidence in their solution by such endeavor.

(2). Up to the present time no one of the ills of life, no matter how mysterious it has appeared during our ignorance of its condition, its cause and its cure, has ever proved to be due to anything except natural physical causes, discoverable by the method known as scientific research.

(3). The very fact that the insanity of youth is not symptomatically unlike traumatic insanity, general paresis, alcoholic psychosis, the delirium of the infectious diseases and the frenzy of the toxemias leads us to the reasonable presumption that its pathology can be made clear and rational by such biologic, chemical and physical researches (when pursued with sufficient faculty and equipment) as have been rewarded with success in these familiar instances.

(4). We have been convinced by the teachings of medical history and veterinary pathology that there are no mysterious God-sent or devil-brewed diseases. There are no mystical, intangible, unapproachable sources of sickness and death. For every effect there is an adequate cause and for similar effects similar causes. We have every faith in the unity of natural phenomena and the existence of an adequate, tangible, rational, consequential, mechanistic cause for every malady, even though its major symptom may be a disorder of the human mind.

(5). To the modern scientific mind and in enlightened public opinion there are no "hoodoos," no "evil eyes," "no curses," no "banshees," no "twisted ideas," or anything like them, adequate to drive annually fifteen full regiments of our brightest youths into hopeless custody and start them on an irrevocable physical decline, to end either in permanent confinement or in early death.

(6). That society and that civilization are not fit to exist and cannot long exist that expend a munificent quarter or more of the state budget on the pessimistic custody of its unfortunate citizens and yet provide no proportionate means of solving the riddle of insanity by such methods as have proved adequate to solve the problems of equally mysterious maladies.

(7). Psychiatry presents the most promising field for research and dementia precox is the most important clinical group awaiting a scientific study and means of cure or prevention.

Positive Skin Tuberculin Reactions in Children.

O. F. Rogers, Jr., has made a study of the subsequent history of 69 children who gave a positive von Pirquet reaction while in the Massachusetts General Hospital and who have been out of the hospital for an average of two years, four months. The results show that before the age of two a positive skin reaction seems to be an indication that the child's life is likely to be short. The mortality among all children up to the age of 10 who react to the von Pirquet test is much higher than that of normal children.

S. L. J.

EYE, EAR, NOSE AND THROAT.

Drs. H. R. Johnson and P. A. Haley.

Abscess of the Frontal Lobe Secondary to Purulent Frontal Sinusitis.—F. P. Calhoun, Atlanta, Ga. (*Southern Medical Journal*, Vol. VIII, No. 3).

Brain abscess secondary to frontal sinusitis is of uncommon occurrence. After carefully consulting the literature but thirty-nine cases have been recorded, and with but a single recovery. The total mortality of 87.01% fully indicates the seriousness of this complication.

The author reports the following case:

Mrs. J. M. Age 58. With a history of previous good health, with the exception of headaches. No history of any chronic nasal discharge. Four weeks before presenting for treatment she suffered severe headache and pain in the left eye developed, with swelling of the upper lid at the inner angle.

Fluctuation was distinct, and an incision was followed by a free discharge of pus. Temperature 100, chills, loss of memory, mental hebetude, somnolence and despondency.

Examination of the nose was negative. Vision 20/20, fundus normal. Pus showed staphylococcus alba. External operation was performed, the entire external wall and floor of the sinus were removed and cleansed. An epidural abscess was found covering the anterior portion of the frontal lobe. The anterior ethmoid cells were opened and found healthy. No opening was made into the nose. Wound lightly packed with iodoform gauze and dressing applied. No improvement followed this operation. Patient's condition growing gradually worse, a second operation was done.

The wound was opened up and a dirty exudate was found covering the exposed dura, and from the center of this exposure was seen a small sinus, from which pus was discharging. A grooved director was introduced directly into the

brain, followed by a gush of odorless pus, estimated at twelve drachms.

On careful inspection the cavity of the abscess seemed to be well walled off, and without further interference a perforated rubber tube was introduced into the abscess cavity and lightly packed with iodoform gauze and the dressings applied.

The patient reacted nicely and for several days did well. The mentality improved, but was very talkative and had hallucinations.

There was also marked improvement in her physical condition. She returned to her home and ten days later she again developed hallucinations, rapid pulse, high temperature and stupor.

Examination at this time showed the sinus granulating and filling in. A grooved director was introduced into a depression marking the sight of the abscess and a small quantity of yellow discharge followed. The opening was enlarged and a gauze drain was inserted. After this the patient improved rapidly mentally and physically and went on to complete recovery.

The way infection of the brain from a frontal sinus takes place may differ, but undoubtedly a majority of the cases occur secondary to an osteomyelitis of the posterior wall of the sinus.

Siefert reports two cases in which the route of infection was through the diploe of the posterior bony wall, while in another case it appeared to have made its way through the cribriform plate with secondary infection of the ethmoid cells.

Denker in the first reported recovery, though the infection followed the venous circulation through the posterior bony wall to the meninges.

In frontal lobe abscess secondary to empyema of the frontal sinus the best approach is through the posterior wall.

In the treatment of cerebral abscess the author strongly advises against the undue use of speculum or encephaloscope or the introduction of the finger, probe or curette and tight gauze packing is condemned. In fact as little as possible should be done as will meet the requirements of the case.

An opening sufficiently large should be made into the brain to facilitate free and comfortable drainage, and for this purpose a fenestrated rubber tube is advised.

H. R. J.

Bulgarian Bacilli in Trachoma.—Powdered tablets of Bulgarian bacilli dusted upon each everted lid twice a day are said to be an excellent remedy in trachoma. Dr. C. R. Hudgel (*Northwest Medicine*) reports three severe cases of long standing practically cured by this method, with one per cent. solution of atropin once daily and hot fomentations three times daily as adjuvants. The lids may be scarified thoroughly once or twice during the course of this treatment, which should be kept up for two or three weeks.

S. L. J.

GENITO-URINARY AND DERMATOLOGY.

Dr. A. P. Butt.

Diseases of the Skin in Pregnancy.—Pregnancy is a contributory factor in a number of dermatoses, writes Bechet. A close relationship exists between the skin and the changes in the general metabolism incident to the pregnant state.

General pruritus occurs most frequently in

those of neurotic temperament. It is a sensory neurosis and is mostly dependent on the digestive and intestinal derangements which usually occur in the pregnant state.

Genital pruritus may be idiopathic or be caused by vaginal discharge, parasites (seat worms) or glycosuria. The treatment of genital pruritus depends upon its cause.

Chloasma is a hyperpigmentation of the skin, most frequently located on the face. It is commonly observed during pregnancy, and when it does occur in pregnant women it may be considered as an exaggeration of the physiological tendency to an increase of pigmentation which usually occurs in women in this condition.

Herpes gestationis is dermatitis herpetiformis, and pregnancy is not an important factor in its production. It appears just as frequently in men, children and non-pregnant women.

Paronychia, or loosening of the finger nails, is a painful condition, usually dependent upon malnutrition. It usually appears in individuals of neurotic tendency. It may also be caused by the trichophyton.

Alopecia is a nutritional disturbance and the loss of hair usually takes place during or shortly after the puerperium. It stops with the improvement of the general health. The loss of hair is never permanent.—*Urologic and Cutaneous Review*.

Rupture of the Urethra Following Fracture of the Pelvis.—C. M. Harpster (*Ohio State Medical Journal*).

The author reports personal cases and concludes that in severe crushing injuries of the pelvis complicated by rupture of the bladder or urethra the urine should always be diverted either by suprapubic cystostomy, or in cases of low rupture of the urethra by perineal urethrotomy. This relieves the urgent symptoms, prevents urinary infiltration and puts the urethra at rest. In cases of shock or haemorrhage repair of the ruptured urethra should be postponed.

H. L. SANFORD.

TREATMENT OF DUCUBITUS.

Normann advises dry powders in treatment of ducubitus unless there is much discharge when treatment as for any discharging wound is preferable. If there are complications, or if the necrosis is extensive, nothing can compare with the continuous bath in treatment of decubitus. Not the least of its advantages, he remarks, is that the body floats to a certain extent in the water and thus further pressure on the region is avoided.—*J. A. M. A.*, Jan. 9, 1915. U. & C. R.

It is a very common mistake to call a prurigo mitis a scabies, and children have been known to be kept away from school on account of their supposed infectious remedy.—*U. & C. R.*

It is not safe to recommend chloroform as a lotion or compress for the hair with the idea of killing pediculi. A little vinegar applied after a shampoo is a simpler domestic remedy.—*U. & C. R.*

Do not let a day pass without finding out with positiveness the cause of a hematuria. The importance of securing such information is all the more obvious when we remember that blood in the urine is practically always the first token of vesical tumor.—*U. & C. R.*

If a patient wants to know the state of his kidneys, make a thorough and careful urinalysis. To heat a small quantity of urine in a test tube is not sufficient. Determine accurately the urea output and base your conclusion on the urinary excretion for 24 hours.—*U. & C. R.*

Never begin treating a cystitis without first determining the urine's reaction. Such a procedure may save your patient money which otherwise would be spent on hexamethylenamine preparations which of course are only active in an acid medium. To change urinary alkalinity use ammonium benzoate.—*U. & C. R.*

INTERNAL MEDICINE.

Dr. John N. Simpson.

Syphilis in Its Modern Treatment.—By Victor Pederson, A.M., M.D. (*New York Medical Journal*, March 13, 1915).

Dr. Pederson is not a stranger to our profession. He gave a paper on venereal diseases before the State Association at Charleston in 1913. His opinions are based upon years of successful treatment. He thinks that most of the failures to cure are due to disobedience or neglect of the patient.

The elements of the subject appear to be the time of the beginning treatment, the method to be selected, the balance of the treatment with reference to the constitution and needs of the patient, the place of salvarsan, neosalvarsan and mercury in the management of the disease, the value of the Wassermann fixation test in the clinical control of the case, the duration of the treatment, cessation of management, subsequent observation and the repetition of the Wassermann blood test in after life.

Treatment should be immediate after diagnosis. One must not wait, as was formerly the case, till the secondary symptoms appear. Immediate diagnosis must be made by microscopic examination of the spirocheta pallida. No one who cannot make the India ink smear examination, or is willing to have it done for him, should be allowed to treat syphilis. Along with a positive diagnosis of syphilis should go a careful examination of the patient's heart, vessels, blood and urinary system.

The aim in treatment is to overwhelm the organism but not the patient in the first six months of the disease, and thereafter to continue the treatment with regular and well balanced progress for at least three years, and to maintain a careful observation of the patient for three years more. In the primary stage wet antiseptic mercurial dressings are his choice until the chancre begins to granulate. Then blue or white mercurial ointment till the lesion is covered with new skin.

If the circulatory and urinary organs are nor-

mal, there should be an immediate administration of salvarsan or neosalvarsan. Most syphilographers prefer the former. Neosalvarsan is less disagreeable to the patient, but it is only about one-half so energetic. So that one must use 9/10 of a gram of neosalvarsan to equal 6/10 gram of salvarsan. His practice for the last eighteen months has been to administer neosalvarsan up to the limit of the patient's tolerance, as determined by its effects on the kidneys and digestive organs. A full dose once a week for from four to eight doses. Any indication of too much of the drug is followed by a period of rest equal to that of the treatment. The treatment is then renewed. Few patients receive less than four doses, most of them eight injections and a few twelve in the first six months. There is no blind rule for the number of doses. It must be governed by the patient's general condition.

Pederson is a warm advocate of the simultaneous administration of mercury along with the neosalvarsan, and thinks the recent paper by Wechselmann condemning its use to be based upon wrong grounds. His practice is to give the neosalvarsan one day, test the urine the next and if found normal mercury is given intramuscularly on the fourth day. At the end of the week the cycle is begun again. If given by the mouth the mercury is given daily. One precaution in these administrations is to have everything sterile, so as to avoid any possible injection of the patient with pathogenic organisms. His method for the injection of the mercury is as follows: A 66 $\frac{2}{3}$ % solution of precipitated salicylate of mercury is suspended in sterile alboline; 1 c.c. will contain 10 grains. The skin over the buttock is sterilized with green soap, alcohol and iodine. A No. 18 needle 2 $\frac{1}{2}$ inches long is then driven into the muscles while the patient holds the hip relaxed by standing on the other foot. The injection is made so as to leave the medicine in several places by withdrawing the needle about half an inch each time. This will prevent the formation of a large, painful lump.

Owing to the fact that the Wassermann reaction does not appear for some time after the initial lesions and the demonstration of the spirocheta pallida, and that other diseases, such as leprosy, yaws and malaria, may give it, he does not set too great store by it. While it may be of great use, the examination of the blood and the disappearance of the symptoms, as in many other diseases, does not mean cure, for they may return as soon as treatment stops. He thinks it is a very great mistake to give the patient a short energetic treatment and then when the Wassermann test is negative to consider the patient cured. One should endeavor to get a negative reaction as quickly as possible and then by treatment never let it become positive. He thinks the treatment should be continued for three years and the patient should be observed carefully for three years more and have a Wassermann test every three months. During the last two years of treatment the iodides should be used to supplement the neosalvarsan and the mercury.

Patients who have been treated three years seldom relapse; those treated two years more often.

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Original Articles.

THE ANTECEDENTS OF HIGH BLOOD PRESSURE AND NERVOUSNESS.

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Of that type of high blood pressure which is not accompanied by sclerosis of the blood vessels or renal cirrhosis there are some features both diagnostic and therapeutic not generally grasped. Very often the first symptoms of patients with increased vascular tension are referred to the nervous system. Peripherally the patient may complain of heavy or numb sensations, especially in the feet and back, or there may be painful sensations like tingling, burning, itching or ringing in the ears, specks before the eyes, or merely a general discomfort. Centrally, we may find dizziness, nausea, headache or more often merely a dull thick feeling with inability to concentrate and torpor during the day. Another frequent symptom is preternatural wakefulness in the early morning, sometimes with irritability during the day. There may be even phobias or obsessions, especially of the pessimistic or melancholic type, referring to bodily or mental

health. Loss of memory is not an infrequent symptom.

It is symptoms such as these which enable the neurologist, who is in the habit of analyzing minutely even the subjective symptoms of his patients, to gain insight into their pathogenesis.

The clinical composites of which the above symptoms are among the commonest materials are sometimes unaccompanied by arterial hypertension, but their pathogenesis is essentially the same irrespective of this. Indeed the hypertension itself is merely a symptom of the common pathogeny.

I append two cases which illustrate this point:

CASE 1. Migraine resembling petit mal due to metabolic disorder.

A bacteriologist, aged 30, was referred in the spring of 1912 by Dr. Paul Johnston because of attacks he calls "bilious" (but not accompanied or preceded by constipation) which produce headache, preceded by numbness and pricking in the fingers, followed by dizziness, mental confusion and foolish talk of paraphasic type, without loss of consciousness. These attacks have occurred every two or three months since the age of 22; they are of very short duration. There were no scotomata, but they were formerly accompanied by vomiting. The headache is of the splitting kind, lasts all day, and is followed by dullness and slowness of thought the day following. The capacity to concentrate his thoughts is increasingly impaired even between the attacks. He is at times irritable. He has no bad habits, and apart from these attacks he is well and strong.

He received a blow on the left side of the head as a boy, and there is still a dent in the left parietal region, upon which side the headache more often occurs. He has a large appetite, which he says he controls, but he eats meat thrice a day, although he says sparingly, takes no alcohol. The blood pressure is not raised, the reflexes and sensibility are normal.

Treatment.—He was given the low protein "standard" diet. He wrote me the following winter: "Since I have reduced the amount of protein in my diet and increased the quantity of vegetables I have had no recurrence of those spells." Dr. Johnston informs me that he remained well to date, two and a half years later.

CASE 2. An engineer of 38, referred by Dr. Atkinson, a powerful, energetic man, formerly accustomed to active work, had been unable for months to concentrate upon the office work to which he had confined himself for over three months. Previous to this he had been much less active, and latterly he had been very much worried by an official inquiry into a contract for which he had been mainly responsible. For no cause known to him he feels a dread in the mornings, and an indecision in business matters is now realized to have been present several months. There was no syphilis nor any other organic disease and he took no alcohol.

He had been improved by three weeks in the woods, during which he was very somnolent, but relapsed at once upon return, and could hardly stand his morning suffering. There was no insomnia.

Physical Examination.—The reflexes were rather active, but there was no other objective change in the lower neurones; there was no amnesia; the sexual hygiene was normal. He was much depressed and longed to go away from it all for a year, which he could well afford to do.

Treatment.—He was sent for three weeks into the mountains. This time he fully recovered, on account of the light diet which he took. Breakfast and supper were of milk and fruit, and his midday dinner was vegetables and six ounces of meat; after a few days cereals were added morning and night.

FALLACIES ABOUT THE CAUSES OF ARTERIOSCLEROSIS.

Such cases, and many others with hypertension, lead me to assert that the common attribution of arterial hypertension to alcohol is a myth. Alcohol, on the contrary, not only lowers vascular tension and dilates the heart, but causes mal-assimilation of the proteins, upon which this disease depends.

Another commonly held notion which I believe to be erroneous is that as age advances the blood pressure should do so also. This leads clinicians to look with no concern upon systolic blood pressure of 140, and even sometimes 160 in a person no longer young. This opinion is based upon the fallacious reasoning that what is common must be healthy, irrespective of the environmental conditions. It is no more reasonable than was the former acquiescence in the presence of an animal parasite on the skin of everyone. On the contrary, hypertension is always a sign of deterioration,

and its causes should always be sought for and if possible met. This can be done unless organic changes have occurred to which hypertension is a permanently needed response. But even age is no indication that this is a fact; it is always necessary to test the patient's reaction to treatment; for this condition illustrates forcibly the old saw, "*Curationes naturam morborum ostendunt.*"

THE CAUSE OF ARTERIOSCLEROSIS: ITS CURE.

The pathogeny I believe to be improperly metabolised protein, and this opinion is supported by the remarkable success of a treatment which, while stimulating metabolism, at the same time reduces the load both of albuminoids and extractives. This I accomplish by imposing a diet based on the Chittenden standard of 50 grammes protein a day, supplemented by abundant addition of the alkaline salts of the vegetable acids in the natural combinations occurring in fruits and vegetables. Metabolism is further aided by exercise appropriate to the age and cardiovascular condition, and by hydrotherapy and massage adapted to the individual constitution dealt with.

CONVENTIONAL INJURIOUS TREATMENT.

By these measures the disease is attacked at its source, a much more rational procedure than neutralizing its effects by cardiovascular depressants such as nitrates, or than by dealing with symptoms as by narcotisation, even with bromides, or by the giving of strychnin, digitalis, caffeine and so-called tonics in a vain endeavor to whip up jaded organs.

PURGATION INADVISABLE.

Even forcible elimination by cathartics I believe to be a great mistake, as it disturbs the proper digestion upon which healthy metabolism depends. Constipation, which is very common in these patients, I have never yet failed to remove without any stimulating cathartics whatever. The intestinal atonia with which the patients so often suffer may be removed within two weeks by abstention from purgatives. During this period it may be necessary to aid evacuation by massage or even by enemata, while the standard dietary affords enough cellu-

lose and fibre to dilute the feces to a bulk sufficient to arouse peristalsis without at the same time straining the capacity of the digestive glands to deal with the large amount of fermentable food which would be otherwise required.

A MODEL STANDARD LOW PROTEIN DIET.

The following is the diet given:

In the morning upon waking 5 to 10 ounces of hot water containing 10 to 20 grains of sodium bicarbonate or potassium citrate. Half an hour later:

Breakfast.—A large plate of fruit and milk or cream, followed by abundant cereal and milk with bread and butter. No meat, eggs or fish. Wait five hours.

Dinner.—Not more than four ounces of meat or fish, which must be quite fresh, a very large plate of green vegetables, potatoes sparingly, and nothing more than a taste of sweets. Five hours later:

Supper.—May be a repetition of breakfast, but succulent vegetables may replace the fruit, and macaroni or a similar dish may be substituted for the cereal.

Thirst and hunger between meals may be satisfied by water and fruit about one hour before a meal or during the night.

Abstain from meat juices (gravy and soup), gelatine, coffee, tea, cocoa, salt and strong condiments, alcohol, pastry.

All starches and meats well cooked.

Fresh vegetables not over-boiled, *e. g.*, a cabbage divided into four to eight pieces to be put separately into *boiling* water for only eight minutes, *without meat or salt.*

VERTIGO WITH HYPERTENSION FROM HYPERPROTEOSIS.

An illustration of the need of more radical treatment in some cases is the case of a congressman, aged 57, referred by Dr. Hardin, March, 1912. His complaint was dizziness and trembling on walking. However, these symptoms had first occurred on his graduation, and again 15 years before I saw him. On each occasion he recovered by physical labor on a farm. They have occurred from time to time since. Being advised that they might be due to an error of refraction, he saw Dr. Wilmer, who gave him prism exercises without benefit. The vertigo so alarmed him that latterly he never went out unaccompanied.

Intercostal neuralgia had troubled him, especially when tired, and troublesome constipation had caused him to take purgatives daily. The physician who sent him to me had recommended a course of baths; but these did not remove the symptoms, which, however, were always relieved by a hot bath and by whiskey. He was a very hearty eater and an excessive smoker.

Examination showed only some exaggeration of the deep reflexes, failure of the right plantar, abdominal and cremasteric cutaneous reflexes. The motility was normal except for a slight lack of firmness in the gait. Sensibility was normal and the pupils reacted and converged well. The heart sounds were clear, the second being somewhat accentuated. The systolic blood pressure, which a year before had been 190, had been reduced under the care of the physician who referred him to 160 when I examined him. He exuded an unpleasant odor of sour tobacco. Physically he felt dull, as a rule, but worried much and felt very restless at times, especially after exertion.

The diagnosis was toxicotic hypertension. The prognosis was good. The treatment consisted of limitation of tobacco to three cigars a day, cure of the constipation by special diet, removal of the toxic condition by this special diet, aided by a course of baths to favor cutaneous action, and exercise in moderation to increase metabolism.

As a result by April 18th the systolic blood pressure was 130, and he was rarely dizzy. A favorable result, however, caused him to exceed dietically once or twice, so by April 25th several dizzy attacks had occurred. The blood pressure, however, was only 124 that day when I saw him. The instructions were emphasized, so that by June 2d, with blood pressure 122, there had been no vertigo. On June 23d blood pressure was 124, constipation induced vertigo again, and it occurred once more on July 11th as a result of over-smoking. (Blood pressure was only 120 when I saw him.)

His complexion had improved, his eyes became clearer, the accentuation of the second cardiac sound had disappeared and he was able to perform his duties like a normal person. Thanks to an earnest and intelligent wife, who sees to his diet, this patient remains well October, 1914.

PSYCHOLOGICAL FACTORS.

I have said nothing of strain and anxiety as factors in the causation of this disease, for I believe their effects are purely secondary in that they interfere with the vegetative functions, which, of course, disorder the metabolism. Only, however, if there is a protein overload do we obtain the conditions required for the disease. Innumerable cases of chronic anxiety fail to develop hypertension or its antecedent, and the disease often occurs in persons of sanguine or placid disposition and contented life, as in the case of the congressman. In the case of the engineer, not only did the causes for his anxiety remain, but he was cured without any psychotherapy, merely by dietetic measures.

1705 N St.

THE RIGHTS AND DUTIES OF THE PHYSICIAN IN COURT.

Judge H. C. Hervey, Wheeling, W. Va.

(Concluded from April issue.)

The other feature of a physician's experience as a witness which I have suggested as requiring some notice is the treatment of expert witnesses by cross-examining counsel. Sometimes medical witnesses feel that this cross-examination is unfair; that it is loaded with suggestions and insinuations that are not proper and tend to reflect upon the credibility and standing of the witness. This is a complaint that is not peculiar to expert witnesses. Many others have had cause to complain of the manner in which the examination is conducted by a class of lawyers who seem to think that they are at liberty to assail every witness who appears against their clients. Fortunately this class of lawyers is diminishing in number. If the witness on the stand is unfairly treated by the cross-examining counsel, the judge should, and usually will, intervene for the witness' protection, but some emphasis must be laid on that word "unfairly." The court will not interfere merely because the witness believes he is unfairly treated. It may be said that as a general rule the physician who knows that to which he testifies, who is absolutely fair and who keeps his temper, need not fear the cross-examination, first, because he is better informed upon the sub-

ject than the lawyer, and, second, the lawyer is bound to suffer if he seeks to get an unfair advantage, for the jury will soon discover that he is not trying to bring out the truth.

I have heard the suggestion made that an expert medical witness should be permitted to make his statement and then retire without cross-examination. I do not believe that physicians will approve of this course if they consider the real purpose and aims of a cross-examination. What is its object? It is intended to make clear (1) the experience of the witness in the matter about which he testifies; (2) his knowledge of that subject; (3) the bias or feeling, if any, which will affect his opinion; (4) the facts upon which he bases his opinion and the soundness of the conclusion he draws therefrom. If a physician were called upon to accept the judgment or opinion of a fellow member of his profession in a matter of consequence, he would apply to that physician and to his opinion the very tests which I have just enumerated. He would naturally ask: What medical education has this physician received? What experience has he had in treating cases of the class to which this case belongs in which he has given an opinion? What has been his opportunity to know of this particular case? Has he gone into it thoroughly or is his opinion based upon a casual examination? Is there anything which would lead him to form a biased judgment? If we test the opinions and judgments of our fellows before acting upon them, have we not a right to expect that they will be tested as carefully when they are submitted to jurors for their guidance?

The law does not classify expert witnesses—it knows no methods by which that can be done. Every man who is engaged in the practice of medicine or surgery may be called as an expert, though his medical education may be barely sufficient to enable him to pass the examination and get a license to practice, and though his experience may be very limited. That experience may be so limited that he has never treated a case similar to that under investigation, and his knowledge of the subject may be confined to that which he has gathered from his reading and studies, yet he may give his opinion. He does not have to specialize on any particular branch of his profession. He

may speak as to the symptoms, cause, treatment, duration and probable consequences of personal injuries, or of diseases, and the range of such testimony is co-extensive with the range of medical skill and science. The court and jury have the right to know how well qualified is this witness to speak on these subjects, and his qualification can only be made clear by a cross-examination which inquires into the extent of his experience and the foundation of his knowledge. Such an examination is not to be regarded as an attack upon the witness, but a fair method of testing the weight to be attached to his testimony. But a physician may have a large experience in dealing with cases like that before the jury and his skill and attainment may be well established, yet he may have but little knowledge of the facts because his opportunity to investigate this particular case may have been very limited. It is clear that the extent of his investigation and the opportunity he had to observe and study the patient as compared with the investigation and opportunities of other witnesses is of great importance in determining the weight which should be given to his testimony. The jury has also the right to know if the medical witness is biased in the evidence which he submits. In the case of some witnesses this bias may be manifest; in the case of others it may be present, but the witness is wholly unconscious of it. As a rule physicians have a high sense of honor; the ethics of the profession tend to develop and cultivate that sense of honor. The medical witness is apt to resent any inquiry which is intended to show that he is not fair and impartial. Yet it is well to remember that the law takes notes of all those influences which tend to sway men toward either one side or the other of a controversy. It will set aside a judge and not permit him to act if he has the slightest interest in the matter on trial. It permits inquiry to be made of witnesses to see if they are related to or employed by any of the parties to the suit, or if they have taken any interest in the case. The physician is human—he is naturally friendly to the man who is his patient. Sometimes experts are called and become witnesses because they are employed by the parties who call them. A proper cross-examination which develops all the facts is not intended to reflect upon the personal integrity of the witness, but has for its

purpose the showing of those circumstances which will naturally influence the witness. This may be illustrated by the well known fact that two men of high standing and honor, but members of opposite political parties, are so influenced by their political opinions that they cannot see things alike, but each will emphasize those particular facts which seem to favor the party to which he belongs.

In an action brought to recover damages for a physical injury the law allows the jury to consider as an element of damages the pain and suffering, both physical and mental, which the injured person has experienced. The extent of that suffering may be so clearly indicated by the physical injury that the physician may speak of it with confidence, but sometimes his estimate of the pain must be dependent largely upon what the patient tells him, and it is within the power of the patient to exaggerate his suffering, and sometimes he does this. The claimant may also exaggerate his injuries and do it in such a way as to impose upon his physician. I well remember the case of a young man engaged in business in Philadelphia, who stood well among his associates, who was injured in a street car accident in that city. The claim made for him was that his spine was so injured that he never would recover, and physicians supported this claim. He was awarded \$30,000 in damages. In a short time after he got his money he was perfectly well and is now in the south in business which requires constant traveling.

In a case tried in this county a man who was injured in a street car accident claimed that certain muscles of his hip were effected, causing his leg to twist to one side whereby he was permanently crippled. Throughout the trial he moved about with the assistance of a cane. The physician who treated him supported his claim, but others who had made an examination doubted whether he was permanently injured. The jury might have had a good deal of difficulty in arriving at a conclusion as to the extent of the claimant's injury had it not been for a very unusual occurrence. After the jury retired to their room to consider their verdict, one of the jurors looking out of the window saw the claimant on the opposite side of the street; something attracted the claimant's attention and caused

him to walk rapidly up the street. The jurors, warned by their fellow juror, watched him as he hurried along without any indication of lameness. In the excitement of the moment he had forgotten to play the cripple. In both of these cases the opinions of physicians who supported the claimants were dependent upon the representations of the injured persons. These exaggerated claims deceived the physicians and in one case a jury. When we have in mind that the testimony of the physician has more to do with fixing the amount of damages than the testimony of all other witnesses, it will be apparent that the facts upon which the physician bases his opinion should be clearly placed before the jury.

When medical experts are called upon to pass upon the question of sanity, another reason for proper cross-examination is found in the varying standards which are used by different experts. One witness, after an examination of the patient, or upon a recital of facts submitted to him by a hypothetical question, will say that the person whose sanity is under consideration is sane; another with equal opportunity for examination or with the same facts presented to him will say that such person is insane. These men may be perfectly honest in the opinions which they offer, but they differ because they apply different standards of sanity. If a medical witness was permitted to select his own method of presenting his testimony, he could say that he had made an examination of the patient and describe that examination and then say that the patient was sane or insane, and we would be without any means of fixing the standard or test which he used in forming that opinion. Cross-examination would show whether that opinion was founded upon facts showing an alienation of the mind such as all men would accept as clear evidence of insanity, or whether it was founded upon those refined views of mental disturbance that are accepted by some alienists as showing insanity. It is well known that men when brought into a court of justice to answer charges of crime have sought to escape responsibility and punishment, by claiming that exciting conditions brought about such mental disturbance as to result in emotional or temporary insanity; and they have had no difficulty in supporting these claims by the opinions of distin-

guished experts. But the courts do not look with favor upon such refinements. The Supreme Court of Michigan (*People vs. Findley*, 38 Mich. 482- described emotional or temporary insanity as that convenient form of insanity which enables a person who does not bridle his passion to allow it to get the upper hand just long enough to enable him to commit his act of violence and then subside. And the Supreme Court of Tennessee (*Baltimore & Ryder*) said: "It is explained that the effect of this special type of malady is a mania for litigation and an ungovernable desire to be successful. It would appear that this species of lunacy is more common among attorneys than litigants."

The law does not fix any such uncertain rule as a means of testing the sanity of those whose acts are questioned or who are called upon to answer a charge of crime, nor does it undertake to define insanity. In determining whether a man is possessed of sufficient mental capacity to make a will, the law in this state holds that "it is not necessary that the testator should possess the highest qualities of mind, nor that he should have the same strength of mind he formerly had; the mind may be in some degree debilitated; the memory may be enfeebled; the understanding may be weak; the character may be eccentric; and he even may want capacity to transact many of the ordinary business affairs of life; it is sufficient if he has mind enough to understand the nature of the business in which he is engaged, to recollect the property which he means to dispose of, the objects of his bounty and the manner in which he wishes to distribute it among them." The language I have just used is not my own, but the exact language used by the Supreme Court of this state in passing upon the fitness of one to make a will. If one is charged with a crime, and defense is made on the ground of insanity, the test applied is not whether the accused person is perfectly sane as measured by any standard which medical experts or alienists may adopt, but it is held that though one may be to some degree insane, he is yet responsible for a criminal act if, at the time of the act, he knows right from wrong; knows the nature and character of the particular act; knows that it is wrong and hurtful to another and deserves punishment. Mere irresistible im-

pulse to do the act will not exempt him from criminal responsibility (*State vs. Harrison*, 36 W. Va. 730).

When he testifies to the sanity of one whose acts are under investigation, the physician has in his mind a certain standard which he has formed for himself or which he has adopted from others; and fitting the case to that standard he gives it as his opinion that such person is sane or insane, but the opinion is not the end of the inquiry because it becomes important to know whether in the opinion of that physician the mental condition of the person inquired about was such that he could not perform a particular act, or if he is charged with crime, whether he has the power to distinguish right from wrong and knows the act with which he is charged is wrong and should be punished.

There is no class of evidence that is more unsatisfactory and beset with more difficulties and possible dangers than that of the expert who, without knowledge of any of the facts, bases his opinion solely upon a hypothetical case. The counsel calling the witness may submit to him a review of the testimony as presented to the witnesses for his side of the case. If he is attacking the sanity of the person under investigation, that review gathers up all the features of the evidence which tend to emphasize those things which are abnormal or irrational. If the examining counsel is engaged in an effort to support the sanity of the person inquired about, he omits those features emphasized by the other side, or so states them that they do not become prominent, and puts his statement into such form as to impress the witness with all the facts which tend to show a sane mind. Such a method of examination, though authorized by the law, is unfair to the witness. If, when only the unusual and eccentric things are presented to him, he expresses the opinion that the person is insane, he may promptly change that opinion when there is given to him a statement of facts and incidents which show that the selected incidents upon which his opinion was based in the first instance do not fairly represent the patient's conduct. The opinion of such an expert may be based upon a one-sided view of the conduct of the person or upon a collection of incidents that do not enable the witness to judge of the ordinary mental

operations of such person. And even when the hypothetical statement is not open to this criticism, where it fairly reviews the testimony of both sides and gives as complete a statement as can be had from the evidence in the case, it usually fails to give the witness a fair basis for his opinion. It is a most difficult thing to put upon paper, through evidence gathered from witnesses, a clear view of a man's mental operations so that one who has no personal acquaintance with him may say with confidence this man is sane or insane. Every physician who has had experience in treating mental disorders will agree that it is often very difficult to tell after a careful examination of the patient on a single occasion whether he is sane; and this being so, how much more difficult it is to determine the question of sanity from a mere recital of selected incidents without the opportunity to look at the patient or to make an independent inquiry into his mental condition. But this is not the only difficulty the witness faces. The hypothetical question submitted to him may be badly constructed, containing confused statements and conflicting conclusions. What position does he occupy when he finds himself confronted with a question reciting a multitude of facts and circumstances covering, perhaps, several typewritten pages, and is asked to give an opinion based upon these facts. Clearly it is his duty, before he gives his opinion, to consider each fact and give it its proper place and weight in the judgment that he is to form. This cannot be done hurriedly; often it cannot be done while the witness listens to the question. Sometimes the recited facts cannot be kept in mind throughout the time required to put the question. If, under such circumstances, he attempts an answer he gives an opinion based upon the impression made upon his mind, rather than a carefully formed and considered judgment in which each feature of the question has had its proper part. What the jury needs is the judgment of a skilled mind, and not a guess; and, in justice to himself, the witness is entitled to the opportunity to give such judgment. He may, therefore, very properly decline to answer a hypothetical question which has been sprung upon him. He may ask for time to analyse it and consider its various features; and if, after a careful study, he finds that it presents such facts

that he cannot safely base an opinion upon it he is at liberty to so declare. As it often happens that large property interests or the life or liberty of men depend upon the single question of the sanity of the person under investigation, it is very much better, whenever it is possible to do so, to have the physician examine the patient so that he can, in part, at least, speak from personal knowledge. In will contests and other cases when the subject of inquiry is dead, this examination cannot be made, and in such cases it seems to me to be a much safer plan to trust to the judgment of the physician and friends who knew him during his life, who were well acquainted with his habits and mental attainments, and are able to compare his condition at a time when he was undoubtedly normal; and for this reason the courts hold that the evidence of the expert who has no knowledge of the facts is not entitled to much weight, while the physician who was acquainted with the patient and had ample opportunity to know his mental condition is regarded as a witness of exceptional authority. The field for the evidence of the pure expert on mental diseases ought to be made as narrow as possible: first; because he bases his judgment upon statements of which he has no personal knowledge, and one or two incidents which may be brought into the case by evidence that is not entirely credible may dominate his opinion; and second; because of the extreme difficulty, except in very clear cases, of forming an opinion upon facts and incidents selected from the life of a person with the purpose of lending support to the contention of the side which made the selection.

Let me conclude this paper by giving the facts as they are recited in the opinion of the court in the case of Ivinson & Ivinson in New York (80 Ap. Div. 601). In this case a will was attacked on the ground that the testator was insane. Witnesses testified that the testator was extremely fond of money; that, at times, he would take his bonds and other securities, spread them upon the floor, then, lifting up one of them, he would kiss it and call it his God. At times when he had several thousand dollars to invest, he would express the fear of becoming an object of charity; that he disliked persons who rode a bicycle; that he hated poor persons, and once threatened to

strike one who asked alms, and at another time put one out of a room where he happened to be; that on an occasion when being shaved, he got out of the chair, with his face covered with lather, to drive an organ grinder away; that when his wife died, which was a few months before his own death, he showed excessive grief, and at times thereafter he said he saw her in the air looking like an angel; that he threw kisses at her and signified a desire to die so that he might be with her; that prior to her death they frequently quarreled because he insisted she should buy summer hats in the fall and winter hats in the spring, thus securing them at a cheaper price; and that at her death and before her burial he tried to sell her seal skin cloak, though he was a man of great wealth. Presented with these facts giving a one-sided view of his conduct, some expert witnesses would have said that this man was insane, and without the necessary capacity to make a will. But it was also shown by the evidence, that this testator was close and saving, had accumulated a large amount of property which he managed with marked ability, and that he invested his money with great shrewdness. And the court held that a finding of want of capacity based upon the evidence I have given could not be upheld.

INSANITY MORE PREVENTABLE THAN CURABLE.

L. V. Guthrie, M.D., Huntington, W. Va.
Supt. of the West Virginia Asylum.

Many problems of the greatest importance to the human race fall on the clergyman, teacher and on the physician, and with the co-operation and assistance of statesmen and intelligent citizenship our efforts will be crowned with success in some proportion to the effort put forth along any particular line of endeavor.

Our constant aim should be to make life purer, happier and more efficient. A great work has been attempted all over the world in the spiritual uplifting of mankind, and with purity in thought, Christian spirit in action, and the elimination of disease and casualties happiness should be at hand.

Many diseases formerly dreaded to the

extent of creating a panic in an infected district are now, thanks to modern knowledge, given little concern. Legislators and employers of labor are attempting to lessen injuries to the men of the mines and factories, and science is busying itself with inventions for the protection of lives.

The great discoveries in medical knowledge are all of too recent date to necessitate more than mere mention. Smallpox, a century ago, depopulated cities and towns, and even in the memory of those of you present this disease struck terror in your hearts when you as children learned of a case in your neighborhood. This disease now fails to terrify the enlightened. The origin and prevention of yellow fever is understood and successfully managed. Diphtheria is robbed of its many victims by early and modern treatment. Typhoid fever is preventable by vaccination, and consumption, or the "great white plague," is like an open book so far as its causes are concerned, and in many cases it is cured by modern management and perfectly natural agencies.

And so on down the list of the great enemies of our race we find a steady advance for better understanding and more satisfactory results in treatment.

The beasts of the field, the reptiles of the jungle and the birds of the air live today, when undisturbed, as they lived 100,000 years ago. This is not the case with man, who steadily progresses onward and upward to better conditions. There seems, however, to be at least one fatal exception. In all the great advancement we fail to find any record of a stay in the destructive hand that is driving thousands and tens of thousands to the hospitals for the insane.

Not only is there no record of a lessening of this horrible condition, but you will find upon close examination into the subject that there is a constant increase in the number of insane, which is out of proportion to the increase in the general population.

The population of the United States increased 11 per cent. from 1904 to 1910, while during the same period the number of insane persons was increased 25 per cent., more than twice as fast, and in England it is also estimated that the per

cent. of insanity is increasing twice as fast as the general population.

West Virginia in forty-two years shows an increase of from one insane person to every 2,100 of the general population to one insane person to every 580.

We are also compelled, as an act of honest fairness, to admit that the per cent. of recoveries is far from satisfactory, even when the most modern methods are pursued. The question naturally arises, why is it that the prevention and cure of insanity is so far in the rear in the magnificent procession of great rewards of human thought and labor? As an answer to this question it is necessary to review briefly the history and knowledge of mental diseases. We find that until comparatively a short time ago the subject was shrouded in superstition, ignorance and mystery.

At one time in the history of mankind the mind was supposed to be located in the kidneys, and our ancient authorities referred to the brain as a gland.

In tuberculosis, typhoid, diphtheria, etc., there is an exact understanding of the pathological conditions met with. It is a tangible condition and the pathologist can reproduce the causative bacilli in his laboratory and can study and experiment with them. The pathological condition in the patient can be studied as an exact science.

How different is all this in many mental abnormalities where the exact pathology has not up to the present time been unraveled or understood. In making this statement I do not fail to appreciate the great and valuable knowledge furnished us by investigators and students of past centuries, but in some forms of insanity nothing pathological to account for the symptoms can be found in the brain, even with the most powerful microscope, and no chemical analysis within present knowledge discloses the cause of the alienation.

The seat of the mind we believe to be in the brain, and the negative conception of the mind is that it is something else than the brain to which we have to refer mental phenomena, rather than regard them as functions of a physical organism. The positive conception of it is that the mind is that which thinks, feels and wills, the subject of mental phenomena of all

kinds; whether it is the nature of matter or of ether, or of both, we know not.

The investigator and student of mental disease is too often dealing with an intangible something that he can neither feel, see nor hear. One of our greatest and most recent authorities says: "We know so miserably little about the true causes of insanity" (p. 259 Kraeplin, third edition).

From the foregoing it can be readily seen that the student of mental diseases is confronted with what seems today an insurmountable barrier to great or apparent progress. Yet when we forget pathology and look closer into the improvement, not in the cure but in the care of the insane, we know that there have been tremendous strides for better conditions.

It is a historical fact that less than one hundred years ago these unfortunate people were confined in dungeons, chained to the walls or floor, and were persecuted to the point of death, and in many cases the treatment was worse than death. They were shunned, abused, and what attention they received was more for the protection of society at large than it was for the patient's own welfare.

Nothing was done to place the patients in a favorable condition for recovery. The medical treatment was worse than none. Today these most unfortunate of God's creatures are housed in well constructed, sanitary buildings, and physicians and nurses are constantly on hand to administer to their wants and see that everything possible is done to make them comfortable and happy.

They are provided with the best of beds and bedding; an abundance of well cooked and wholesome food is furnished all cases, and there are special meals for all whose physical health indicates any special articles of diet.

Pianos, graphophones and other musical instruments are in the wards for the use of the patients. Band concerts are also furnished. Innocent games are encouraged for their entertainment, both indoors and out. Diversional occupations are taught. Motion picture shows have become a regular part of all up-to-date institutions. Schools are maintained for the younger class of mental defectives who have sufficient intel-

ligence to profit thereby. Daily newspapers and magazines are also available. Religious services are provided for both Protestants and Roman Catholics.

The medical staff feel gratified in the fact that they are keeping abreast of the times by special studies, visiting other institutions and centers of medical learning.

Well equipped and expensive laboratories are maintained to study the subject at hand which shed new light on the pathology and symptoms. Bright minds are devoting their lives in an endeavor to ascertain the cause and cure of many of these obscure diseases and conditions.

West Virginia appropriates annually for the insane and mental defectives three hundred and seventy-two thousand five hundred dollars.

Within the past few years many important discoveries have been made, and even the exact pathology has been understood in a few forms of insanity, and I am hopeful that light will soon be shed upon the remaining unfathomed conditions. By well defined symptomatology we are now able to classify our cases on a scientific basis.

The trained eye of the experienced observer is now directing his microscope and chemical re-agent away from the brain and toward the other parts of the body in his effort to find the cause of some of the least understood mental symptoms.

As metabolism and the functions of the ductless glands become more clearly determined, perhaps we will then better understand the cause and effect of the unneutralized poisons in the human body and their relationship to epilepsy and the now obscured phases of insanity.

Notwithstanding the many important discoveries offering hope for the relief of insanity, notwithstanding that the history of the treatment of the disease gave much promise in a transition from exceedingly harsh to sympathetically humane methods, notwithstanding the expenditure in the United States of thirty-three million dollars annually for the relief of the insane, we are yet obliged to acknowledge disappointment when the meager curative results are considered. We must in the present state of our knowledge find our chief consolation in their better and more intelligent care and in the more sympathetic and happier conditions by which they are surrounded.

It ought also to be mentioned, for instance, that among many advantages guaranteed by the state by modern methods, these unfortunates cannot reproduce their kind while in state hospitals, and the patients themselves enjoy advantages which could not possibly be afforded at home.

The mental defective is seldom, if ever, made normal, and by statistics taken from one of the most progressive states we find that in 35,000 cases of insanity treated for one year the cures amounted to less than 5 per cent.

I can, however, readily understand how private institutions treating *selected cases* and patients on *first admissions* can show 25 to 35 per cent. of recoveries.

By taking into consideration this low rate of recovery and the fact that many so-called recoveries are prone to relapse, and by taking into consideration the common causes of insanity, we become deeply impressed that insanity is more *preventable than curable*.

The great underlying or contributing cause of insanity and kindred conditions is heredity. This cause is variously estimated by different authorities to range from 50 per cent. to 75 per cent. of all cases. As it is difficult to obtain accurate histories in these cases, it is natural there should be some divergency in the opinion of observers.

Personally, after twenty-five years of observation, I am led to believe that if a full and accurate family history could be obtained in each case we would find that about 65 per cent. of all cases in our public institutions can be attributed to the hereditary taint as a foundation of the disease.

It has also been conclusively shown that when both parents are feeble minded that the progeny of the slightly feeble minded mother is nearly double the average number of offspring of the normal mother, and that multiple births occur ten times as often as among normal women. However, it would be unfair to place this increased pro-creation entirely upon the woman, for it is a well known fact that the sexual instinct in the mildly degenerate or slightly weak-minded man is usually more developed and under less control than in a man who is blessed with great or normal intellectual development.

In a limited discussion of insanity I must not digress too far from the principal topic,

but from the standpoint of the social worker I am obliged to conclude that heredity and its relationship to insanity, epilepsy, imbecility, pauperism, tramps, criminals, ne'er-do-wells, etc., is too intimately associated to be merely accidental.

By a long and tedious process of progressive degeneration nature attempts to bring to extinction the feeble minded when mated with feeble minded, but this is slow, and usually does not bring about desirable results until great harm has been done.

The disadvantage of the natural process of extinction of the species, as above indicated, is apparent, and the most unfortunate part of this process in practice is that the feeble minded does not always marry the feeble minded, but sometimes mates with normal or nearly normal individuals, thereby postponing the extinction several future generations.

To overcome this great disproportion in the birth rate between the normal and the abnormal inhabitants of our country, we are compelled to admit, is a gigantic undertaking. Especially is this so in increasing the birth rate under our modern social conditions among the prosperous and normal families. However, the ratio can be improved by educating the public to the danger of the offspring in marrying or mating with feeble minded or mentally defective families.

First—The wise man should inquire into the mental condition of his proposed wife, and also into the mentality of not only the parents but also the grandparents, with due regard and allowance for accidental cases of abnormalities. This, of course, applies with equal force to the woman who is about to take upon herself a husband.

Second—Segregation of the mental defectives and the class under discussion into colonies will lessen the increase of this class of inhabitants. The state should be encouraged to segregate as rapidly as possible. For another class of defectives whose racial tendencies cannot be improved by education and environment, and who for any reason cannot be segregated, I would recommend sterilization judiciously applied.

Third—More stringent marriage laws and the enforcement thereof will in my judgment be a step in the right direction, but there is much less to be hoped for by this method than theorists would imagine. It is

a well known fact that a very large number of defectives are born each year out of wedlock, and this number would probably be increased with eugenic marriage laws.

Fourth—The establishment of a lunacy commission or state bureau under the governor or State Board of Control, with broad duties of educating the public, by inspection of hospitals for the insane, and a general supervision of all matters pertaining to insanity and kindred conditions.

Our several state governments send out well prepared and instructive bulletins concerning the prevention of hog cholera and gaps in chickens, but literature on alcoholism, insanity and heredity in the human species is conspicuous by its absence.

Among other avoidable causes of insanity, the public should be educated to the great damage done to our citizenship by syphilis.

There is one form of insanity now agreed upon by all authorities to be produced by this luetic infection. Statistics show that in one year the deaths from smallpox in the entire United States were 134 persons, while in New York alone during the same year 590 people died from the results of softening of the brain, dependent upon previous infection with syphilis. With our present knowledge and treatment I regard practically all cases of paresis as hopeless so far as recoveries are concerned.

Statistics further show that of those who were sent to hospitals for the insane the first time among men living in cities 22 per cent. of the cases were dependent upon syphilitic infection.

The damaging effects of alcohol upon the mental and moral condition of an individual are too well known to need extensive discussion in this paper, but I cannot refrain from reminding you of the fact that statistics show that among the first admissions to the hospitals for the insane 19.5 per cent. of the cases among men living in cities were produced by this agency, and this takes no account of the hundreds and thousands who reach penitentiaries and the gallows from the same cause.

In conclusion, I wish to state that there is an occasional mental defective born of perfectly normal parents, and close investigation may fail to find anything abnormal about the grand or great-grandparents, showing conclusively that hereditary influence had nothing to do with this exceptional

case. These defectives are usually the result of some well known cause or accident during pregnancy or at the time of birth.

Imbecility in rare instances in children whose ancestors are perfectly normal may also develop as the result of traumatism or some well known organic disease of the brain.

These exceptions to the law of heredity are known as "accidental cases." Insanity also occurs in families with the best of ancestry. These cases are usually the result of either syphilis, alcoholism, long continued mental strain, fevers, especially typhoid, traumatism of brain or drug addictions, the greater per cent. of which are avoidable.

We need a more candid discussion of knowledge concerning the evils of luetic disease and the great danger to the offspring in families having a well marked predisposition to mental disease or deficiency.

We cannot hope for improvement or remedial legislation as long as the public, through a dangerous sense of propriety, refuses frank and free discussion of the history, nature and destructive tendency of these diseases. General ignorance has lulled us into a feeling of false security, and the removal of ignorance will afford the first important step toward relief. Recently a movement toward publicity has been powerfully encouraged by a French drama written by Brioux, called "Damaged Goods." The National Committee for Mental Hygiene of New York is also freely and candidly pointing out the dangers of syphilis, alcoholism, bad heredity, etc.

May I not suggest that you gentlemen do what you can to remove the social ban against an open and candid discussion of these lurking dangers to society?

You occupy a position to inform the public with comparative freedom, and the service you would thus render the home and state would, in the end, prove most salutary.

THE DIAGNOSIS OF MEDIASTINAL TUMORS.

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The thoracic organs being enclosed in a cavity with rigid walls, the diagnosis of affections of the mediastinum by the usual methods of inspection, palpation, auscultation and percussion are often of little help.

at least in the earlier stages, when a correct diagnosis might be of some benefit to the patient, and more often than not these affections are recognized at a time when treatment, surgical or otherwise, can be of no avail. Still further difficulties arise from the fact that these tumors exhibit very few symptoms of their own, and must be diagnosed mainly from changes brought about in the intrathoracic structures by pressure or otherwise. Therefore the size, location and rapidity of growth are of paramount importance in the consideration of these tumors.

For practical purposes the mediastinum may be considered to represent a conical space with its base over the diaphragm, the apex at the root of the neck, its lateral walls being formed by the mesial surfaces of the lungs, and its anterior and posterior by the sternum and vertebral column, respectively. Into this space are crowded the following structures: The heart with its large vascular trunks, aorta, anonyma, subclavia, carotis, arteriae and venae pulmonales, vena cava superior and inferior, ductus thoracicus, trachea, oesophagus, thymus gland; also the following nerves: Phrenic, pneumogastric, with the recurrent laryngeal, and parts of the sympathetic system. Besides these structures there are numerous lymph nodes, especially at the root of the lungs, where they are held together by loose connective tissue. The functions of one or a number of these organs may be interfered with as the result of a growth, which may exert pressure or traction, or may cause displacement or even infiltrate these structures, and in order to have a clear conception of the changes and their various combinations one must study the possible and probable arrangements of each structure separately.

Dyspnea is one of the most frequent and distressing symptoms of mediastinal growth. It is always an indication of insufficient interchange between the gases of the inspired air and the circulating blood resulting in deficiency of oxygen and accumulation of CO_2 , and may be produced in various ways. Compression of the trachea and large bronchi, pressure on the lungs with reduction of the respiratory area, pressure on the heart and large venous trunks, interfering with the free circulation of the blood through the lungs are some of the most important causes of dyspnea in these cases.

The difficulty in breathing runs all the way from the slightest discomfort during violent exercise to the most distressing and alarming orthopnea during complete rest of body and mind. There are two critical locations where pressure from enlarged organs, such as the thymus, a deep goiter or a swollen lymph node, or a benign or malignant tumor, causes the most distressing dyspnea. One is at the root of the neck, where, in children at least, the dimensions of the mediastinum are very small, the antero-posterior diameter measuring only two centimeters. One can easily understand that under such circumstances the slightest enlargement of the thymus or a small retrosternal goiter may cause the most alarming attacks of dyspnea, leading not very rarely to sudden exitus, and it is the opinion of the writer that many cases of death from so-called "overlying" are in reality cases of thymus death. Often the position of the head has a decided influence in increasing or diminishing the dyspnea, inasmuch as bending the head forward increases the antero-posterior diameter, while extension of the head and neck decreases it, so that a slightly swollen thymus might very easily get caught between the trachea and upper edge of the sternum, thus preventing the access of air to the lungs. Patients of this kind are often forced to sleep in a certain position, and for the same reasons the dyspnea is often worse at nights when the head and neck are naturally in an extended position.

The second point where pressure on the trachea is most frequently found is lower down between the bronchio-cephalic trunks and the left common carotid. Sudden swelling of the thymus in this region compresses the trachea between the sternum and vertebral column, causing more or less severe dyspnea. Often the dyspnea is paroxysmal, especially in children with enlarged thymus, and there is an inspiratory stridor, more rarely expiratory.

Cough is often an early symptom. It is usually dry, paroxysmal, unproductive, and is sometimes relieved or aggravated, as the case may be, by change of position. In case of rapidly growing malignant tumors small quantities of blood are frequently expectorated. These small hemorrhages are quite characteristic of malignant growths and differ widely from the drowning masses of

a bursting aneurysm or the prolonged irregular bleedings of pulmonary tuberculosis.

Changes in the voice, ranging all the way from slight hoarseness to complete aphonia, are met with in these cases, where the recurrent laryngeal nerve is compressed or otherwise injured.

The walls of the large arterial trunks are able to resist pressure to a considerable extent, and a difference in the fullness or retardation of the pulse wave on the affected side is therefore not very often found. Not so with the veins, whose walls are thin and easily compressed. Distention of the veins of the head, chest and upper extremities, with occasional edematous swelling and more or less pronounced cyanosis of the parts involved, and the occasional development of a collateral circulation between the upper and lower vena cava, are therefore met with in quite a number of cases.

Cyanosis is often extreme in those cases of rapid growth where the thoracic structures had no time to accommodate themselves to the new conditions, and where pressure, displacement and distortion go hand in hand with a rapidly increasing deterioration of the blood.

Quite frequently the first symptom arousing the patient's attention is a painful sensation either in the chest itself or in regions of the body more or less remote. Thus from pressure on the phrenic nerve there may be severe pain in the upper abdomen; suggesting either severe gastric disturbance or serious affection of the biliary tract, or there may be severe pain in the right iliac, suggesting appendicitis.

When the intercostal nerves are interfered with the patient may suffer pain along the intercostal spaces, and likewise one sometimes sees patients who complain about neuralgic pains along the distribution of the cervical or axillary nerves.

From the wide distribution of the pneumogastric to the heart, lungs and abdominal organs one would naturally expect a variety of symptoms concerning the heart and the functions of the other organs involved. However, these symptoms are difficult to analyze and as a rule not of much help in diagnosis. As the pneumogastric carries depressing fibres for the heart we may expect bradycardia from its irritation or tachycardia from its paralysis. However, neither of these is met with often, as the affection

of only one nerve seems to have little effect on the pulse.

Difficulty and pain on deglutition would indicate pressure or traction on the oesophagus; it is met with in a small number of cases only.

The same is true of the difference in the size of the pupils in those cases where the oculo-pupillary fibers of the sympathetic are involved, and also in those cases where we have unilateral or bilateral local hyperidrosis or anidrosis of the head and neck.

Emaciation, deterioration of the blood, cachexy are symptoms that, while they occur more or less constantly in malignant tumors, are of little diagnostic importance, coming on at a stage when diagnosis should have been made from other symptoms.

Whether one or more of the above symptoms are present depends a great deal on the size and location of the tumor. A swelling of the thymus the size of a hickory nut in a young child may cause instant death, while a tumor the size of a child's head situated in the basal region of the mediastinum may cause very few and insignificant symptoms, and tumors of the malignant type have been found on autopsy to fill almost the whole chest cavity when the symptoms during life were of such a character as to indicate only slight intrathoracic changes. In these cases the large vessels, nerves, etc., are found to be embedded in the soft tumor mass without being either compressed or displaced.

Physical examination in cases of mediastinal tumors yields as a rule only scant information, especially in the earlier stages of growth. Dullness on percussion is found in various locations, according to the situation and size of the tumor. Its contours are irregular, indicating an irregular form of growth, in contrast with the sharp, regular dullness of aneurysm. Only in far advanced cases with distention of the chest cavity and dilation of the peripheral veins will inspection be of some help, while auscultation will reveal some of the changes brought about by the pressure of the lungs, heart or bronchial tubes. But the most important means of diagnosis in these obscure conditions lies in the radiographic and fluoroscopic examination, when the size, location and configuration can be made out more or less accurately, and when the differential diagnosis between tumor and aneurysm can

be definitely settled, the pulsations of the latter being plainly visible with the fluoroscope.

With the diagnosis of a mediastinal tumor our task is not yet finished. The question now arises as to whether the tumor is of a benign or malignant character, whether it is a primary or secondary tumor, whether it springs from the intrathoracic lymph nodes or from some other structure, whether it is a real tumor or an aneurysm or a cyst. Malignant tumors, such as sarcoma, carcinoma, malignant lymphoma, are met with most frequently. A primary sarcoma or carcinoma somewhere in the body, followed by an intrathoracic tumor, suggests very strongly the malignant character of same. Benign tumors, such as fibroma, lipoma and dermoids, are comparatively rare and cause few symptoms, except when quite large; they grow slowly and have no effect on the general health of the patient.

Where we diagnose a tumefaction in the mediastinum and find at the same time enlarged lymph nodes in the neck, axilla or groins the nature of those enlargements, whether leukemic or pseudo-leukemic or syphilitic or tubercular, will decide also the nature of the intrathoracic swelling.

The melancholy history of all these malignant mediastinal tumors, the utter inability to cope with them either medically, surgically or otherwise, the difficulty of an early diagnosis, should stimulate research work along these lines of diagnosis as well as treatment, and we may yet hope that in the future an early operation, combined with X-ray, radium or serum treatment may hold out a ray of hope to these most unfortunate patients.

THE LABORATORY AND THE GENERAL PRACTITIONER.

Part II.

S. L. Cherry, M.D., Clarksburg, W. Va.

FINDINGS FROM THROAT SMEARS AND CULTURES.

In no disease is procrastination more fatal than in diphtheria. It is a rare man, indeed, who can say that a given membrane is *not* diphtheritic. When in doubt give antitoxin and make the diagnosis later. While there is every proof that the diphtheria bacillus can be isolated from every case of

diphtheria, a single culture may give negative results. It is possible in a great many cases of diphtheria to find typical diphtheria bacilli in smears made directly from the throat. A patient showing two successive negative cultures need not be quarantined. Cases of undoubted diphtheria should not be released from quarantine until two successive cultures have been found negative.

"Bacilli carriers" can be recognized only by means of cultures. Besides diphtheria, membrane in the throat may be Vincent's angina, syphilitic or streptococcic. Vincent's angina generally affects one tonsil, tends to burrow rather than spread laterally and microscopically presents in smears the typical spirillae and fusiform bacilli. In syphilis there are other symptoms and the Wassermann test is positive.

FINDINGS FROM THE SPUTUM.

The usual examination of the sputum is limited to searching for the tubercle bacillus. For this purpose it is usual to ask for a morning specimen. The important thing is to get a specimen that is coughed up from the lungs and not merely hawked up from the naso-pharynx. It should be received in a clean bottle and examined shortly. Two well covered slides from each specimen should be examined and if negative another specimen should be gotten. It is a mistake to rule out tuberculosis because one specimen is negative. The fact is the clinical diagnosis should precede any other, although I have found the bacillus in the sputum when there were no localized signs in the lungs. Syphilis of the lungs is a rare possibility that should be kept in mind.

Other findings in the sputum are Curschmann's spirals, Charcot-Leyden's crystals and marked eosinophilia—all observed in bronchial asthma.

Cases of genuine influenza still occur and are characterized as follows: A rapid onset with fever, a dry paroxysmal cough at first, which rapidly becomes loose, and general prostration. The sputum or nasal discharge differs from that in the ordinary case of bronchitis or coryza in that it is purulent almost from its first appearance. It is yellowish green, homogeneous, and portions of it are easily picked up with a platinum wire. If a loop of the most purulent portion is spread thinly on a slide and examined after a Gram stain, small Gram-negative bacilli

are found within the pus cells. The influenza bacillus is found frequently in the sputum of tuberculous patients.

FINDINGS FROM EXAMINATION OF PUNCTURE FLUIDS.

The spinal fluid has been mentioned. The diagnosis of empyema should always be controlled by puncture: the presence of pus as well as the organism concerned can then be diagnosed with accuracy. Further than this, the examination of puncture fluids is of relative value only. The most important fact that can be determined is whether the fluid is inflammatory in origin or not, *i. e.*, an exudate or transudate.

A specific gravity over 1.018, albumin over 3 per cent. and a positive Rivalta test point to an exudate due to acute infection, tuberculosis, carcinoma, etc. In acute conditions not due to the tubercle bacillus organisms may or may not be present, but the fluid clots spontaneously and in the sediment polymorphonuclear leucocytes predominate. In tuberculous fluids lymphocytes predominate in the sediment and proteolytic ferments are absent. The tubercle bacilli are not found in smears and may even give negative results after inoculation in guinea pigs. In carcinomatous fluids blood is apt to be present. Peritoneal fluids are less often examined than pleural, since the diagnosis is usually clear clinically.

FINDINGS FROM EXAMINATION OF BREAST MILK.

Normal human milk contains 11/12 per cent. of solids, divided as follows: Proteids, 1.5%; fats, 3.5%; sugar, 6.7%, and salts. Slight variations are often found and cause no trouble. A perfectly normal milk may be found and yet there is trouble. In cases of difficulty the clinical findings are the most important. The mental condition of the mother, the exercise she gets in the open air and her diet are usually one or all at fault. Where the milk is normal yet disagrees, insistence upon exercise in the open is found all that is necessary. If the fats or proteids are at fault, the problem is more difficult. The child should never be taken entirely from the breast until all means have failed.

Fat curds and proteid curds in the stool are difficult to distinguish. Fat curds dissolve in a mixture of equal parts of alcohol and ether.

VARIOUS MINOR FINDINGS.

Skin Parasites.—The parasites of ring-worm, favus, tinea versicolor, etc., are easily identified microscopically after soaking the scales in liquor potassa. The same is true of blastomycosis. The "sulphur granules" in actinomycosis are well known. Sporotrichosis is often mistaken either for syphilis or tuberculosis. Since potassium iodid is a specific in this condition, it is possible that some of these cases have had good reason to confirm their beliefs. The cases present a highly typical clinical picture, an initial, painless gummatous lesion, usually on the hand, followed by the appearance of painless nodules along the course of the lymphatics. An absolute diagnosis can be made by inoculating some of the material on any medium containing glucose or maltose. The typical mycelia and spores appear on the third day when grown at room temperature.

Pus Smears.—A wooden applicator tipped with cotton and sterilized in a test tube is the best means of obtaining material for examination. The pus should be examined before it dries. Thin smears should be made on slides and stained with methylene blue and by Gram's method. Special methods of staining are necessary in searching for tubercle bacilli, diphtheria, etc.

The staphylococcus and streptococcus are readily recognized. The pneumococcus may at times appear in chain formation and requires proof of the absence of hemolytic properties.

Bacilli of the colon-typhoid group require special cultural methods for their identification. In the past two years I have found the paratyphoid bacillus twice in urine and the bacillus mucosus capsulatus twice; in stools, the dysentery bacillus three times, Shiga once and Flexner twice.

In cases of dysentery where the amoeba is suspected it is necessary that the fresh material be examined at the bedside. A rectal tube is passed, a bit of mucus is picked from the hole in the tube and is examined immediately after placing between a slide and cover slip. If the material is obtained from a liver abscess, a blunt curet should be passed lightly along the side of the cavity, where the amoeba are sure to be found if present.

Autogenous Vaccines.—The mode of action and the value of vaccines or bacterins can be summed up briefly. A vaccine (or bacterin) is a suspension of organisms, sterilized by heat (60 C.) in normal salt solution. If a vaccine is injected into a normal individual specific antibodies are always formed in the blood of that individual. Up to a certain dosage there may be neither local nor general reaction clinically. Now, if it is assumed that during any infection the body does not react to its fullest power, the defensive forces can be augmented artificially by the injection of a vaccine containing the infective organism. Theoretically, therefore, vaccine therapy should be ideal; practically, however, it has fallen far short of all expectations. We know that after an injection specific antibodies will circulate in the blood, but there will be no favorable result unless these antibodies have free access to the seat of trouble. Thus in localized inflammations drainage must be surgically perfect; a vaccine may then advance recovery. In general infections no remarkable results are recorded. At the very best vaccine therapy is but an adjunct to general medical or surgical treatment. The most favorable results have been obtained in subacute or chronic skin infections (furunculosis). The periostitis following typhoid fever yields to a typhoid vaccine. A colon-bacillus vaccine is worthy of trial in obstinate cases of pyelitis.

To sum up, there is necessary a knowledge of the infecting organism, then conditions favoring the perfect meeting of antibodies and infecting organisms. The dosage is arbitrary. Give enough, but try to avoid a reaction. As to the choice between a stock and an autogenous vaccine, it is logical to assume that if a stock vaccine is helpful in a given case an autogenous vaccine carrying a strain identical with the infecting organism will be still more helpful.

In spite of the general outlook the physician should not condemn a vaccine because it has not worked to his liking; he must not lose sight of the fact that the mere presence or increase of antibodies in the blood is not always a favorable sign, since antitoxin can be demonstrated in the blood of cases of diphtheria, and that antibodies may be very abundant in typhoid fever, yet the patient have a relapse.

ECLAMPSIA, WITH REPORT OF CASES.

C. R. Foutche, M.D.,
Berkeley Springs, W. Va.

(Read at meeting of Eastern Panhandle Medical Society, March 3, 1915.)

It is with the greatest trepidation that I undertake to present to you the subject of eclampsia in the parturient woman. In my experience of thirty years' practice I have had over a dozen cases of eclampsia. We are told that one case of eclampsia occurs in every five hundred confinement cases. I am sure I never attended six thousand cases of confinement, but I wish to say that within the last three years of my practice I have had more cases than in all my other years of practice.

The etiology of eclampsia is very far from being understood, as you all know. Some of the best teachers tell us that it is due to defective metabolism; others say it is due to some fault of the kidneys, while some say it is due to the pressure of the foetus upon the large blood vessels, which causes the dropsical condition of the lower extremities; others say it is due to the changes taking place in the foetus in utero. I myself am inclined to believe that there is some reason for this; the foetus in utero cannot get rid of carbon dioxide by respiration, and it cannot get rid of urea and uric acid by the action of its kidneys. Now the mother has to do all this for the child in utero, and if there is any abnormal change in metabolism or in physiological function we can expect some variation from the normal. Could it not be possible that there is retained in the blood of the mother products of metabolism of the foetus? Would it not be a wise plan to have the blood of all pregnant women analyzed and see if there is anything abnormal to be found? We can examine the urine and find albumin, and yet when labor occurs we have no trouble, and in the next case we have the patient may get along finely and we go home and in an hour or two we are called back to find the worst form of eclampsia.

I find in most cases that we have enlarged thyroid glands. Why could the function of these glands not be changed to such a degree that it would cause this trouble?

I have found urine almost 40% albumin

and the patient not have eclampsia, so I do not think it is always due to albumin in the urine. The function of the adrenals may also be interfered with, so I believe if we could have blood tests made it would no doubt aid in saving many a life.

The hormones theory has been of great interest to me. Is it not possible that some organ may be stimulated and secrete a hormone that will reach another organ that will secrete the necessary product needed by the mother or foetus to correct the defects of metabolism, or whatever it may be that causes the trouble at or before delivery?

I do not wish to lengthen my paper by theorizing, so will proceed to take up the report of several cases which have come under my notice in my practice.

CASE 1. Mrs. M. Labor began at 5 P. M. and progressed normally to about 2 o'clock A. M., when she was seized with convulsions. The treatment used in this case was chloroform and morphia, with forceps delivery, followed by hot packs. This patient recovered.

CASE 2. Called about 10 A. M. Mrs. H. had been delivered by midwife about 8 o'clock. When I arrived I found the patient suffering with the worst convulsion I ever saw. Used chloroform to control convulsions, gave morphia, but patient died at 11:30 A. M.

CASE 3. Mrs. M. Called to see her about 11 o'clock A. M. Found woman in convulsions. Gave chloroform and followed it by a hypodermic of veratrin and morphia. Continued the veratrin every hour. Drs. Grubb, Coughlan and I saw the case together at 3 P. M. and at 4 P. M. we bled her. Continued the veratrin for twenty-four hours. Patient regained consciousness and made a good recovery.

CASE 4. Called at 12 P. M. Found child born. Delivered the afterbirth and went home. Called back in an hour and found a severe case of eclampsia. Called Dr. G. in consultation, used morphia and veratrin, but patient died.

CASE 5. Mrs. R. Called to see her at 1 A. M. Found child born. This case was a primipara. Delivered placenta and went home, congratulating myself upon the easy time I had. Had not been in bed half an hour when I received a hurry-up call. When I arrived I found patient suffering with very severe convulsions. I gave chloroform, followed with morphia and veratrin. Then pushed the veratrin 1/134 every hour, but before I did this I bled patient in both arms. Got all the blood I could get. Patient made a rapid recovery.

CASE 6. Mrs. C. Called to see her on second day after delivery. Found her in convulsions. Dr. Stigers was called in consultation; we agreed upon former treatment mentioned and then bled her. She took typhoid fever and then pneumonia and died.

CASE 7. Called to see patient at 10 A. M. Baby born when I arrived, delivered placenta and went home. In two hours was called to see patient

with Dr. Grubb, who had used morphia and veratrin, and when I arrived we bled her in both arms. We got all the blood we could get. The patient regained consciousness and had no relapse, and made a good recovery; swelling disappeared. We continued the veratrin for two or three days until I thought her kidneys could take care of the excretions. She made a fine recovery.

THE COUNTY MEDICAL SOCIETY.

J. E. McDonald M.D., Logan, W. Va.

(Read before Logan County Society, Jan. 21, 1915.)

"In union there is strength" is a maxim old but true, and we have but to reflect on the accomplishments in other lines of business to realize the gigantic way in which this truth has been demonstrated.

The medical profession, it seems to me, is an ideal place in which to make a full demonstration of the truth of the above adage, since it must be looked to by all classes regardless of wealth, poverty or "previous condition of servitude."

Yet it is not my aim to proclaim any necessity for the formation of a medical trust, but in the more enlightened interpretation of the words association or society. Isms must be divorced from our ranks, and an united brotherly effort be put forth to develop the field as a science. We cannot begin life as a mere physician, but must be active, energetic citizens, with a common interest in public affairs, with an opinion to express on proper occasions.

If we elevate the profession above quackery we must demand the necessary protection from our county and State officers, and such laws from the legislature as will enable us to secure our vested rights, and to get these things we must unitedly ask and demand the protection due to the profession in whose battles we are enlisted.

We belong to an educated, cultured and refined profession, and are naturally accorded a high estimation by the laity, and we should dispense refinement and ethics toward each other, that we may merit the standing accorded us. We are careful observers, reason quickly and act rapidly, and the sphere we occupy as citizens and physicians should enable us, by union, to demand such legislation as will elevate the profession and punish the intruders who seek to take advantage of

an uneducated public and a divided profession.

It should ever be our aim as a fraternal body to lend a hand to those seeking a living honestly and legally in performing the duties of the medical profession, and bid them God-speed in acquiring the knowledge of this great science, but it should be our further aim to prosecute and convict all pretenders who seek commercial gain through and by false precepts and illegal practices, and unless we become a mutual body of practitioners and concentrate our efforts to that end we will remain miserable failures. Brotherly conduct toward each other, respect and confidence in our dealings with all in the presence of the laity, and that fraternal feeling which is commensurate with the great science which it is our duty to build up and defend can only come about by a thorough understanding through perfect organization.

If our commingling together is conducive to better practice and a more intelligent understanding of medicine and disease; if the papers and discussions at our meetings are a source for thought, study and enlightenment to each other from which we profit professionally; if we do and act that which is good and synergistic to our wants, what reason or invective could bring reproach upon such an organization?

We must place beyond question these propositions:

1. That existing professional conditions and estrangements are useless beyond estimation to both the doctor and the public, and a legitimate remedy exists.

2. That the plan of county, state and national organization is based on our system of civil government and contains nothing untried, experimental or impracticable.

3. That the county society is not only the unit of these organizations, but the source of all authority and power through a delegate system, and is the only portal of entry thereto.

4. That the time has come for unification cannot be questioned, as it is highly necessary that we consult and extol knowledge from each other not alone for our own advancement, but for the more efficient service to the public and the

prestige such fraternal association secures. We must manifest such an interest in the profession as will gain public approbation and demonstrate to the laity that we represent a worthy and learned science; that we are necessary in the world and must be protected in certain inalienable rights.

Let us be conversant with the ethics of the profession and the duties we owe each other and live up to their tenets until we shall have achieved the undeniable rights of the learned cause we represent, and to attain this standing we must relegate to the background our commercial ways and live up to the ethical requirements of our society. We must place a ban on druggists prescribing and the class of imposters who are posing under some fake title as medical practitioners by furnishing the evidence and demanding enforcement of the laws by the prosecuting attorneys. This will soon eliminate the most reprehensible barrier of antagonistic, unscrupulous, dollar-mad and money-crazy, pernicious practice.

Let us clean house at home, get right and stay right, come prepared to respond when called upon by the program committee; let us review the latest authorities on diseases, discuss the modern methods of diagnosis; let us give value to the privilege our society gives us in the state and national associations; let it be said that, notwithstanding the small number, the Logan Medical Society has a working ability second to none; that her physicians are industrious, studious, brotherly, energetic, up-to-date, with the "stick-to-it-iveness" and progressiveness to accomplish what many other county societies with many times our number must awaken to an active sense of duty in order to accomplish. Let us hope that our courage and ability will prompt us to foster our union with that unselfish pride it deserves, and the future crown us with success.

I know many of the members of this society do contract work, and it is the most unsatisfactory field for the application of either ethical or scientific work that exists. In fact, some are engaged in it for commercial gain alone, depending on registered hirelings to do their work, extracting what blood money they can in a commercial way. That the mortality

in infants in some of these mining camps is appalling is no wonder when we understand the way the practice is handled. Smith or Brown, who is paid not to exceed \$150 per month to care for work of a pay roll value say \$450, does not and cannot manifest the same interest he would if he were getting the full remuneration, and I believe the legislature should limit the collections of coal companies for commercial practice, and I further believe the State Board of Health should suspend the license of any physician who engages in a "dollar-mad" commercial practice. Human life should have some consideration other than commercial barter, and the death rate of coal and lumber camps should be reduced at least 30 per cent., and the most available way is to require the services of the man who contracts and allow the men who pay to select their own physician annually or biennially. This alone would compel much better work and shut out some of the avarice and greed that have been so common in the past ten years and bring back to economic medicine and matters pertaining to the cultural, moral, social and ethical consideration of the profession under whose tenets they secure their license to practice. I submit the cause as I see it, and when these things are satisfactorily adjusted and we can meet on one common plane the Logan Society will flourish and do the work of a post-graduate school and our mingling will be a pleasure and the dignity of the cause will be placed above suspicion.

Selections.

CONSTIPATION AND EPILEPSY.

From an interesting paper on "Constipation in Relation to Various Diseases," by Dr. C. A. L. Reed, in the *Lancet-Clinic*, we extract the following:

Constipation and Epilepsy.—My experience in dealing with constipation in a large number of epileptics has forced upon me several important conclusions. The first, if not the most important, is that there exists an important relationship between the condition of the bowels and both the frequency and severity of the attacks. In other words,

when the bowels are constipated, the epileptic seizures are both more frequent and more severe than when the bowels are normally open. This fact of every-day observation, not only by medical attendants, but by their epileptic patients themselves, is further confirmed by the most important observation that has been made in my practice, namely, that *constipation due to strictly mechanical causes exists in exactly 100 per cent. of epileptics, and that it is the only tangible and constant lesion that has so far been demonstrated in connection with the disease.*

I wish to make this statement even more explicit by explaining that every case of epilepsy that has come to me has been shown, first, by ordinary clinical examination; next, by careful X-ray findings, and, finally, by surgical exploration in all cases that have come to operation, to have some mechanical interference with the free activity of the bowels. This mechanical interference may be due to any one or more conditions, such as displacement, obstructive angulation, adhesion, redundancy, chronic dilatation, atrophy or other departure from the normal standard of structure.

The next result of my experience is the fact that, in certain cases, the surgical relief of this anatomic condition is followed by a corresponding relief of, first, the constipation, and, finally, the epilepsy. The third and probably the most important conclusion that has been forced upon me by my clinical observation is that the role of constipation, as a causative factor in epilepsy, is due to the more than probable fact that the initial cause of epilepsy is to be found in a specific infection.

A Bacterium Epilepticus.—I am so convinced of the accuracy of this conclusion that, in the absence of actual identification of the micro-organism, not only its existence, but many of its characteristics may be predicated upon its clinical manifestations. Thus, it may be safely assumed that this organism, probably a bacillus, belongs to the gas-forming series. Its habitat is the alimentary canal, probably originally the duodenum, but in all instances finally the colon. It is, furthermore, obviously toxogenic, and it or its toxin may be either on, within or beneath the epithelial cells of the mucosa. It is probable also that they are intrafollicular, and that the persistence of

infection in certain cases is due to similar relations of the organism and its toxins to the endothelia. From its general habitat in the mucosa the infection may travel in either or both of two directions, namely, outward with the intestinal secretions or inward into the lymph and blood currents. That which travels outward, or, in other words, that is thrown off with the intestinal juice, the *succus entericus*, if not promptly carried away in the alvine current, must be taken up again in the process of absorption, and in this way become an additional element in systemic contamination.

Systemic Effects of the Bacterium *Epilepticus*.—It is, furthermore, clinically obvious that toxins of this origin and presenting certain specific properties have the faculty of accumulating in the tissues and in the circulatory media. Once within the blood current, they display a selective affinity for the sensory and motor centers. It is, furthermore, obvious that their effects upon these centers are relative to the size of the accumulated dose and the tolerance of the individual. When the accumulation goes beyond the point of tolerance, we may have, first, a flash of unconsciousness with a minimum of muscular disturbance, or none at all (*petit mal*); or, second, sudden and profound loss of consciousness, with violent convulsive disturbance (*grand mal*); or, third, persistent and almost coalescent seizures of the latter variety (*status epilepticus*). I have demonstrated to my own satisfaction that these manifestations are identical in causation, the variation in degree and intensity being determined by corresponding variation in the dose of the causative toxin.

The infection is, furthermore, responsible for two series of phenomena. The first is local, within the intestines, and is characterized by the elaboration of gas, having a characteristic and very offensive odor. This gas formation may occur in some degree during the interval between, but is always more marked at the time of attacks, or more properly, explosions. It is then associated with more or less violent muscular disturbance of the intestines, and with the sudden stimulation of the salivary, urinary and cutaneous secretions. The saliva, urine and perspiration are liable to have the same odor as the gas generated in the intestines. It would seem at this time as if the patient had

literally been the victim of an internal explosion, the offensive and characteristic odor corresponding, for purposes of illustration, to that of burnt powder. Another constitutional effect of epileptic infection is to bring the mean average temperature below the normal standard, approximately to 97° F. This mean average is associated with some vasillation which increases until an explosion is reached, after which it again for a while remains near the mean average of the individual case. Another constitutional effect is to produce a certain amount of mental dullness, with depression amounting, in most cases, to actual narcotism of from a few minutes to several hours following explosions.

These are obviously some of the effects of the bacterium of epilepsy, the identity and morphology of which I hope to have demonstrated from within my own practice in the not distant future. I have only mentioned these effects in this connection to emphasize the most important phases of my subject, namely, that epilepsy is of toxic origin; that it is primarily elaborated in the intestines; that it becomes effective through hyper-absorption due to mechanical constipation, and that the cure of the constipation must be considered the first step in the logical cure of the epilepsy. In other words, in the light of our present knowledge, constipation is the one link in the chain of pathologic sequence that is available for treatment. It is important for completeness of statement to add that I have demonstrated to my satisfaction that the principle of immunization applies in the treatment of epilepsy. In other words, I have discovered that with respect to everything but mechanical constipation autogenous vaccination is a curative agency in these cases.

INSANITIES OF THE PUERPERAL STATE.*

The request of my good friend, your distinguished secretary, that I give you a short talk on the subject of "Puerperal Mania," calls to mind the story of the man who wrote a book on "The Natural History of Ireland"—one chapter of which treated of "The Snakes"—and consisted of three words—"There are none."

*Remarks before the Obstetrical Society of Cincinnati, December 17, 1914.

Following this example, my remarks could be limited to the statement, "There is no such disease as Puerperal Mania." Nevertheless, a large amount of literature, much of which has become "classic," exists under this title, and is just as valuable to-day as it ever was, for it is a record of observed facts. Our viewpoint has changed, however, respecting this as well as other mental maladies, so that the term itself has been practically dropped from the modern textbook.

In other words, the mere fact that a parturient woman becomes mentally disordered within a few days or weeks after delivery, does not indicate that such insanity is of a distinct type to be called puerperal. One could as properly speak of puerperal typhoid, measles, or pneumonia in that same woman. Therefore, we may say there is no such thing as puerperal insanity, in the sense of a specific type, limited to the puerperal state.

However, puerperal women do become insane—one in four hundred of them. What shall we name their insanity? Just the same name that would be attached to the insanity of that particular woman, if she were *not* in the puerperal state. *It is the patient, not the parturition*, that determines the type of mental disorder.

In other words, it simply means that the particular individual who is thus affected can not adjust herself mentally to the strain to which she is subjected. We can not attribute these psychoses to the parturient state, for they may follow a broken leg, a toxemia, various infections, etc. The majority of modern writers, therefore, simply ignore puerperal mania as a type of disease.

The important question in connection with the woman who has developed a psychosis shortly after parturition is not "What kind of disease has this woman," but "What kind of a woman has this disease." For, if she has ever been insane, the disease is very apt to be a recurrence of the former type, whether that was puerperal in time or not so.

The question might be asked, "What difference does it make? The patient is insane!" As well say of a pneumonia with mental symptoms, or a meningitis, or a typhoid, "The patient is sick and has fever, what difference does it make?" The difference in both groups of cases is obviously

not only one of diagnosis, but of prognosis and treatment.

What kinds of insanity may occur in the puerperal woman? We may usually arrange under four heads the typical *mental states* which are of pathologic significance:

1. The melancholic state.
2. The maniacal state.
3. The demented state.
4. The confusional state.

The first, or melancholic state, is indicated by:

- a. Depression of feeling (emotional).
- b. Slowing (retardation) of thought.
- c. Hypo-activity of motion.

To these may often be added:

d. A tendency to self-accusation and self-injury (suicidal attempts).

Physical evidence is manifested in *muscular rigidity*, which is greater in the trunk and in the muscles connecting limbs with trunk, diminishing toward the periphery.

The *retardation of thought*, having a superficial resemblance to reluctance or unwillingness to expenditure, makes the term, *mental misery*, apply fairly well to the psychic picture. This type of psychosis occurs in the parturient woman, but is not the usual form.

The second type, *maniacal state*, is just the opposite, in general aspect, of the preceding. The feelings (emotions) are cheerful, optimistic, elated; thoughts accelerated in rate, ideas abundant, varied and fleeting; motions hyperactive, restless, incessant. The mental picture suggests a *mental spend-thrift*—a reckless and profuse scattering of ideas serving no useful purpose.

Thus, the fully developed maniacal phase of The Manic-Depressive Psychosis, may occur in the puerperal patient, who is otherwise predisposed to it, but it is not "puerperal" mania. It is an attack—perhaps as a recurrence—of *manic-depressive insanity* in a puerperal woman. It is not the usual type of psychosis in such women.

Our third *mental state* is the *demented*. True dementia implies *loss*, usually permanent, of part or all of the activities called "mental." In its complete development, the patient is a *mental bankrupt*. Apathy of feeling, poverty of ideas, and motor inadequacy—uselessness, characterize its various forms. Dementia is rare in the parturient woman, and when present, is *not* "puerperal." It simply signifies that a patient, in

the early or over-looked stage of *dementia praecox*, has become pregnant and the physiologic stress attendant upon delivery has accelerated the development of a deteriorating disease. Or, if the dementia be accompanied by "organic" symptoms, on the part of the pupils, knee-jerks, etc., paresis must be thought of. This is also very rare in the puerperal woman, for obvious reasons.

Our fourth group comprises the confusional state. The mental picture may convey to our minds the impression of a *mental omelette!* It differs from its gastronomic prototype in this important respect: it may be "unscrambled," and generally is, recovery being the usual outcome. There is nothing of the clearness of perception and quickness of thought and agreeable emotional "tone," so characteristic of the maniac, in these "confused" patients. On the contrary, perception is clouded; thought is absent, or difficult and fragmentary; and the emotional tone, if any, is apt to be one of "fear," the patient often shrinking at the mere sound of words—regardless of their meaning. *Disorientation* is common, *i. e.*, less of recognition of locality and time, and even of members of the immediate family. This disorientation probably has much to do with the tendency to injure the infant; the patient does not know what it is or its relation to her. Hallucinations of sight and hearing are common, which is not the case in ordinary uncomplicated mania. The onset is acute. There is commonly an elevation of temperature to 100 or 101° F. In the parturient woman, the lochia becomes scanty, offensive, and finally ceases. The milk fails, which is an advantage, since the infant must be removed from the mother.

This "Confusional Insanity" is the type we usually see in the puerperal woman, but it is not by any means limited to such subjects. On the contrary, nutritional poverty, with overwork, inadequate heart, kidneys, etc., are common causes; sepsis, alcohol, lead, exhaustion from various other toxins, extrinsic and intrinsic, are also followed by the same type. The *confusional* type, serious as it looks, has its compensations. Of all the forms of insanity, it is the least likely to recur, provided the *cause be removable*, and is not of recurrent character.

To sum up—puerperal mania, as a distinct entity, is non-existent. The insanity of the puerperal state is usually of "con-

fusional type," though the manic-depressive psychosis in both depressed and manic phases may occur.

Dementia praecox may be present in a limited number of patients. In other words, the insanity of the puerperal women is the same insanity she would have developed, with her makeup, in the presence of any other "stress" and exhaustion.

The *prognosis* is excellent—about 75 per cent. recovering within from three to six months.

Non-recovery is often due to

1. Sepsis and exhaustion.
2. Chronic organic disease.

Recurrence is unlikely in pure "confusional" cases, uncomplicated. This is an element in prognosis of much satisfaction to all concerned.

Treatment: Every insane puerperal woman is a possible infanticide; just as every melancholiac is a potential suicide. Hence the removal of the infant is imperative, that the mother may not injure it in her delirium. Return of the infant should not be permitted until recovery is complete.

For the mother, treatment consists in isolation, rest, elimination and nutrition. Depressant drugs and narcotics must not be used. Baths, laxatives, *over-feeding* are all highly beneficial. Alcoholic stimulants may be used in some, but as a rule are unnecessary. As the patient improves, an outdoor life will hasten convalescence, but restoration of the infant and return to household duties should not be permitted until recovery is complete and sustained for at least two or three weeks.

Vaccine Treatment.—"The treatment of pertussis with pertussis vaccine seems to lessen the severity of the disease, abort complications, and shorten the duration. The sooner the treatment is begun the better the results," writes Dr. J. Allen Kirk, in the *Kentucky Medical Journal* for July, 1914.

"I believe this to be the best treatment of pertussis we have today, although it does not seem to be a specific. The method seems to be without harmful results.

"Several of my fellow practitioners have used the vaccine, some of them in a great number of cases, others in a limited number like myself. They all speak favorably of the vaccine and advise its use, and think that it is the best treatment we have today for pertussis."

The West Virginia Medical Journal

S. L. JEPSON, A.M., Sc.D., M.D., *Editor.*

L. D. WILSON, A.M., M.D., *Assistant Editor.*

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All articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over 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 will be 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 to the editor and printer.

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Editorial

We can save a little money for some one who is intending to attend a post graduate school in New York. Write us.

STOP! LOOK! READ!

How many meetings of the West Virginia State Medical Association have you attended?

Why not come to Huntington May 12th-14th?

You frequently prescribe a rest and a change for your patients. Why not use the same cool judgment with regard to yourself? It will do you good. You will go back to your work refreshed and better fitted for your laborious duties—if you spend a week mingling with your fellows.

We have on our program such men as George W. Crile, of Cleveland; S. G. Gant, of New York; William M. Beach, of Pittsburgh; John J. Gelbride, of Philadelphia; Thomas S. Cullen, of Baltimore; E. O. Smith, of Cincinnati; T. A. Ashby, of Baltimore; to say nothing of members of our own W. Va. State University faculty and leaders in the medical and surgical world of our Mountain State.

Then, too, in conjunction with our State Association meeting, we are having a "state-wide" First Aid and Mine Rescue Contest, given under the auspices of the Norfolk and Western Coal Field Operators and the Chamber of Commerce of Huntington.

You have heard of mine explosions? Come and see how they happen! It will be demonstrated by the United States Bureau of Mines—who will send their "Explosion Gallery" all the way from the U. S. Arsenal at Pittsburgh for this demonstration.

You also want to see what Uncle Sam is doing in the way of training laymen in First Aid Work; how the wounded should be taken care of until such time as they can be delivered into your hands for professional care. These things will interest you and give you a larger, broader vision of your own work.

So take a week off! Come to Huntington May 12th to 14th.

And, Mr. Secretary of your local Society, you are a delegate by virtue of your office! Don't you fail to come! You can meet other secretaries and be of mutual benefit to each other. We'll try to have a little conference for you which will not interfere with your enjoying the general program.

Let Huntington be the Doctors' Mecca for May 12th to 14th. We'll have a good time! We'll gain inspiration! We'll acquire knowledge! Come!

Ask your agent about railroad rates. I think we'll get them

J. HOWARD ANDERSON,
State Secretary

CULTIVATION OF LIVING TISSUES OUTSIDE THE BODY.

The story of the cultivation of tissues outside of the living body has already lost much of its novelty. Though we can still easily count the time in terms of months rather than years, the fact has been established so conclusively and the technic developed so successfully that the cultivation of tissues in this way has already become a familiar practice in many laboratories.

Not long ago Carrel of the Rockefeller Institute for Medical Research called attention to the condition of a piece of connective tissue kept in a condition of permanent life. It was derived originally from a piece of heart from a chick embryo. The

fragment pulsed for 104 days and gave rise to a large number of connective tissue cells which have since multiplied actively. It has now been kept alive artificially for twenty-nine months, according to *The Journal of the American Medical Association*, and shows greater activity than at the beginning of that period, and is no longer subject to the influence of time. If we exclude accidents, these connective tissue cells may live indefinitely.

**HOSPITAL INTERN YEAR
REQUIRED.**

A letter from the dean of Northwestern University Medical School states that at the quarterly meeting of the board of trustees, held recently, the recommendation of the medical school was adopted, that an additional year of hospital work be made part of the medical work for the course for students entering for the session of 1915 and thereafter. This is the fifth medical school to adopt this requirement. The complete list and the sessions when the requirement became effective or will become effective are as follows:

- University of Minnesota Medical School...1910-11
- Leland Stanford J. University School of
Medicine1914-15
- Rush Medical College (University of Chi-
cago)1914-15
- University of Vermont College of Medi-
cine1914-15
- Northwestern University Medical School...1915-16

One state licensing board, that of Pennsylvania, now requires that every candidate to be eligible for a license to practice medicine in that state must have served at least one year as an intern in an approved hospital. The requirement became effective in 1914.

UNIVERSAL EPIDEMIC.

Roger W. Babson says that in looking up appendicitis cases he learned that in 17 per cent of the operations for that disease the postmortem examinations showed that the appendix was in perfect condition.

"The whole subject," he adds, "reminds me of a true story I heard in London recently. In the hospitals there the ailment of the patient, when he is admitted, is denoted by certain letters, such as 'T. B.' for tuberculosis. An American doctor was examining these history slips when his curiosity was aroused by the number on which

the letters 'G. O. K.' appeared. He said to the physician who was showing him around:

"There seems to be a severe epidemic of this G. O. K. in London. What is it, anyhow?"

"Oh, that means "God only knows," replied the English physician."—*Open Door*.

Society Proceedings

HARRISON COUNTY SOCIETY.

To the Editor, West Virginia Medical Journal.

A regular meeting was held in the meeting room of the society in St. Mary's Hospital, April 22nd, 1915. Dr. J. B. Winfield presided.

Dr. Lynch, of Hepzibah, exhibited a man having the following peculiar condition. The backs of both hands were covered with a profuse vesicular eruption; the vesicles tended to dry up without pustulation, some leaving dark red spots. There was marked swelling and itching but no pain. The man has always been in good health and no apparent cause could be found for the condition except the fact that he had worked in the garden for the first time this season just previous to the attack. The treatment was limited to zinc ointment applications.

Dr. J. F. Williams reported a case of diphtheria in a child of 10 to whom he gave 30,000 units of antitoxin in three days before he noticed any improvement.

Dr. Louchery made some optimistic remarks on the treatment of new growths, enlarged prostate, etc., with radium.

Dr. J. F. Williams then read a paper entitled "The Treatment of Gonorrhoea." He emphasized the fact that gonorrhoea is not the easiest disease to treat, that most cases are not well under six months, that no case should be discharged unless careful massage of the prostate and seminal vesicles reveals no latent focus of inflammation. Dr. Showalter asked if it was necessary to have a complement fixation test done before one could be absolutely certain of a cure. Dr. Cherry remarked that the complement fixation test has shown that about ten per cent of cases regarded as clinically cured still harbored infection. Drs. Slater and Sloan asked about the value of vaccines, remarking that they had seen no benefit following their use.

Dr. A. T. Post followed with a paper, "The Importance and Value of Blood Pressure Estimation." While the mercury instrument is the most accurate, he recommended the aneroid instrument as being the best adapted for routine use. The importance of blood pressure estimations is shown by the fact that one after another of the big insurance companies is now demanding its use. At the present time the conditions in which some information may be obtained are the toxæmias of pregnancy, nephritis, arteriosclerosis. He cautioned against placing too much reliance upon these estimations alone, remarking that they were to be regarded as important symptoms to be weighed with other clinical signs.

Dr. Winfield mentioned a case of high blood pressure (220) without apparent cause. There were no evidences of nephritis, syphilis (negative Wassermann, etc.)

The meeting then adjourned.

Twenty members were present: Drs. J. F. Williams, D. C. Louchery, D. E. Ritter, C. D. Post, C. T. Arnett, P. C. Showalter, L. F. Kornman, R. V. Lynch, J. B. Winfield, W. Gaston, C. N. Slater, H. H. Sloan, C. A. Willis, T. M. Hood, A. T. Post, S. L. Cherry, J. E. Wilson, E. F. Wehner, W. T. Gocke, C. M. Kessler.

S. L. CHERRY, *Sec'y.*

BARBOUR-RANDOLPH-TUCKER SOCIETY.

ELKINS, W. VA., April 8, 1915.

ED. WEST VA. MEDICAL JOURNAL:

The Barbour-Randolph-Tucker County Medical Society held its regular quarterly meeting at Elk-
ins, in the parlors of Hotel Randolph, on April 6th.

We had a good program and interesting papers and discussions, but we are pained to note that not only the majority of the members of the society, but even those in the town in which our meetings are held are wholly indifferent as to the meetings, and while often excusing themselves on the plea of work, yet we note that if there is a horse race, a chicken show or a ball game generally the men who are too busy to attend society meetings can find ample time to be on hand on time and all the time.

The truth of the matter is, according to my observation, that the really busy physicians in professional work are the ones who attend medical society meetings and the ones who neglect to attend are those who do not have much interest in their work or in keeping up with the profession in its struggle to attain to the highest and the best.

Dr. J. L. Miller gave a very interesting history of his observation of the use of pituitrin in obstetrical practice. He gave a history of its use in 61 cases, noting its prompt and satisfactory effects in nearly all the cases. Dr. Miller thinks it gives the best results of any drug he has used in obstetrical practice, but emphasizes the necessity of care and constant attention and the prompt use of some anesthetic when indicated.

This paper was discussed by Drs. Butt, Golden and Rodgers. Neither of them had given this treatment the extensive use that Dr. Miller had, and none of them were as optimistic in its use as was Dr. Miller. Dr. Butt ventured to say that Dr. Miller was more optimistic in its use now than he would be in after years.

The society requested Dr. Miller to prepare his paper for the Medical Journal, that all may have the benefit of his experience and information from his careful observation.

Dr. A. P. Butt read a paper and gave a talk on "Uterine Prolapse." In this discussion the doctor forcibly expressed the opinion that this condition is the result of weakened support, and that every obstetrician should carefully examine every one of his cases to be sure there is no laceration, and if so, if of sufficient extent to weaken the support of the uterus, to at once or as soon as

possible repair the damage, and if the patient declined to have the treatment, to be frank and tell the true condition and give proper advice and let the result of neglect rest with the patient or friends rather than the physician.

Dr. Butt's paper was discussed by Drs. Golden and Miller, concurring in the necessity of more and greater caution in the treatment and management of obstetrical cases, with especial attention to lacerations and the needed attention thereto.

At the evening session "Eclampsia" was discussed by Drs. Butt, Talbott, Rodgers, Golden and Miller. In this discussion it was the prevailing opinion, in which all authorities seem to agree, that this distressing and dangerous symptom is the result of some toxic element existent in the system, but its exact nature or cause, or the definite treatment, is as yet not known and the treatment as uncertain and indeterminate as is the cause. It was generally agreed that elimination was the most promising and logical course, and that free purgation was always to be one of the strongest factors to be relied upon. Some claim to have had good results apparently from the use of veratrum, of morphia, normal salt solution, used as injection per rectum, vagina or subcutaneously, and purgation from epsom salts. The generally accepted belief was that the prophylactic treatment was the most reliable in threatened or probable cases, and that every case should have the careful attention of the physician through all stages and every symptom receive careful attention and prompt treatment.

Dr. H. K. Owens gave a compilation of facts as to the treatment of cases in obstetrical practice by the method that is getting so much attention by the secular press and through the laymen, known as "Twilight Sleep."

The general opinion was entertained that this method of treating obstetrical cases was greatly overestimated, and that the results were neither so safe or satisfactory as people were led to believe, and that the technique was so diverse, the care required so constant and requirements so elaborate that it was neither safe nor practicable in general practice and should never be attempted without special preparation by an experienced hand and in a hospital where abundant and qualified help can be relied upon.

Drs. Miller and Rodgers were elected delegates to the Huntington meeting in May.

The July meeting will be in Tucker county.

J. C. IRONS, *Secretary.*

MERCER COUNTY SOCIETY.

BLUEFIELD, W. VA., Jan. 21, 1915.

ED. WEST VA. MEDICAL JOURNAL:

The Mercer County Medical Society met in the room of the Chamber of Commerce at 8 P. M., with President G. R. Holroyd of Athens in the chair.

The following doctors were present: C. A. Johnston, E. W. Horton, O. S. Harc, B. F. Cornett, E. H. Thompson, W. W. Morton, T. E. Peery, W. C. Slusher, A. H. Hoge, E. M. Easley, C. M. Scott, F. T. Ridley, H. G. Steele, C. T. St. Clair, T. H. Becker, J. F. Fox and W. H. St. Clair, of Bluefield; S. R. Holroyd and E. E. Ver-

million, of Athens; U. Vermillion, of Oakvale; C. C. Ballard, of Gap Mills; I. W. Taylor, of Montcalm; visiting doctors, J. B. Kirk, Elkhorn, W. Va.; E. F. Peters, Maybeury, W. Va.; F. Pyott, Tip Top, Va.; P. D. Johnston, Tazwell, Va.; M. B. Moore, Raven, Va.

The minutes of December meeting were read and adopted.

Dr. E. F. Peters of McDowell county kindly read us a very interesting and extensive paper on "Pulmonary Tuberculosis," which showed his wide experience and deep thought on the subject. He emphasized the importance of an early diagnosis and treatment with serums and tuberculin in its incipency.

Discussion by the following: Drs. Scott, Easley, Holroyd, Kirk, Pyott, Slusher, Johnston, Steele, C. T. St. Clair, Hoge, Thompson, Ridley, Morton and closed by Dr. Peters.

In a few words the question was asked by Dr. Steele if some physicians and the hospitals were permitted to continue advertising, why shouldn't the rest of the physicians have the same privilege? Which caused a lengthy and interesting discussion, and resulted in adopting the following resolution: That the proprietors of hospitals of Mercer county be instructed by the society to notify the press not to designate the hospitals nor the doctors in their papers in connection with cases treated at same, and that all advertising by members to the public be discontinued by February 1st, 1915, and that a committee draft a letter to each hospital to this effect.

The committee appointed by the President was to be the Secretary elected at this meeting.

The officers elected for the ensuing year were as follows:

President—E. H. Thompson, Bluefield.

First Vice President—U. Vermillion, Oakvale.

Second Vice President—I. W. Taylor, Montcalm.

Third Vice President—E. E. Vermillion, Athens.

Secretary—H. G. Steele, Bluefield.

Treasurer—O. S. Hare, Bluefield.

Censor—E. W. Horton, Bluefield.

Delegates to the State meeting in May—S. R. Holroyd, Athens, and W. C. Slusher, Bluefield.

The President asked that the same committee appointed at the December meeting on Dr. Shepherd's resolution be continued, and this committee also draw up appropriate resolutions in regard to our deceased brother, Dr. Smith.

Adjournment.

Spent a delightful hour and a half at a luncheon at the Busy Bee restaurant.

C. T. ST. CLAIR, *Secretary*,
Per H. G. S.

BLUEFIELD, W. VA., Feb. 18, 1915.

The Mercer County Medical Society met in the Chamber of Commerce at 8:30 P. M., with President Thompson in the chair.

The minutes of the January meeting were read and adopted.

The following were present: Drs. Morton, Horton, Scott, Peery, J. H. Byrd, C. T. and W. H. St. Clair, Becker, Goodwill, Hoge, Slusher, Uriah Vermillion, Hare, Thompson, Fox and Steele.

Under report of cases Dr. Scott presented a

child five months old with a tumor on its left scapula 9x7x4 c.m. by 22 c.m. in circumference. It began to develop about January 1st, it fluctuated, was ecchymotic on top, was of rapid growth and cervical glands were somewhat enlarged.

This was discussed at length by most all present. Some were of the opinion that it was an angioma, while others, especially Dr. Morton, insisted that it was a sarcoma.

The second case reported by Dr. Scott was a young man with a cleft palate, with a very nice approximation of hare lip, done one week ago, this operation having been done under the influence of ether in olive oil per rectum, morphin gr. ¼ and atropin gr. 1/150 and 10 gr. of chloretone administered 20 minutes to the time of operation.

Dr. Goodwill reported a case of sarcoma in a child 11½ years old.

Dr. Peery reported a case of sarcoma of the cornea of a child. The eye was enucleated and the diagnosis verified by death shortly after.

Dr. Hare read the following resolution.

In recording the death of our friends and fellow practitioners, Drs. F. W. Smith, C. A. Johnston and J. M. Shepherd, we feel that it is unnecessary and futile to attempt to set forth in words their virtues or our loss. They were members of this society, and we know them as friends and have listened with profit to their counsel and have often felt their hands upon our shoulder with a word of encouragement, making lighter the task in the battle we wage against disease. They were untiring in their work and mirrored in their lives the true physician, which is service and sacrifice. They have passed from among us into that great beyond, eternity, and have answered that decree of nature whereby all that live must die. May their ashes give sustenance to the flowers of the fields, to cheer the hearts of the millions that are yet to come.

When you and I behind the veil have passed,

Oh! but the long, long while the world shall last,
Which of our coming and departure heeds

As the sea's self should heed a pebble cast.

And fear not lest existence closing your

Account and mine should know the like no more.

The Eternal Saki from that bowl has pour'd
Millions of bubbles like us, and will pour.

We wish to extend to their families our sympathy.

Adjournment.

O. S. HARE, }
W. C. SLUSHER, } *Committee.*
W. W. MORTON, }
H. G. STEELE, *Secretary.*

Now that we are able to definitely establish a diagnosis of chancre by smear and by blood test, there is no longer any reason why a genital "primary sore" should not be excised. On the contrary, the prompt removal, by this means, of its many contained spirochete is highly desirable.—*American Journal of Surgery.*

Progressive Medicine

INTERNAL MEDICINE.

Dr. John N. Simpson.

Modern Treatment of Diabetes Mellitus.—Prof. James Tyson, University of Pennsylvania (*New York Medical Journal*, April 10th).

In an earlier number of the JOURNAL I reported a series of cases treated by Dr. Horowitz with cultures of *Bacillus Bulgaricus*. This article by Dr. Tyson deals with the modification of the Von Noorden treatment.

1. Slight cases, patients usually over 50 years. In these the disease, if not capable of cure, is easily controlled. The disease should be recognized early. The aim of the physician is to keep the urine free from sugar. This is done by eliminating the carbohydrates from the diet. The dangers from acidosis and acetonuria are slight in mild cases. The ordinary non-carbohydrate diet is usually sufficient to control these cases. Later small amounts of carbohydrate may be allowed. It is thought that the elimination of the carbohydrate rests the "sugar factory" and gives it a chance to recuperate and resume function.

2. Transitional cases. He cuts out carbohydrates and reduces the proteins, often employing the oatmeal cure, and fast days as additional measures. In this way severe forms of glycosuria are converted into mild ones. In these cases the danger of acidosis and acetonuria are much greater. In these cases brilliant results often follow. The oatmeal diet is preceded and followed by two or three days of green vegetables and eggs. Usually in three or four weeks the sugar disappears. Although the patients are on a diet free from carbohydrates except on oatmeal days, there is no sugar in urine and the acetone bodies are diminished. After such a regime for several months his tolerance in carbohydrates is increased. In these cases the diet is enriched in calories by the addition of fat. Von Noorden thinks the patients should fast at stated intervals while remaining in bed, giving the "sugar factory" an absolute rest.

Three degrees of days of abstaining are distinguished. 1. Strict diet when carbohydrates are excluded, but proteins permitted. 2. Days of green vegetables, bacon, butter and eggs. 3. Fast days, weak tea, lemon squash, whiskey and soda. Under this treatment the patient's strength improves.

Gluten foods have fallen into disrepute owing to the many frauds and to the greater accuracy which can be obtained in using white bread in reducing the sugar output.

The use of lean meat is forbidden; eggs and the vegetable proteins are permitted along with butter and cream.

Fifteen years ago Von Noorden discovered that oatmeal had a remarkable influence in diabetes. He gives this for three days, then a fast, then for three days green vegetables. On oatmeal days he allows broth, French sauce, red wine, cognac, tea, coffee, bouillon and lemon juice.

The oatmeal is prepared in two ways—*gruel*: half pound of oatmeal in 6 to 8 parts of water; ten ounces of butter divided into 8 parts, one part taken every two hours. *Oatmeal porridge*: one

ounce oatmeal soaked over night in two ounces of water, then 3 to 5 ounces of water are added and steamed two hours. To this are added 2½ ounces of butter, half hour before it is done cooking.

Treatment of Acidosis.—It is due to the presence of diacetic or acetoacetic acid or beta-oxylbutyric acid from which acetone is formed.

They are supposed to be found in the liver from the oxidations of the fatty acids. The withdrawal of carbohydrates increases this complication. "Fats are burned in the fire of the carbohydrate." The acidosis is remedied by the use of large doses of sodium bicarbonate and 1 ounce to 2 ounces daily. Von Noorden gives 75 grams in water the first thing in the morning and at bed time.

In case the soda is not tolerated by the stomach it can be given by rectum or intravenously. Drugs. The opiates and bromides are helpful in the later stages, but must be used carefully. Tyson has found arsenic in small doses, that can be tolerated and given for a long time, of marked benefit in some cases. Mineral waters are useful in proportion to the amounts of sodium bicarbonate, and the good effects of baths are due to the added element of rest and change of occupation.

SURGERY.

Dr. Frank L. Hupp.

Gen. Gorgas' Reports on the Health of the American Army.—A telegram from Washington, recently printed in the *New York Times*, gives the following interesting account of the health of the Army of the United States:

In his first annual report as Surgeon General of the United States Army, Brig. Gen. William C. Gorgas says the time has come when the United States can be assured that it can maintain a state of hygienic competence that will warrant the holding of large bodies of troops in the field indefinitely. Figures submitted by Gen. Gorgas indicate that of all the armies in the world that of the United States is the healthiest.

The report further shows that the percentage of disease in the United States Army is the lowest it has ever been and that since 1912 this rate has been decreased approximately 18 per cent. in the United States proper, while the rate is also lower than at any previous time among the troops on duty beyond the continental limits of the country. It is interesting to note that at no time in the history of the Army has the rate for alcoholism been so low.

"It is especially satisfactory," says Gen. Gorgas, "in view of the extension of white races toward the tropics, to state that the rates for malarial fevers are the lowest since 1908, when our troops were first permanently stationed in the tropics."

The Hospital Corps of the Army, the Surgeon General says, should be made more attractive, because under present conditions there is little inducement in the pay to draw to it men of intelligence that are necessary to perform efficiently its many and specialized duties. Pharmacists, surgical, laboratory and sanitary assistants, expert nurses and cooks can get better pay as well as better hours out of the Army than in it, he says.

"The reorganization of several new field hospitals and ambulance units during 1914," Gen.

Gorgas continues, "only in part remedies the glaring defect observed in the shortage of mobile sanitary units. Our present personnel permits only one-half of the regular army in the field to be served by the sanitary units prescribed by field service regulations. In view of the great battle losses to be expected in modern wars, it is a serious responsibility to rely upon improvised units that must serve at the front. This matter does not require congressional action.

"The great reduction in the amount of preventable disease foreshadows great economies to the government as practical application is developed. Until comparatively recently the duties of medical officers were almost entirely confined to the care of the sick and wounded. In keeping with modern tendencies, specialization has developed and to their former duty is now added that of sanitary science with the practice of preventive medicine in the field and garrison, the handling and disposal of the sick and wounded in campaign, and the various specialties of the civilian physician and surgeon. All this requires preparation and training unknown in past years. The Medical Corps is the only portion of the Army not included in the plan of education of the Army instituted when Senator Root was Secretary of War.

"It seems time that a comprehensive scheme was adopted to keep medical officers trained and abreast of the times in both their medico-military and strictly professional duties.

"For some years it has been necessary to constantly employ from 90 to 100 members of the Medical Reserve Corps with troops. It is desirable that the Medical Corps be large enough to perform all the duties required in peace, and any reserve of trained medical officers be effected in other ways. In time of war there will be demands for medical officers that the corps will be unable to meet. A sufficient number to meet requirements in peace is the best preparation to meet the demands upon the medical department in mobilization and war.

"Appeals are made during great public disasters for the services of medical officers and for medical property by the National Red Cross. It is desirable that plans be perfected whereby they may become available through the authority of the Secretary of War. Legislative enactment is necessary to modify the present restrictions upon granting this help."

Under the caption "Influence of Race" Gen. Gorgas says that the statistics show that the colored troops in the army had the highest non-effective and the second highest death rate. The white troops had the lowest admission rate and the Philippine troops the highest death rate. The constant non-effective rates were colored, 30.27; white, 23.97; Philippine, 18.21, and Porto Rican, 24.58. The death rates were colored, 5.83; white, 4.80; Philippine, 9.17, and Porto Rican, 3.37. The rates for total losses were white, 18.05; colored, 19; Philippine, 18.34, and Porto Rican, 11.79. The highest rate for alcoholism was among the white troops, the highest rate for malaria was in the ranks of the Philippine Scouts, while the highest tuberculosis rate was among the Porto Rican troops.

Indications for Cesarean Section.—It may be generally stated that an indication for Cesarean

section exists when an obstetrician, after a careful study of his case, is convinced that the child can only be born after a difficult instrumental or other form of delivery that may seriously cripple it for life, if it does not cause its death, and which subjects the mother to the possibility of extensive laceration, with shock and probably impairment of her future health. Formerly there was but one indication for Cesarean section, and that was the so-called absolute indication; but today it may be truly said, without employing confusing terms, that all indications are absolute. Unfortunately, there is no set of rules to guide us in determining these indications, and each operator must rely upon the results of his own experience. He must consider the size and the shape of the pelvis; the relative size of the child, its position, and the extent of ossification of the head; he must also estimate the ability of the mother to force that child through the maternal canal within a reasonable period of time.

In estimating the size and shape of the pelvis many factors must be considered. As one writer aptly remarks, "It is unfortunate that all these important factors have not been reduced to precise calculations such as are known to the mechanical engineer in his problems of resistance. Deprive him of his carefully prepared tables and let him attempt his problems with only his senses of sight and touch and personal experiences, and his errors would soon disqualify him. The mechanical problems of obstructed labor must be more definitely systematized before our conclusions in individual cases can be scientifically accurate. Until that has been done we can only rely on individual judgment with its inherent errors." The physician who would do modern obstetrics must endeavor to satisfy himself about many facts concerning the pelvis. The external measurements upon which so much was thought to depend are of little value as a matter of fact in determining size. The information they give is indicative rather of changes in shape, and consequently they lead to a more careful study of pelvic deformity. It is in determining intra-pelvic conditions that the judgment and skill of the operator are taxed. The thickness of the symphysis, the measurement of the true conjugate, the inclination of the pelvic bone, the prominence of the sacral promontory, the straightness or exaggerated curve of the sacrum, the projection and curves of the lateral pelvic walls, the depth of the pelvis, the character of the cervix and pelvic floor—these give some idea of all the factors to be considered when we are trying to estimate the general shape and size of the pelvis. Out of the data obtained only one factor is mathematically exact, and that is the measurement of the true conjugate, which when two and three-quarters inches or less is always a so-called absolute indication. When more than two and three-quarters inches it cannot, as Norris wisely says, when considered apart from associated changes in the shape, inclination and general character of the pelvis, determine the potential obstruction in any given case. He further states that his experience has led him to pay especial attention to the height of the sacral promontory, the height of the symphysis, the angle of inclination of the pelvic inlet, the angle of inclination of the symphysis and the degree of curvature of the sacrum. In this con-

nection we must also remember the funnel-shaped pelvis, mentioned by Williams, as existing in women who present no external deformity of the pelvis and in whom the usual measurements are normal.

In trying to reach an estimate of the size of the child, the operator is again obliged to depend only on his experience. There are no rules or instruments to serve as infallible guides, but by constant practice the obstetrician in the course of time, after making the various allowances necessary for abdominal fat and the liquor in the uterus, may become quite proficient in arriving at a fairly accurate conclusion. When the pelvic measurements are small, it behooves the conscientious obstetrician to know before the onset of labor whether he is dealing with a six or a twelve-pound baby, and the only way that he can acquire this information is by a timely and careful examination, under ether if need be.

A consideration of the physical power of the mother with reference to her ability to endure labor, especially in the presence of a large child, with a moderate degree of pelvic obstruction, is a problem that cannot be disregarded. There is a class of women, characterized by Reynolds as "the obstetrically worst equipped, who," he says, "endure even natural labor badly and show a high percentage of morbidity after the various intrapelvic operations." I believe, with Reynolds, that this class of patients should be subjected to the Cesarean section.

The various pathological conditions affecting the uterus and the vagina must be dealt with as they occur. Abnormal positions of the fetus in primiparae show a high mortality, and in the presence of border-line pelvis Cesarean alone is indicated. In breech presentations in multiparae the selection of operation must depend upon the estimated proportion between the size of the fetal head and the pelvic outlet. In any case after a few hours of good labor pains, when the presenting part refuses to enter the brim, the Cesarean operation ought to be considered. In elderly primiparae, especially in those cases where another pregnancy is improbable, Cesarean section should be advised because it offers much better results for both mother and child.

In this series I have had but one placenta previa, done primarily for the pelvic condition. From this one case I am aware that no deductions can be drawn, but it seems to me that the attitude of De Lee on this question ought to carry some weight. He states that there is a reduction of the infant mortality from 50% to 5% and a reduction of the maternal mortality to at least 4%, if not below. His position is that an indication for Cesarean section will arise in cases of central and of partial placenta previa, when the pregnancy is at or near term with a living child, the mother in good condition, and the cervix closed or promising difficulty in dilatation—conditions most common in primiparae.

In conclusion, I would emphasize the fact that the Cesarean operation should be an operation of election. This means, of course, that the obstetrician puts himself in the position of a prophet, foretelling the outcome of labor. It is true that he may be criticized, but his results will be far

more satisfactory to mother and child than if he puts his trust in the god of chance. Opening the abdomen of a woman exhausted by a long labor and exposed to the risk of infection is a task from which any operator may well shrink.

OBSTETRICS AND GYNECOLOGY.

Puerperal Infection.—Dr. F. J. Watkins of Chicago, after a study of the subject, presents these conclusions in a paper in the *Journal of American Medical Association*:

1. Puerperal infection is essentially a systemic infection; the treatment should be chiefly general.

2. The only general treatment of established value consists of remedies which strengthen the body resistance, hastening the development of general immunizing bodies.

3. Retained products of conception should be left to escape spontaneously. In individual instances gauze packing should be used to check bleeding, to hasten separation of the tissues and to stimulate uterine contractions.

4. Pelvic inflammatory exudates usually will disappear entirely by absorption; exceptional cases, usually secondary colon bacillus infections, require incision and drainage.

5. Cases of suppurative peritonitis should be operated on early.

6. The vigorous operative treatment that is often used is more dangerous than the disease.

S. L. J.

Cancer of the Uterus.—Farrar Cobb (*Boston Medical and Surgical Journal*) states that the two most important questions in regard to this subject are: (1) How can the public and the medical profession be taught the importance of early diagnosis and the possibilities of cure by a radical operation? (2) In what cases is a radical operation justifiable? In answering the question as to what is an operable case the author notes that if the entire pelvis is filled with a hard mass, the uterus, fixed and the vagina markedly involved, there is no doubt that such a case is inoperable, but in many cases no bimanual examination, with or without an anesthetic, can determine positively that the case is not one for radical treatment, because fixation of the uterus and indurated masses in one or both broad ligaments are not infrequently due to inflammatory tissue, adhesions, pus tubes or cysts. Even if fixation and induration of the broad ligaments is due to cancer, such cases should have the advantage of exploratory laparotomy, because it is certain some of the apparently desperate cases, even those involving the bladder, can be cured. Of Wertheim's cured cases there were no less than 10 per cent. that had been considered inoperable by very worthy men. The general condition of the patient must be considered carefully, and the long and tedious abdominal operation should never be attempted in feeble subjects; it is contraindicated also in the presence of marked adiposity. In such cases vaginal hysterectomy should be substituted. In certain of the adipose cases it may be possible to do a paravaginal or radical vaginal hysterectomy, the operation of Schuschardt and Schauta. The impor-

tant factors in the operation are: (1) The preliminary preparation; (2) the anesthetic, with special reference to the prevention of shock; (3) the abdominal incision; (4) the freeing and handling of the ureters; (5) removal of the parametrium and glands; (6) control of hemorrhage; (7) prevention of peritoneal infection and implantation metastasis from the growth itself, and (8) drainage and after-treatment. S. L. J.

Spinal Anesthesia in Gynecology.—H. J. Boldt states that in the thousands of cases of spinal anesthesia in which novocain has been used there has been recorded no fatality attributable directly or indirectly to the drug. In the author's experience the undesirable effects of the drug are limited to the more or less severe headaches which sometimes continue for several days, but which are relieved by the administration of the mixed bromides. An important consideration in spinal anesthesia is the preliminary narcosis by means of scopolamin and morphin freshly prepared. Spinal anesthesia is indicated in comparatively few cases: in patients in whom inhalation anesthesia is contraindicated because of some organic defect or because of exceptional obesity. Another advantage of the method resides in the fact that one can dispense with one assistant.—*New York Medical Journal.* S. L. J.

Tuberculosis of the Fallopian Tubes.—This is more frequent than that of any other portion of the genital tract. The infection may be primary or secondary. Primary infection probably comes most frequently by way of sexual intercourse, the germ being carried up the genital tract by extension from the uterus. It has also been carried in on the hands of the physician or his instruments. Secondary infection is much more frequently seen than primary, but it also travels a different route. The primary infection travels from below upward, while the secondary infection travels from above downward. Secondary infection generally occurs as the result of an extension of tubercular peritonitis.

Symptoms and Course.—Tubal tuberculosis is usually bilateral. The tube is very much like that of a salpingitis from any other cause. Often nodular masses of tubercular deposit are found projecting from the surface of the tube. These assume a bead-like appearance, and this condition is the so-called rosary shaped tube of Hegar. This is quite diagnostic of tubercular salpingitis and is found in no other condition. The fimbriated extremity is often closed and the tube filled with liquid, creamy or cheesy matter. In the primary form the inflammatory condition extends into the tube, and at the isthmus there is a shoulder-like enlargement, which is generally present in tubercular salpingitis. The diagnosis is rarely made before operation. Many cases are taken for other inflammatory conditions, and the diagnosis is made at operation. Given a case of tubal trouble of long duration, where the husband is tuberculous, it might be possible to make a diagnosis by finding the tubercle bacilli in the scrapings from the uterus. The natural tendency of this condition is to destroy life. There is no medicinal treatment which is of any benefit. Operation af-

fords the only hope of cure. Even in the secondary salpingitis due to an extension from a tubercular peritonitis there is always considerable benefit from opening the abdomen. In the primary form removal of the tube is followed by recovery. Salpingitis occurs under two forms, the catarrhal and the interstitial.

Catarrhal salpingitis is an inflammatory condition confined to the mucous membrane of the tube. It is transient in character and of mild grade. In interstitial salpingitis the mucous membrane, the muscular coat and often the serous coat are involved in the inflammatory process. That portion of the tube which runs through the broad ligament does not lengthen out like the rest of the tube, and the consequence is that in the majority of cases the tube is twisted on itself, and the ovary is included in the angle of deflection. In the streptococcal variety the brunt of the attack seems to be in the distal end of the tube, and as a consequence we have the tube falling back into the cul de sac, and can generally be felt as a dense hard mass behind the uterus. The gonococcal variety is generally accompanied by a greater uniformity in the course of the tube and, as a general rule, the latter variety is not accompanied by any mass in the cul de sac. The tubes curl up very much in the shape of a bologna sausage.

The ultimate effect upon the tube is generally guided by the variety of the inflammation. A mild grade of inflammation will probably be followed by complete resolution. Again, resolution may be more or less incomplete and leave the tube crippled as the result of the attack. When the attack is severe there is generally pus in the canal as well as in the interstices of the tube. In many instances the infectious material will have found its way into the peritoneal cavity, either through the ostium abdominale or through the walls of the tube itself. This excites a localized peritonitis with the exudation of plastic material, which results in walling off the cavity from the general peritoneum. Sometimes the amount of pus is so great, or the walling off process is inadequate, and we then have a general peritonitis. In many instances the ostium abdominale becomes closed and we have the condition known as pyosalpinx.—*Martindale, in Journal New Jersey Medical Society.* S. L. J.

PEDIATRICS.

The Best Age to Begin School.—For a great many years physicians have been calling attention to the absurdity of educating the brain before it exists. At six years of age it has not yet attained the final tenth or eighth of its growth, and is utterly incapable of sustained attention or safe reasoning. Not until the ninth or tenth year is the child capable of understanding many of the things taught in the lower grades, and might as well be kept outdoors until then. Experience has proved that children unschooled until nine, ten, or even later, make more progress in the end, as though the training before that time had a repressive effect. Every few months and at least every year some physician publicly unburdens his indignant mind and starts the discussion all over again.

Nevertheless, mothers obtain so much relief while the children are at school that the tendency is to send them earlier than ever, not for any educational benefit, but for custodial care and nursing. Though these little tots cannot be drilled in things requiring reasoning, they have excellent memories and they keep their ears and eyes open every minute. They obtain invaluable knowledge of the correct use of language, if they do not get it at home. The public school system has already assumed the functions of a kindergarten, and if we do not look sharp it will soon become a crèche in addition. Why not? Is it too much of a jump to the future socialism to let the state take over the day nursing of our infants in the same way they have taken over the children less than nine or ten who are really nursed more than taught?—*American Medicine*. — S. L. J.

Nosebleed in Children.—Petry relates the case of a child of 9 who for a year had suffered from recurring epistaxis and was extremely anemic. She had been treated with iron for the anemia, but the nosebleed kept returning. Finally two minute ulcers were discovered on the septum, the source of the bleeding, and as soon as these had been cauterized with trichloroacetic acid there was no further hemorrhage and the anemia rapidly gave place to normal conditions. During sepsis and acute infectious diseases the diagnosis of "septic nosebleed" should never be made without inspection of the nose, as an overlooked bleeding ulceration may do great harm, as he shows by a number of examples. In one case a child of 7 had pneumonia, fever, headache and vomiting, and by the end of the week he began to vomit large amounts of dark clotted blood and was much agitated. No one, not even the trained nurse, suspected that the blood came from the nose until a small bleeding ulcer was found on the septum and promptly healed under an epinephrin salve. In two other cases pneumonia set in with profuse epistaxis, and necropsy in one case showed numerous emboli of diplostaphylococci in the capillaries of the nasal mucosa. The mucosa in the non-fatal case presented the same aspect. In a third case the profuse epistaxis came on likewise late in the course of pneumonia, and the nosebleed was followed by extravasation of blood into the skin at various points. The child had tossed around so much that the ecchymoses at various points were evidently of a traumatic nature, but the hemorrhages were none of them profuse enough to have proved fatal if it had not been for the continuous drain from the bleeding ulcer on both sides of the septum. It is more than probable, Petry adds, that the child might have been saved if the bleeding ulcers in the nose had been discovered earlier. The hemorrhages were ascribed to the sepsis in general and no search was made for a possible local source.—*Exchange*. — S. L. J.

Nichuss' Vaccination Method.—No pain and the babies love it. Catch two or three folds of gauze bandage with a pair of hemostatic forceps; holding the child's arm with the left hand, produce just enough friction to allow a little serous exudate—no blood. Apply the vaccine, and dress the wound by the usual method.

Dr. H. H. Nichuss has been using this method for several years with excellent results, and

never realized until recently so much advantage over the old method. He does not recall where he got this idea, nor the exact time when he began using it. However, it is painless and the vaccine is certain to take, other things being favorable.—*Arkansas Medical Journal*. S. L. J.

Appendicitis in Small Children.—From observation of six cases of appendicitis in children 15 months to 4 years of age V. Veau (*Quinz. therap.*) concluded that these patients show no sign of localizing appendicular pain. Some scream and manifest violent anger; others seek to push aside with the hand something causing discomfort over the abdomen. Tenderness in the right iliac fossa is not present. In order to elicit an entirely unconscious sensitiveness in these cases an indirect method such as those employed in the diagnosis of coxalgia in infants must be used. When light pressure is made over both iliac fossæ, the child will execute slight movements of the right leg. If the pressure be increased, the right leg will become rigid and irregular movements of the left leg executed. Often the face will be observed suddenly to flush when pressure is made with the finger over the appendix. Muscular rigidity is so slight as to be hardly perceptible. The prognosis in these cases is grave, as the child cannot keep completely still or withstand strict dieting. Operative intervention should be considered whenever the symptoms do not show a tendency to prompt betterment. — S. L. J.

Asthma in Children—Its Relation to Egg Poisoning (Anaphylaxis).—Fritz Talbot, in *Boston Medical and Surgical Journal*.

The symptoms of poisoning in children after the ingestion of eggs and certain other proteins are various. There may be vomiting, diarrhea, urticaria or even symptoms of anaphylactic shock. "When a foreign protein is introduced into the blood or tissue it stimulates certain body cells to elaborate that specific ferment which will digest that specific protein. When such a protein first comes in contact with the body cells the latter are unprepared to digest the former, but this function is gradually acquired. The protein contained in the first injection is slowly digested and no ill effects are observable. When subsequent injections of the same protein are made the cells, prepared by the first injection, pour out the specific ferment more promptly and the effects are determined by the rapidity with which the digestion takes place. The poisonous group in the molecule may be set free so rapidly and in amounts sufficient to kill the animal." A foreign proteid may thus "sensitize" a child unless successive doses are given at short enough intervals and over a long enough period to cause immunity. A subsequent dose of foreign protein given to a sensitized child causes symptoms of anaphylaxis. Sensitization may possibly be inherited in a child or there may be an inherited tendency to anaphylaxis.

The writer has studied eleven cases of egg anaphylaxis, ten of which gave history of eczema, and six cases had severe asthma. For diagnostic purposes a skin test with the suspected foreign protein is useful. The technique is similar to that of the von Pirquet tubercular test. A positive

test shows an urticarial wheal at the site of application, sometimes in sensitive individuals within five minutes. The six cases reported strongly suggest that sensitization to egg albumen may be the etiological factor in the production of certain forms of asthma in children and that immunization to egg albumen by repeated small doses may be the rational method of treatment. Similar treatment with other proteins in some other forms of asthma and in other manifestations of anaphylaxis may produce very gratifying results.

S. L. J.

EYE, EAR, NOSE AND THROAT.

Dr. H. R. Johnson.

Infections of the Upper Air Tract.—Russell L. Cecil, M.D., New York, *Laryngoscope*, Vol. XXV, No. 2. This report is based on the study of eighty-nine cases. In this group fifty cases, or 56.2%, showed a predominance of the streptococcus viridans on blood agar plate cultures. It was also found in many of the other specimens. Next to the streptococcus viridans in frequency of occurrence was the pneumococcus, which, including streptococcus mucosus, was predominant in eighteen cases, or 20%. The third in frequency was the streptococcus hemolyticus, found in six cases or 6.7%.

The remaining 17% were found to be composed of *B. influenza*, *micrococcus catarrhalis*, *staphylococcus*, etc.

In the infections of the tonsils, in both the acute and chronic types, the predominant organism was the streptococcus viridans. This organism was found to be invariably predominant in all cases of acute follicular tonsillitis with rheumatic sequelae.

The author studied twelve cases of pyorrhoea and tonsillitis and found the streptococcus viridans present in all cases, and in some in practically pure cultures. One of these cases was associated with acute polyarthritis, four with chronic arthritis, one with chronic endocarditis and two with chronic nephritis.

In the accessory sinuses infections Herzfeld and Hermann studied ten cases of the maxillary sinus and found non-virulent streptococci in eight cases. In six cases the streptococcus was present either in pure culture or was the predominant species.

Howard and Ingersoll in a study of eighteen cases of sinus infections found streptococcus in nine cases. In four cases in pure culture and predominant in four others.

Leichwitz, after the study of a large number of cases, concludes that the streptococcus and staphylococcus are responsible for nearly all sinus infections.

Lewis and Turner in eighty-four cases found the streptococcus the predominant organism in 60% of the acute and in 80% of the chronic cases. The pneumococcus was found in almost as large per cent.

Chronic sinus infections do not yield readily to vaccine treatment. Streptococcus viridans infection of the middle ear is unusual; the streptococcus hemolyticus and pneumococcus are the ones commonly found in acute cases, and the staphylococcus albus and aureus in the chronic form.

The author studied fourteen cases of acute and chronic bronchitis and found streptococcus viridans predominant in eight cases.

Streptococcus viridans infection of the respiratory tract presents three definite characteristics:

(1) It runs a mild course; (2) has a decided tendency to become chronic; (3) it is followed by little, if any, immunity, hence liable to recur at frequent intervals.

The author's results of this investigation lend support to the conclusion that local streptococcus viridans infection is an important etiological factor in certain systemic diseases, especially arthritis, nephritis and endocarditis.

Streptococcus viridans infection of the upper air tract causing systemic diseases is found almost invariably in the tonsils and tooth sockets and less frequently in the nasal sinuses.

Autogenous vaccines may be of value in selected cases of acute and subacute infection from this organism, but is of decidedly less value in the chronic form.

In chronic bronchitis, bronchiectasis, old sinus infections with structural changes, tonsillitis with fibrosis or advanced pyorrhoea with receding gums the benefits from vaccines are very limited.

The author concludes that the idea of mixed infection in these cases will not hold good in the majority of instances, but is due to one organism, and the one most often found is the streptococcus viridans.

Vincent's Angina.—By M. J. Symmotts, M.D., Montclair, N. J. (*New York Medical Journal*, Vol. CI, No. 10).

Vincent's angina presents a clinical picture so closely resembling lesions of luetic origin that it is often impossible to make a diagnosis without recourse to the laboratory.

The author reports a case in which smears were made fully expecting to find the spirochaetae pallida, but found instead the characteristic fusiform bacillus and spirillum of Vincent's angina.

It is maintained by some observers that these organisms are really the same, but in different stages of development, which may explain their being so regularly found associated in this disease.

The diagnosis depends entirely on the finding of these specific organisms. The spirillum stains easily, while the treponema pallidum stains with difficulty and is colored red with Giemsa's stain. The spirocheta of syphilis is smaller, extremely slender, has a low refractive index and a complete corkscrew spiral arrangement.

The slough over the lesions of Vincent's angina is a pseudo-membrane due to necrosis and not a true exudate as in diphtheria.

The Wasserman test may be employed to exclude syphilis.

The low range of temperature and pulse are entirely out of proportion to the local conditions, and aids in excluding the infections due to such pyogenic organisms as streptococcus and staphylococcus.

In the local treatment the author found the condition responded promptly to the application of the undiluted tincture of chloride of iron, three or four times daily.

Such remedies as the tincture of iodine, Lugol's solution, silver nitrate and argyrol have their advocates, but the author obtains the best results from the tincture ferri chloridi.

GENITO-URINARY and DERMATOLOGY

Dr. A. P. Butt.

Continuous Painless Renal Hemorrhage and Its Treatment, W. M. Spitzer.—After a detailed discussion of the etiology, pathology and treatment of renal hematuria without pain, Spitzer concludes:

1. The changes found in the kidney of essential hematuria are identical with those found in passive congestion and are therefore caused by passive congestion.

2. The bleeding is due to passive congestion, the kidney being an organ so constructed that it must of necessity bleed in the presence of passive congestion.

3. It is erroneous to ascribe the bleeding to nephritis, as there are no clinical symptoms or urinary findings indicative of nephritis, nor can the latter be unilateral. Still it is admitted that if the bleeding continues the pathologic changes in the kidney will be the same as in chronic interstitial nephritis.

4. The passive congestion occurring in one kidney only is due to some interference with the outflow of the blood, which comes from a twisting of the kidney on a short pedicle.

5. Operative interference is warranted only when it becomes necessary to save the patient's life because of an increasing secondary anemia.

6. Bisection of the kidney for the cure of this condition is contraindicated and likewise dangerous.—*International Abstract of Surgery*.

Kidney Infections (J. C. R. Wettstein).—Wettstein discusses pyelitis thoroughly, and reports a case of pyonephrosis after removal of infected adnexa in a young woman. Drainage of the pelvis was followed by recovery. This patient, as well as another, showed some bronzing of the skin, which the author thinks is traceable to the adjacent adrenal, which was somewhat involved in the inflammatory process. He further calls attention to the following facts as related to his own cases:

1. There are many cases of surgical kidney conditions without a single sign pointing to the kidney as the source of these symptoms.

2. There are many cases of obscure fever which have their origin in the kidney.

3. There are many cases of stone in the kidney or ureter, or both, which never have the symptoms known as renal colic; furthermore, there are many conditions besides kidney or ureteral stone which can cause typical renal colic.

4. Many cases of kidney disease, especially tuberculosis, cause more bladder than kidney symptoms.

5. The first sign of kidney disease, especially tumor, is a severe hematuria.

In conclusion Wettstein refers to several infections which may secondarily involve the kidney: (1) acute and chronic tonsillar infections; (2) infection in and about the appendix, and (3) gall-bladder infections.—*International Abstract of Surgery*.

Rupture of the Bladder (J. B. Clark).—The author reports an intraperitoneal rupture of an apparently healthy bladder without evidence of external or direct injury not operated upon for twenty-four hours. The patient after a day of heavy drinking had fallen the evening previous to examination and was seized immediately with nausea and vomiting and a very little later with severe abdominal pains, not intense enough, however, to prevent his walking home, but rapidly becoming severe enough to cause him to summon an ambulance to take him to the hospital. The symptoms were abdominal pain, especially in the lower portion, inability to urinate, catheterized urine scant and bloody and antiseptic fluid injected not all recovered in return flow; pulse 100; respirations 22; temperature 99°; slight abdominal tenderness; some percussion dullness, not distinct enough to be significant of fluid; no sign of shock. At operation the extraperitoneal portion of the bladder was found to be intact; a transverse jagged rent was found in the apex; scant amount of bloody urine was in the peritoneal cavity. The rupture was sutured; external drainage was arranged down to the outer coat and a retention catheter inserted. Recovery was uneventful.—*International Abstract of Surgery*.

Malignant Disease of the Retained Testicle.—A. P. Butt and A. Arkin (*Surgery, Gynecology and Obstetrics*).

The author reports a case of double undescended testicle with tumor formation. The patient, a farmer, aged 48, claimed to have led a vigorous sexual life until recently. His health had been failing for a year. He was troubled with gastric disturbances; his abdomen had enlarged noticeably for the past six months. Examination showed a man of slight build, with scant moustache, practically no beard, voice of feminine type. His scrotum was small, penis undersized and no testicles were found in the scrotum. A large, hard, smooth mass was palpable in the left lower abdomen. Upon operation a tumor weighing three and one-half pounds was removed from the left side. The right testicle was removed from the lower part of the pelvis. Microscopic examination of the tumor showed it to be a sarcomatous proliferation of double undescended testicles. The carcinomatous portion predominated and the connective tissue showed evidence of sarcomatous proliferation with large numbers of small round-cells. In addition giant cells were scattered through the tumor, making it an unusual one. Lymphoid follicles were present and the mixed tumor had involved both undescended testicles.—*Genito-Urinary Surgery*.

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POTPOURRI MEDICINALIS. (Presidential Address.)

Henri P. Linsz, M.D., Wheeling, W. Va.

President West Virginia State Medical
Association.

Fellows of the West Virginia State Medical
Association and gentlemen:

I stand before you tonight, not to offer apologies to you for electing me President of this honorable and intelligent body of men, but to thank you because you saw fit to elect me, or take me silently, as in the matrimonial vow expressed, "for better or for worse," to help guide this association, our wonderful ship of state, through the seas of good fellowship, learning, peace and tranquility to the harbor of Love and Charity.

To be chosen to preside over this body of distinguished men representing the best element and progressors of the medical profession in the State of West Virginia—a great honor, I assure you—makes one wonder if he is really worthy of the trust, at the same time instilling him with a sense of confidence in his fellowmen and a thrilled feeling of good fortune which tends to make one feel proud.

THE FAMILY PHYSICIAN.

It is fitting here to express "all honor and glory" to the old family physician of bygone days, with his high silk hat and his long frock coat, who has disappeared as thoroughly as though he had never existed.

With his exodus goes a character which never can be replaced. Beloved by all his patients, admirers and followers, he not only ministered to their physical needs, but was counselor, confidant and friend as well. The community placed him on a pedestal on account of his ability to help out, and he was accorded the distinction of being the Parson of the neighborhood—parson, from the old English, signifying "the person." He was "The Person" in that particular community. He was always a prominent member in church and business affairs; at the same time was very unbusiness-like in his own personal matters, rarely sending accounts for services rendered, simply accepting what was handed him by the more charitably inclined families among his patrons, in which respect a great many of the fraternity of today differ very little, namely, "very poor business men."

THE SPECIALIST.

The practice of medicine today has assumed another aspect. The physicians are business men, or, if not, they should be. We are living in the age of specialties; we wear the sack suit of a business man, and commercialism has to a certain degree entered our ranks. We are not employed on account of our social or family connections or friendship, but because the patient thinks the physician he has chosen to treat his ailment is the most capable in that particular case. In any case, the doctor "must deliver the goods," or his neighbor will fall heir to the case.

The modern medical science is likened unto a huge wheel, each spoke representing a specialty, where rich and poor alike, by

the use and aid of the various departments of our modern hospitals, may find an exact diagnosis and appropriate treatment for their various ailments.

The specialist of today has become an absolute necessity, not only to the patient, but the physician and surgeon as well, and on account of his worth as such he is held in high esteem.

True it is we have a great number of specialists throughout the country who are only specialists in the sense of the word and *not* qualified experts; who have entered the field, in connection with their general practice, simply for the pecuniary reward which the services of the real expert command.

I feel there should be a law enacted whereby any practitioner of medicine who wishes to engage in a certain specialty should be required to pass a most rigid examination before a board of specialists from that particular branch which the applicant or aspirant expects or wishes to enter before he is permitted to announce himself as such, thereby eliminating the incompetent and self-announced specialist.

The "omnibus specialist," or general practitioner, will live on forever and grow in favor as time rolls on. A good, live, energetic, well-read, practical general practitioner is one of the most valuable assets a community possesses today. His worth as such has been thoroughly demonstrated, and instead of the "omnibus specialty" of the practice of medicine being relegated to the rear as a result of the inroad of specialism general practice is growing in favor day by day, and the general public has decided that a general practitioner, possessing some knowledge of all the branches of medicine, is a good risk, and is willing to abide by his judgment and recommendation.

COUNTY SOCIETY—STATE SOCIETY.

The medical society of today is as essential to the general practitioner, surgeon and specialist as is his daily bread. While the bread is food for the body, the knowledge obtained in attendance on medical societies is food for the mind and soul. In these meetings much toward the development and progress of medicine is accomplished. It is a curious fact to note, however, that the busiest and most progressive practitioners of medicine, and those always seeking-knowledge, new light and new truths, are

usually in attendance. They realize that while they may sustain a loss, commercially and otherwise, while absent from their business, the social and personal benefits, the recreation, the knowledge and new ideas gained amply repay them for the loss sustained and enable them to be better fitted for their work at home, saying nothing of the many friendships gained, which are often pleasing and lasting. Meeting as we have been in different cities throughout the State has educated the public to the fact that the medical societies have been doing much toward the education of the physician and the people as well, and that these meetings are an absolute necessity not only for the welfare of the general public, but also for the advancement of the physician. The majority of the intelligent people of today, realizing that knowledge and advancement will come to those alone who attend these meetings, and that their physicians would be better qualified to handle their cases from the new knowledge they have gained, would prefer that they visit the meetings of the medical societies whenever the opportunity presents itself rather than see them remain at home.

UNIVERSAL LICENSE.

I wish here to advocate a universal license. By that I mean a man who has been licensed to practice medicine by one State should be privileged without further ceremony, to practice throughout the entire United States and its possessions. While there appears to be no remedy at present for this absurd condition prevailing today, viz., that each State acts for itself alone, the time has come that some movement should be agitated whereby an applicant to practice medicine in the United States, upon passing a satisfactory examination before any State Board of Health, or I would recommend a Federal Board in this case, should be at liberty to practice medicine wherever he chose, and to move from one State to another and practice his profession without going through the ridiculous formality which now exists. As the law stands at present a man is criminally liable for crossing the line of his State and going into the adjacent State to prescribe for a patient unless he holds a license from that State also.

I am informed there is no other country in the world in which such a condition of

affairs exists. A diploma obtained from any of the schools in Germany is good not only throughout the German Empire, but is accepted in Austria-Hungary and Switzerland as well without further formality. This is the condition that should exist in the United States, and I heartily urge that this association place itself on record as advocating the same.

STATE BOARD OF HEALTH.

What has become one of the greatest benefactors of this State is our State Board of Health, which stands second to no other State Board of Health throughout the United States. Through its untiring efforts and perseverance it has educated the general public, which it has taken into its confidence, to know how to be clean, how to combat as well as prevent disease. Some very short time ago, if a doctor addressed the general public on any subject pertaining to the conservation of health, prevention of disease, sanitation, etc., he would have been severely criticised and his motives questioned. Not so today. The public wants to be educated in health affairs and anxiously joins in the crusade against disease and its spread. Every possible subject from the dreaded tuberculosis down to the mosquito and house-fly, as well as personal hygiene, etc., has been brought to the attention of the general public by our State Board of Health with the wonderful result that today our State enjoys as good as the healthiest and better than the majority of our states the reputation of being clean, free from epidemics, and by the co-operation of the general public, through its education along these lines, a minimum of disease.

The inauguration by our State Board of Health of a day to be designated and observed as "Public Health Day," on which day "we should work for clean and healthful conditions of living; for the removal of known causes of disease; the dissemination of a knowledge of those principles that underlie an efficient preservation of Physical and Social Hygiene," is one of its most note-worthy achievements, and will serve well its purpose to further educate the general public in the methods for the observation of public health.

Our State Board of Health, through its most efficient Secretary, Dr. S. L. Jepson, has delivered public health lectures, throughout the State during the year. It

has established a State Hygienic Laboratory, has published regularly a Bulletin of Health, which every physician should read carefully and study, and it has established a School of Instruction for local Health Officers, which all health officers of the State are expected to attend.

The Board of Health has been given more authority under the Bill just passed by the Legislature, and it remains to be seen just what further benefits the fraternity and the general public will derive from its untiring and progressive efforts.

THE HARRISON ANTI-NARCOTIC LAW.

It has been the purpose of all trust worthy physicians and druggists to secure proper control of the narcotic traffic so that it may be confined to a legitimate one. The Harrison Bill as enacted by Congress is, without doubt, a beneficent law, and its purpose and value should be endorsed without qualification.

Thousands of drug habitues are at present distressed greatly, and our hospitals throughout the country are full of them, suffering from the effects of the enforcement of this most humane law, making it impossible for them to obtain any of the interdicted drugs. Their suffering is offset by the immense and lasting benefit to mankind in general, due to its enforcement, whereby the rising and coming generation will practically know nothing of the horrible and disastrous results incident to narcotic drug usage.

While Congress did not wish to interfere unduly with the legitimate dispensing by the physician, it sought to insure the proper exercise of this law by them.

"Nothing contained in this section shall apply to the dispensing or distribution of any of the aforesaid drugs to a patient by a physician, dentist or veterinary surgeon registered under this act in the course of his professional practice only; provided, that such physician, dentist or veterinary surgeon shall keep a record of all such drugs dispensed or distributed, showing the amount dispensed or distributed, the date and the name and address of the patient to whom such drugs are dispensed or distributed, except such as may be dispensed or distributed to a patient upon whom such physician, dentist or veterinary surgeon shall personally attend; and such record shall be kept for a period of two years from the date of dispensing or distributing such drugs, subject to inspection as provided in this act."

The above quotation from the words of the law relative to the dispensing or dis-

tribution of a narcotic drug to a patient by the physician, as passed by Congress and signed by the President, has been practically set aside by the ruling of the Commissioner of Internal Revenue, who says that his office deems it necessary that:

"Where a physician personally visits a patient and administers any of the drugs coming within the scope of the Harrison Act he is not required to keep a record of such administration, but where he leaves a supply of any of these drugs or preparations to be taken by the patient in the physician's absence he will be required to keep a record of such drug or preparation, the same as he would in his office. A physician must keep a record of all drugs or preparations dispensed or distributed in his office, whether administered personally or given to the patient to be carried away with him."

This is very unjust and works hardships on all practitioners, and most particularly the country physicians who cover large territories and must dispense in order to properly treat their patients.

"Personally attends," in the course of professional practice should include the leaving of necessary medicines for use between visits, as well as the medicines indicated at the office after consultation without recording, the law not intending to mean personally administered. The Bill as passed by Congress does not require any such record to be kept, but the ruling of the Commissioner of Internal Revenue makes it necessary, and as the Treasury Board is not empowered to make law, I do not understand how any such ruling as made by the Commissioner of Internal Revenue can be enforced; therefore, I would suggest a resolution asserting that while our Association is heartily in sympathy with the purpose of the Federal Narcotic Law, and pledges its co-operation with the authorities in securing its rigorous enforcement, it is absolutely opposed to this or any other extension, by bureau action, of the law, beyond its clear and undoubted meaning as expressed in the Statute, and that properly attested copies of these resolutions be sent to the United States Senators from West Virginia, to the Representatives in Congress, and to the Commissioner of Internal Revenue.

MEDICAL DEFENSE.

One of the greatest strides our Association has made in the past few years has been the establishment of its medical defense plan, which has already shown bene-

ficent results. When this system was first inaugurated it was looked upon with utmost scepticism, but after weathering multitudes of storms of opposition and doubt, has proven to be one of the greatest benefactions of our Association; has gained the confidence and support of all the members, and bids fair to become an institution in itself; in fact it has become so. From its incipency, about three years ago, it has steadily progressed in its usefulness until today it has assisted many of our members through gloomy days, when malpractice suits were hanging heavily over them. It is interesting to note that during the existence of this fund, quite a number of suits have been brought against members of this Association ranging from \$5,000 to \$150,000 each, tried in court on their merits and decided in favor of the defendants. In no single suit brought was a decision rendered in favor of the plaintiff: our motto, "investigate and stop at the source," "no compromise," and "fight to the finish," supported by an ever-willing and self-sacrificing solid phalanx of medical experts from among our own ranks, and from outside sources when necessary, has brought about such brilliant results, until today not a single suit is pending against any one of our members. This is due to the public having been educated that to bring a suit against any one of the organized Medical Fraternity of West Virginia is useless as well as hopeless.

With all the expenses of the various suits paid we have remaining in the treasury at 6% interest more than \$4,000.00, which is increasing each year as the Association prospers. Take notice, "as you sow, so shall the Association reap;" therefore be charitable to your brother.

RELIEF FUND.

When the medical defense policy was first inaugurated it was decided that should we be fortunate enough to accumulate \$1,500 to \$2,000, the annual assessment per member to the fund should be reduced. This decision has been abandoned. As before stated, with all our indebtedness paid, the fund amounts to more than \$4,000.00 and is merrily rolling on, until the prospects of its perpetual accumulation leads us to reflect on further possibilities. Therefore, the thought arises in me, what should

we or what could we do to assist our disabled brethren, or the wives and orphans of our deceased members when in distress.

As the churches throughout the country are systematically accumulating a fund for disabled clergy, their wives and children, so should we do the same for our distressed members. I therefore suggest that a certain sum from the medical defense fund be set aside for such purposes, and that each year an amount that will not interfere with the workings of the defense fund be taken therefrom, and added to the Relief Fund, thereby insuring its perpetuity; that this Relief Fund be placed in the hands of trustees (3) whose duty it shall be to attend to the proper investment and distribution of the same. Quoting from the Bible, "Inasmuch as ye have done it unto one of the least of these my brethren, ye have done it unto me."

OUR DUTY.

Like our friends in the other learned professions, we have met in annual session for our mutual encouragement and for the recreation so necessary to all engaged in our exacting and often trying work.

Many new problems and perplexities confront us daily which need to be solved. Incessant is the triumphal march of progress, the forging ahead along the lines of medical science, and how can we keep abreast of the modern progress if we discontinue or researches; and what greater stimulus is there for medical men than to convene in harmonious session to consider the things that make for efficiency in our chosen calling?

The various communities from which we come, our great commonwealth, and the world at large expect great things from us. And they have a right to, for do we not stand at the very head of all secular professions, endeavoring, as we do, to lead our fellows from the shackles of disease and certain failure, by the conquest of the great human foe, to the glorious heights of health, wealth, long life and happiness and prosperity?

Ours is indeed a noble calling, and it has its rewards but also its trials and its shadows. It should be our earnest endeavor to overcome the latter, and we must battle for this with all the best within us. In some cases we are confronted with indifference, yes, prejudice, born perhaps of super-

stition or of ignorance, or perchance of the inherent feeling of independence with which our fellow citizens are imbued.

It needs much tact, earnest application, and real efficiency to overcome these things which stand in the way of all true medical progress. Then there is *quackery*, the fake doctors whom we must pursue with all our might. The regular family physician has ever been and will be the friend, the confidant of his people, and we must not abuse the confidence of those who are loyal to us. It is up to our medical societies to show up all crookedness and fraud among those who claim to hold a physician's diploma—for in no other way can we retain the support of the people whom it is our earnest desire to serve.

Above all things, let doctors themselves respect their own profession. This respect should of course be instilled into all at the very source, namely in our medical colleges, and the sacred character of our work should never be minimized.

How better can we honor the profession than by a cordial and mutual self-respect? We note how clergymen, even of different denominations, greet each other with reverence and with kindness, because they know each man represents the divine institution, the Church, and that a minister is the "curer of souls." Why should not this feeling prevail among physicians? One thing that is ever retarding our progress is the petty jealousy, the gruffness of manner among men who should be of the kindest and most loving disposition, because to them is entrusted the sacred human body, which the clergy styles the "Temple of the Holy Ghost." One of the greatest faults of our generation and time is the absence of kindness and courtesy among men, doctors included.

It has been said: "Our age is harsh when it judges, brutal when it blames, and savage in its severity. Today no leader, no matter how noble, escapes brutal criticism, and no movement whose white flag is not besmirched by mud slingers." Let the men of the medical profession endeavor to eliminate all brutality and roughness of manner, especially when dealing with fellow physicians. Let all jealousy disappear from our ranks, and let each accord the other the respect which he is entitled to. We are all human enough to desire a kind

word here and there, and indeed not only from our patients but also from those who are engaged in the same profession with us.

"Don't weave wreaths for a man's white tombstone which you deny his brow. Don't pay a man's dead ashes honor which you refuse his living spirit." Every regularly graduated and earnest-minded doctor is worthy of respect and kind consideration. Each one is talented and endowed in his own peculiar and special way. But what are all our achievements, our supreme gifts and talents if they are marred by harshness, bitterness and unkindness?

In our great life's calling, recognized to be great by all who can discriminate, we furthermore need the support and the serenity which come from a well ordered home life. The greatest assistance to us is the noble assistance given by our helpmates at home. A doctor's home should be an abode of happiness and cheerfulness—where love and kindness meet, and where the wife displays constant interest in the welfare of her husband in his difficult calling. We may not agree with everything which the German emperor does, but one thing is certain, he is truly happy in his domestic relations and recognizes the great worth and assistance of a true wife.

The cardinal virtue—Love—is lost sight of too often in our profession. If we only undertook to understand one another better, we would love each other more, and this world would be a world of friends. It is said of Oliver Goldsmith that he and Dr. Johnson were seated in an inn in England, pondering over a cup of tea, when in walked a gentleman, who stalked across the floor and took a seat at a table in the corner of the room. Goldsmith thrust his thumb over his shoulder in the direction of the man who had just seated himself and said to Dr. Johnson: "I hate that man." Dr. Johnson inquired: "Who is he?" Goldsmith replied, "I don't know." "That is singular," remarked Dr. Johnson. "You say you hate him, and yet you do not know him?" "That's just it," replied Goldsmith, "I believe if I knew him, I would love him." We must always remember there is something bad in the best of us, and something good in the worst of us, and no matter what our trial and tribulations may be, let us be up and doing, one for the other, and the Lord for all of

us. Meet your fellow practitioner with a healthy smile, and glad hand; don't wait until he has laid down this earthly yoke, to pay homage, or standing viewing his remains, make such remarks as: "Don't he look natural?" "Wasn't he a fine fellow?" etc. Do it now! Say it now! Make him feel he is a necessity to the community and his profession as well, so that when he is entering upon that long journey, from which he will never return, while he came into this world crying, while all about were smiling, he is leaving this world smiling, while all about him are crying. Just to be missed.

Let your motto ever be:

"Let me live in my house, by the side of the road, and be a friend to man."

THE EARLY DIAGNOSIS OF TUBERCULOSIS.

J. W. Gilmore, M.D., Wheeling, W. Va.

(Read at meeting of Ohio County Medical Society, February, 1915.)

The crusade against tuberculosis really began in 1907, and results obtained are gratifying indeed, but our results are not what we really set out for, and our greatest anticipations have not been realized. "Rome was not built in a day," so let us not become discouraged, for our efforts have not been as great as our gains, and there is plenty of room for more effort and greater gains in attempting to conquer this awful disease.

The paramount issue today in suppressing tuberculosis is the early diagnosis of those infected and the proper regulation of the sale of contaminated food products. The physician in general practice has a very important part to act in this crusade, and he should begin to realize the responsibility which rests upon his judgment and skill in directing his early cases of tuberculosis. The problem can generally be solved if the physician will be thorough and painstaking in his methods of making a physical examination. There are no pathognomonic signs or symptoms of this disease except the constant presence of tubercle bacilli in the sputa. We have seen cases with acute colds whose sputa contained the tubercle bacilli at times, yet there was no evidence of ulceration of the upper respiratory tract, nor was there any sign of pulmonary infiltration,

and the sputa would be negative after the cold was cured. The laboratory is an excellent aid in ferreting out the diagnosis of early tuberculosis, but at present the most important factor in the hands of the general practitioner is the method of physical examination. No matter which theory we hold about tuberculosis, whether it is a disease of childhood which remains latent or it is contracted by ingestion, by inspiration or is congenital, there is a period when it becomes manifest and diagnosis is possible. It is this period which marks for the practitioner the beginning of the disease. We understand, then, by incipency the clinical beginning of the disease. No disease exists for us save by clinical manifestations. This is not saying that because we cannot detect it an individual is tuberculosis free, for it is possible to be infected with tuberculosis and yet not have the disease called tuberculosis. To say that an individual has tuberculosis presupposes clinical signs and symptoms, but a person may be infected with an indeterminate tuberculosis. It is estimated that 90% of all persons dying from all diseases have or have had tuberculosis, and this does not exclude children. Since it is also estimated that the great majority of adults who now have tuberculosis got their infection before the age of twelve years, an interesting clinical fact should be mentioned in this connection, viz., that the infection by the bovine type of bacillus tuberculosis manifests itself usually in the human being in the joints, peritoneum or glands, and that between 10 and 15% of all cases of tuberculosis in childhood comes through the milk.

Since it is impossible many times to make a diagnosis of pulmonary tuberculosis with our hands, ears and eyes, it becomes of the utmost importance to take a careful history of the patient. The history of the suspected infection should consider the following points:

1. Whether or not the individual is from tuberculous parentage. Not that he or she inherited the disease, nor a tendency, nor a lowered resistance, but that he got his infection directly from them. It is now generally accepted that a very large per cent. of tuberculosis infection comes about through family association (Howes of Boston). Out of 1,300 cases of discovered tuberculosis there were 134 instances of family clusters of three or more. It developed while work-

ing out this percentage that there are now three groups of tuberculosis patients responsible for this horrible fact:

(a) The undiscovered tuberculous individual who has never consulted a physician and of whom the neighbors remark, "He coughs, is getting pale and thin and must have consumption." He deals death to his family.

(b) The individual who is known to have tuberculosis, who is poor, in whom no one is particularly interested, who is told in a half-hearted fashion how to live, and who doesn't because he cannot. *He infects.*

(c) The improved sanitarium patient, discharged with full instructions how to conduct himself at home, who doesn't do it, and who in his returning ill health infects.

2. Whether or not, in the event that there has never been tuberculosis in his family, he ever associated with an individual known to have been infected. Many instances are recorded where room-mates at boarding school, one from a tubercular family, the other not, both subsequently dying from the disease.

3. Whether or not the person in question has moved into a dwelling formerly occupied by tuberculous people, as so frequently happens among the foreign and colored population.

4. Whether or not the patient ever suffered from pleurisy, as 85 to 90% of all pleurisies are of tubercular origin.

5. Whether or not the patient ever carried a continuous temperature for a period of days or weeks and then recovered. In this latitude across the United States a continuous temperature must be from one of five diseases, viz., typhoid fever, sepsis, malaria, syphilis or tuberculosis; and tuberculosis is certainly the most common of these five diseases here at present.

6. Whether or not the patient ever expectorated blood regardless of the physical condition of the patient at the time blood was seen. Many cases of tuberculosis get speedily well clinically, but at some time nearly every person who has expectorated blood has been or is infected with tuberculosis.

7. Whether or not the patient takes cold easily and frequently. Unless the arterial blood supply to a mucous membrane is interfered with that membrane never secretes mucus, and the frequent interference with

the blood supply causes a lowered resistance to the membrane, and since the tubercle bacillus gains entrance as a rule through inspired air or ingestion, one is thus to that extent more liable to pulmonary infection.

8. Whether or not the individual to be examined is:

(a) Tired most of the time (muscular weakness from infection).

(b) Is he short of breath on slight exertion?

(c) Does he have aching shoulders and legs and think he has rheumatism?

(d) Has his ability to take food decreased?

(e) Has he lost weight?

(f) Is there anemia coming on?

(g) Is he running an evening temperature sub-normal or from 99° to 100° F.? Both good points.

(h) Is there an increase in pulse rate? One of the very best points known.

(i) Has he been told that he is having the grip, rheumatism, indigestion or malaria?

(j) Has he been complaining of "stomach trouble?" An indigestion is a common symptom of early tuberculosis.

(k) Does he get hoarse easily and clear the throat instead of coughing? A frequent clearing of the throat sometimes takes the place of the early hacking cough.

(l) At some time in the affection is there a feeling of warmth with fatigue when there is no temperature?

(m) Are tonsils enlarged and frequently a little tender? This may be the initial lesion in tuberculosis.

(n) Are there or has there ever been enlarged cervical glands?

Temperature—One may take the temperature of a suspected or suspicious case three times daily at the usual times and not find it above normal. It has been common experience that a patient giving a suspicious history has a temperature at some hour during the twenty-four. It may be 9, 10 or 11 P. M. If one sees that the temperature is taken every two hours from 6 A. M. until 11 P. M. one many times finds the thing that more often in a little more advanced cases shows up at 5 P. M.

Blood Pressure—It has often enough been demonstrated that 105 m.m. may be taken as the low limit of normal blood pressure in men and 95 m.m. in women. This will of necessity be modified slightly

by age, occupation and muscular development of each individual. The only way to estimate the degree of abnormality in blood pressure is to apply the knowledge obtained from experience in examining a great many cases. Therefore, it is usually advisable to employ the blood pressure test as a routine in all cases in order to develop one's ability to interpret the significance of each individual case (*Boston Medical and Surgical Journal*).

In tuberculosis, if there is not a co-existent mitral stenosis, the systolic pressure falls as a rule, then the diastolic pressure is maintained. When the disease is advanced the systolic pressure is lowered, is rather marked and quite constant. In first degree cases, and even before physical signs make their appearance, low systolic pressure is often enough seen to justify one in considering this a good point in diagnosis. As the health improves the systolic pressure rises toward normal.

The Pirquet and Moro paste reactions, if done in adults, is of little value. In the child a negative skin reaction (two or more), if it can be demonstrated that there is nothing present that in itself would cause a negative reaction, is fairly good evidence that the child is not tuberculous.

X-Ray—Along with other methods of precision in making a diagnosis of tuberculosis has developed the X-ray. In itself it is of little value; as a rule, but backed by a carefully taken history and a thorough physical examination, and interpreted by an expert, it becomes of great value, and at times an indispensable aid in early tuberculosis. It proves of greatest value in children with a mediastinal glandular involvement and in the emphysematous chests of adults.

"The X-ray passes through objects in exact inverse proportion to their density; the slightest degree of change can be detected by an expert. Since there is no tuberculosis process occurring in the lung that does not change the density of the tissue infiltrated, the history, physical findings and X-ray should convince us as to the diagnosis."

Cole is of the opinion that once cases advance from mediastinum to parenchyma, which goes well with the idea that the large majority of infected patients got their infection before twelve years of age, and that it was first a mediastinal adenopathy, and the glands proved so on X-ray. Adventi-

tious sounds heard about the chest and at times mistaken for signs of tuberculosis are:

1. The simple act of swallowing produces sounds that are transmitted to both apices in the back, and if the auscultor is not aware are at times with difficulty differentiated from crepitations in early tuberculosis. These sounds are not localized, being heard over both apices differentiates them from signs of diseased tissue, since tuberculosis as a rule begins on one side and the sounds are localized.

2. Sounds produced by muscles. The muscles of the back, particularly the supra and infaspinatus, produce a rumbling sound at times that obscures any sound that may be made by the lung while breathing. At other times they simulate closely crackling rales. These muscle sounds occur most frequently in patients who are nervous and excited, but who have a fair muscular development. Marginal sounds are those that occur at the margin of the lungs on deep respiration, resemble and generally are the atalectatic sounds that occur in patients who fill the lung with air at your request and which had not been so full of air for weeks or months.

Hoves of Boston is of the opinion that muscle sounds may and do cause error in diagnosis in 9.2% of cases, and that joint sounds cause error in 22% of cases.

Chest Findings—Many cases of early tuberculosis present no signs about the chest upon which one can base an opinion, as when the chest is negative to harsh inspiration, prolonged expiration, moist rales, dullness, increasing vocal and tactile fremitus, rigid muscles, Litten's shadow sign, Epsine's sign, pain and cough. Then the diagnosis must be made from the history and X-ray. The stethoscope tells us nothing that is positive in these cases. Revier's pulmonary collapse and apical catarrh are so far-fetched that one would do well to diagnose such as tuberculosis and treat as such, since every case of tuberculosis of the parenchymatous tissue is a catarrh.

Since there is no disease any more insidious in its inception, unless it be gastric carcinoma, it becomes absolutely necessary that the points in history taking with their subdivisions mentioned above be most carefully considered in every case where there is the slightest suspicion that tuberculosis exists. Only by so doing can we know that

we are materially helping in reducing the mortality of this horrible disease. "What the early diagnosis of acute inflammatory glaucoma means to the eye specialist and malignant disease to the surgeon, tuberculosis means to the internist and general practitioner."

PELLAGRA.

Burton B. Sturdivant, M.D.,
Harding, W. Va.

(Read before Barbour-Tucker-Randolph Medical Society, October, 1914.)

Pellagra is a chronic disease of undetermined causation, characterized by a peculiar dermatitis of definite distribution, marked by gastro-intestinal derangements, great physical and mental depression, profound disturbances of nutrition and terminal dementia. Its progress is at first periodic, later continuous. Its occurrence may be sporadic, endemic or epidemic. It is not directly transmissible from the sick to the well.

Etiology—The geographical distribution is largely restricted to northern Italy, Spain and the South of France; cases have been observed in Egypt. Recent observations have shown it to be widely prevalent in the United States, especially in institutions for the care of the insane. Its prevalence is neither coterminous with nor restricted to maize-consuming districts. It is a disease of the poor and of rural populations. It occurs chiefly in middle life, but cases have been observed at every age. The youngest patients I have heard of were infants of four and five months and the oldest a man of 99 and a woman of 102 years. Women suffer more frequently than men.

The Exciting Cause—Two hypotheses are defended—that of Lombroso, who maintains that pellagra is caused by eating bad maize and is due to some poisonous principle associated with maize, an opinion until recently universally accepted; second, that of Sambon, who holds that the presence of pellagra is closely associated with streams of running water and the presence of a suctorial fly of the genus *Limulium*, which abounds in certain districts bordering upon the streams.

The early symptoms are not very distinctive. They consist of weakness, sleep-

lessness, headache, vertigo, dyspepsia, muscular cramps and pains referred to the spine and joints. These attacks occur in the spring or summer and subside in the autumn, only to recur again the following spring. Fever is not common, except in the severer cases in which irregular pyrexia with a temperature of 102° and 105° F. is frequently observed.

The eruption is symmetrical and affects chiefly the parts exposed to the sun, as the hands, wrist, neck and upper part of the chest and the feet and legs. It has the character of an intense erythema with petechia, and in severe cases bullae, which rupture and leave indolent ulcers upon their subsidence; the skin is left thickened and deeply pigmented. The dermatitis recurs annually, but after the fourth or fifth year the integument involved undergoes atrophic changes. The nails and hair are not affected; after some years the symptoms become continuous. Dyspepsia and diarrhea are pronounced, chronic stomatitis characterized by salivation and a cardinal red or bluish-black stippled tongue, often denuded of epithelium, is common. Wasting weakness and mental depression progressively increase. Vertigo, unilateral or bilateral mydriasis, twitchings, tremors, epileptiform seizures of the cortical type and palsies occur. The latter stages of the disease are characterized by melancholia, mania and dementia. At this period there are forms of palsy with diminished or absent reflexes—the signs of a peripheral neuritis. A majority of the cases in the United States have been discovered in asylums for the insane poor, but recent observations and a growing knowledge of the facts among practitioners render it probable that many obscure cases of the southern and southwestern states are pellagrous.

The direct diagnosis rests upon the foregoing periodical and progressive phenomena and may be made without difficulty.

The resemblance to general paresis and leprosy is of the most superficial character.

The prognosis after the third or fourth annual periodic recurrence, especially when mental symptoms have shown themselves, is very unfavorable. Death occurs from progressive wasting and asthenia or from intercurrent disease.

The dietetic treatment should consist of nutritious foods consisting of meats, milk, cheese, salads, vegetables, etc.

Medicinal treatment—iron, quinin and strychnin, Fowler's solution in increasing doses and occasionally tincture of nuxvomica.

PELLAGRA IN WEST VIRGINIA HOSPITAL FOR THE INSANE.

J. G. Pettit, M.D., and Cecil Denham, M.D., Assistant Physicians, Weston.

Pellagra is a disease that has been known in the countries of Southern Europe for many years, but not until comparatively recent time has it made its appearance in America. Occasional cases were reported in various sections of the United States prior to 1905. Between the years 1905 and 1909 so many cases were reported from different localities that the medical profession in general were becoming impressed with the fact that pellagra was not confined, as we had formally supposed, to southern countries, but had become a problem affecting the health of the whole country. In the last few years it has been encountered in nearly every State in the Union, and over fifty thousand cases have been reported. During the last five years we have treated in the Weston State Hospital thirty-two cases of pellagra. Some developed the disease after a long residence in this hospital; others were suffering with the malady when admitted. With the hope of assisting the general practitioner to diagnose sporadic cases that may occur in his practice we submit the following case histories.

The etiology of the disease seems still to be a matter undecided, notwithstanding the fact that it has claimed the attention of state and federal governments, with many able investigators making every effort to determine the cause.

The spoiled maize theory was at one time almost universally accepted, but now has few adherents. Some think defective methods for disposing of human wastes an important factor, and in support of their theory cite instances of greater prevalence in districts supplied with surface privies.

Alessandria and Scala, after a series of epidemiological studies on pellagra, have been led to regard the disease as etiologically related to potable waters used in pellagrous sections, and have satisfied themselves

that pellagra is a mineral acidosis. The element in the water responsible, they think, is silica.

Sambon incriminates two species of gnats as the transmitters of pellagra. Some believe the lack of meat and other animal protein foods is the main etiological factor. We believe, from the reports we have read and from our own experience, that the evidence is against direct contagion. In no instance have we had reason to suspect direct transmission. From the army of earnest students now in quest of this etiologic agent much may be expected, but from the wide variance of opinions it would seem that it has not yet been definitely determined.

In 1909 we began to receive letters at this institution inquiring if pellagra had made its appearance in West Virginia. These letters were read with interest, but we felt that pellagra was a disease of southern countries and anticipated no trouble of that sort here. However, in March, 1910, one of our patients developed a very typical pellagrous erythema. His history is as follows:

No. 6975. Age 40. Admitted from Doddridge county in May, 1909. Family history negative with the exception that his maternal grandparents were first cousins. He had been a gambler operating successfully with the rich sports of Denver and Los Angeles. At one time he is said to have been an opium user, but not recently. Although little definite history could be obtained, it appeared that during the early spring of 1909 he developed some mental confusion and returned from the western coast to his home in West Virginia and was later admitted to this institution. When admitted his psychosis seemed of the manic-depressive type. He was poorly nourished, having lost considerable weight during the past year. His mental and physical condition remained much the same until the following February, when he developed a severe diarrhoea which did not yield to ordinary dietetic and medicinal treatment. The stools were watery, gaseous and extremely foul-smelling. This condition continued and about the first of March an erythema appeared on the backs of both hands resembling that caused by a slight scald. It covered the posterior surface of his hands from the wrists to the knuckles, was symmetrical and showed a clear line of demarcation between the healthy and unhealthy skin. As the disease progressed the erythema became more pronounced, slight blebs were formed and the surface became raw and denuded of epithelium. Sordes appeared on the teeth and the mucous membrane of the lips showed slight involvement, the tongue was red and wrinkled in appearance. Temperature and pulse varied from time to time, but rarely was the temperature above one hundred and sometimes slightly sub-normal. His appetite was fairly good throughout the whole course of the disease, and at no time did he suffer from anorexia or refuse food. He became very

much emaciated, and not until fall did he show any signs of improvement. He was confined to his bed until November, when he began to grow stronger, the erythema disappeared and his diarrhoea subsided. His mental condition was clearer and he was able to be about and took an interest in happenings going on about him.

His physical condition has remained reasonably good up to the present time, and he has had no recurrence of the dermal or gastro-intestinal symptoms of pellagra. We believe that in his case the mental symptoms were the first to appear and that pellagra is responsible for his insanity. This was the only case of pellagra we had in 1910.

No. 7107. Age 25. Family history negative. Turbulent youth; loose morals. He was sentenced to the penitentiary for stealing and transferred to this institution in November, 1909. From the history we had and our own observations it appeared to us that his psychosis was dementia precox—the hebephrenic form. Mental deterioration was well advanced, but when admitted his physical condition seemed very good. His condition remained unchanged until February, 1911, when the appearance of dermal and gastro-intestinal symptoms of pellagra were manifested. Temperature ranged from sub-normal to 104 and pulse from ninety-six to one hundred and thirty. Treatment at first seemed to aid him, but not for long. Diarrhoea reappeared and his appetite diminished from day to day. A condition amounting to marasmus was soon evident and his decline was rapid. He died June 20, 1911. A marked peculiarity was the decided fever at times, so different from the usual afebrile condition of pellagra.

No. 6232. The only other male patient in whom pellagra developed in 1911 had been a resident of the hospital for five years; age was sixty-one. His psychosis when admitted was of the manic-depressive type. He rapidly passed into a state of terminal dementia, and for two years previous to the onset of pellagra had been in rather feeble health. In his case the dermal symptoms were first in evidence. The backs of his hands became roughened and scaly, but did not show the marked erythema that is usually apparent. However, the symmetrical arrangement and the line of demarcation could be plainly noticed. Diarrhoea was slight, but the stools peculiarly offensive. While the symptoms were all mild, on account of non-resistance the case resulted fatally.

Of the six cases which developed among the male patients in 1912, all but one had been residents of the hospital for periods ranging from nine to twenty-three years; one had been in the hospital for two years. Of these cases three died and three recovered. With the exception of one case, these ran a course similar to the ones already described. The marked peculiarity in this case was the intense dermal symptoms with but slight gastro-intestinal disturbance. These

cases all appeared during the first four months of the year. One of those who recovered had a second attack the following March from which he recovered.

Of the four male patients who suffered from pellagra in 1913 one had been in the institution for eight years, one twenty-eight years and another thirty-five years; the fourth patient was admitted with pellagra. Of these two died and two recovered.

It might be of interest to state that the patient who was admitted with the pellagrous eruption manifest gave a history of having had for several years during the spring months a severe eczema on the backs of his hands, for the treatment of which he had consulted several physicians, but little benefit had resulted, as, he stated, they generally got well, but not before fall. He was a fairly well-to-do farmer and lived very well. When admitted he was very much emaciated, expression anxious; was comparatively quiet; incoherence marked; delusions and hallucinations were in evidence. Parasthesias and formication were more marked in his case than in any of the others. Tremor was most marked in the hands. The mucous membrane covering lips, tongue and buccal cavity was red, but he complained of no burning sensation. His appetite throughout the whole course of the disease remained good. Diarrhea at times was very profuse and offensive, and would then subside for a week or two. At the time of his admission, May 28, 1913, the dorsum of both hands was very rough, with fissures extending through the skin, making open sores in several places. No pain or itching of the hands was present, but they were quite sore when handled. It has been our experience that pellagrans do not complain of itching of the skin, as is common with eczema, but of a burning sensation.

The condition of this patient, both mental and physical, improved. The dermal lesions healed, diarrhea ceased, he gained rapidly in weight, and in November was taken home by his relatives. Early in April of the following year he was returned to the hospital with a recurrence of the above symptoms. The symptoms ran a much milder course in the second attack, and he returned home July 5, 1914, and so far as we know has had no recurrence.

In the years 1914 and 1915 we have had among the male patients but four cases. One of these was a recurrence of the symptoms in a man who had pellagra the spring before. In his second attack the gastro-intestinal symptoms predominated and he succumbed May 16, 1914.

Another, No. 2079, age 50, had been a resident of the hospital twenty-eight years. He had been in robust health up to March, 1914. He passed through a severe attack with well marked dermal and gastro-intestinal symptoms, and recovered after an illness of six months. At present he is in good health. His mental condition remains uncharged.

Of the two remaining cases of this period, one is still confined to his bed. He is a convict transferred from the penitentiary to this institution one year ago, and we believe pellagra responsible for his psychosis, which is of the manic-depressive type. The dermal symptoms are very mild and might easily be overlooked.

No. 8448. Age 45. Family history negative. Three years ago he is said to have had some kidney trouble for which his physicians advised a change of climate. He had been living in North Carolina for the past three years, but has not been getting along very well and was not able to make a living. He returned to West Virginia a few days previous to his commitment. He got off the train at Grafton, sick and in a confused mental state, and was unable to tell his name or the whereabouts of his relatives. From a letter in his pocket his relatives were located and they brought him here. He arrived in a state of physical exhaustion and was almost unconscious. After a rest in bed he was at times partly rational and gave us a history of having had an "eczema" affecting the backs of his hands and associated with diarrhea last spring. There was a fairly well marked erythema affecting the backs of his hands from the wrists to the knuckles. There was a scaly appearance and roughness of the skin on the forehead. Buccal cavity was red and denuded of epithelium, tongue dry, red and cracked. Diarrhea was profuse, gaseous and foul-smelling. Emaciation was present to a degree amounting to marasmus, and he died nine days after his admission.

FEMALE PATIENTS.

No. 7372. Age 23. Married and the mother of one healthy child. Family history negative. Up until within three months of her commitment here there had been no neuropathic or psychopathic indications; her general health had been good, and even at the time of her admission she appeared well nourished. She had resided with her husband in a lumber camp in Webster county and, so far as we were able to elicit, amidst good sanitary conditions. Personal history and our own observations led us to believe that her psychosis was of the manic-depressive type. She was first admitted the latter part of November, 1910. She rapidly improved both mentally and physically, and as she appeared to have completely recovered and was very anxious to spend the holidays at home, she was discharged December 24th. On January 14th she was returned to the hospital, her mental condition being about as when admitted in November. Her expression and attitude were indicative of mental pain; she was despondent to a degree that assumed suicidal tendencies; she seemed incapable of thought not in harmony with her painful mental condition. Psycho-motor activity was marked. About one week after her admission the appearance of the dermal and gastro-intestinal symptoms, with the nervous and psychic symptoms manifest from the beginning, made the diagnosis of pellagra easy. Anorexia was a prominent symptom from the beginning. The mucous membrane covering lips, tongue and

buccal cavity, at first cherry red, became absolutely raw. Porrhoea alveolaris became quite extensive. She refused food on account of the soreness in the mouth and sensations of burning in the stomach and intestines. The awful agony through which she passed seemed due more to this intense burning than any other symptom. Diarrhoea appeared early and soon became inflammatory in character. The feces were watery and full of frothy bubbles of gas. It would be hard to describe the odor of the feces which seems to be distinctive of this disease.

Her temperature ranged between normal and 100. The dermal manifestations appeared with the gastro-intestinal. The skin over the chin and anterior portion of the neck appeared slightly tanned, but otherwise throughout the course of the disease appeared normal. The lesion on the backs of the hands was a mild erythema, at first glance looking like a burn; later it became very red and swollen; blebs appeared and a desquamation of the epidermis followed, leaving raw surfaces. The arrangement of this eruption was symmetrical, the lesion on one hand and arm being duplicated on the other. The line of demarcation between healthy and unhealthy tissue was marked. This symmetrical arrangement and line of demarcation were seen in all of our cases with marked dermal lesions and seems characteristic of pellagra. Toward the last of her illness the mental condition of the patient underwent a decided change. Insight was good, she seemed to realize the seriousness of her affliction and begged those in attendance to do nothing to prolong her life and suffering. She became exhausted and died March 29, 1911. This was the first case of pellagra among the female patients.

No. 4420. Age 63. Had been insane twenty years and a patient here for eighteen. For many years prior to the onset of pellagra she had shown evidence of dementia and general debility. In February, 1911, she developed pellagra, from which she died in September. The cutaneous and gastro-intestinal symptoms, well marked in the beginning, yielded to treatment and at times it seemed she might recover, but late in the summer a return of the diarrhoea caused her death.

Nos. 4736 and 5506, both old women, residents of the hospital for several years, demented and in poor health, developed pellagra in March, 1911, both dying from exhaustion a few months later.

No. 5506. Age —. Had been a patient here for — years. From a psychopathic family. Melancholic with suicidal tendencies when admitted. Some evidence of dementia at time of attack, but mental deterioration not marked; general health had been good. Developed pellagra in March, 1911. Gastro-intestinal and dermal symptoms were well marked. After a few weeks in bed recovered, and since then has weighed more and been stronger than before the attack.

No. 7055. Age 39. Resident of hospital for twelve years. Came from a tainted family. General health had been good. Developed pellagra in February, 1911. Porrhoea alveolaris necessitated removal of some of her teeth. Dermal symptoms appeared in April. She recovered and has since been strong physically.

No. 7433. Age 34. Widow. Admitted from Lewis county April 28, 1911. Family history nega-

tive. Had enjoyed good health up until after ten days of her commitment here. Had passed through a prodromal period in which she had been badly disturbed by hallucinations and delusions of a depressing nature. When admitted destruction of psychic existence seemed to have been completed. The physiognomy was of a negative and empty character, there was no longer any emotional expression and no evidence of psychic activity. In this short period psychic, neurotic, dermal and gastro-intestinal symptoms had made their appearance. Throughout the course of the disease her mental condition never improved. Towards fall there had been a marked improvement in the gastro-intestinal symptoms, she had increased in weight, seemed much stronger, and from the first of September until within two weeks of her death on January 10, 1912, spent little time in bed. The dermal symptoms, at first a mere erythema, progressed until the backs of both hands were covered with ulcers extending nearly to the bones. Much of this time there was a dermatitis covering the anterior surface of the neck and chin.

During the first four months of the year 1912 among the female patients there developed three cases, and in the first four months of 1913 two. All these cases were among patients who had been residents of the hospital from three to twenty years. Reference to their cases will be made in the summary.

Of the four female cases treated in 1914, it appears that pellagra was the cause of insanity in three; the fourth one had been insane for forty years, and her physical condition had been poor for several years. She developed pellagra in February and died in July.

No. 8028. Age 48. Came from a tainted family. Admitted in October, 1913, from Upshur county, where she had resided on a farm. Had been melancholic with suicidal tendencies. No history of a dermatitis or gastro-intestinal symptoms prior to admission. Mental condition seemed to improve and it seemed probable that she would recover. Until February, 1914, patient was in vigorous general health, weighing about one hundred and eighty pounds. During February she again became badly depressed mentally, showed suicidal tendencies and refused nourishment. Within a short time her lips, tongue and the mucous membrane lining the buccal cavity became a cherry red, gums spongy and bled easily; sores appeared in the corners of her mouth; the skin covering her chin and neck became rough. Before she died ulcers appeared on the inside of her cheeks and the inflammation seemed to extend into the pharynx, making it difficult to swallow. A dermatitis appeared on the backs of the hands, symmetrical in arrangement, but was not persistent. At time of death the only evidence of dermal symptoms remaining was the rough dry skin covering the backs of her hands and forearms. Close watch was necessary to keep her in bed

and to prevent her suiciding. If her mental condition had been such that she could have cooperated in the treatment she would probably have recovered. She died August 8, 1914.

No. 8162 (colored). Age 19. No information as to family or personal history except the statement in the case papers that indications of insanity had appeared about three weeks prior to her commitment; that she had delusions and was maniacal. She was committed from Kanawha county. When admitted April 14 she seemed to have passed into a state of dementia; there appeared to be a complete enfeeblement of all mental faculties; there was absolute loss of memory, extreme incoherence and disorientation; her habits were filthy. The symmetrical arrangement of the dermatitis covering the backs of the hands and extending well up on the forearms suggested pellagra. Within ten days the appearance of typical gastro-intestinal symptoms confirmed our suspicions. Early improvement was noted, and by July there was no evidence of pellagra except the psychic symptoms, which were greatly improved. This improvement continued, and she was discharged and returned to her home in November.

No. 8023. Age 43. Several members of the family have been insane. She was at one time an attendant at this hospital; resigned about six years ago to accept like employment in another institution, where she remained but a short time before returning to her home on a farm in Lewis county, where she resided until her admission here September 6, 1913.

She had enjoyed good health until January, 1913, with the exception of some inclination to hypochondria. It seems from the history we got that her illness at this time was pellagra and that by April she experienced considerable annoyance as a result of the dermal and gastro-intestinal symptoms. She consulted a number of physicians, but it appears that none of them recognized the disease. As these dermal and gastro-intestinal evidences of pellagra disappeared the psychic manifestations appeared, making her commitment here necessary. When admitted she evinced delusions and illusions characteristic of paranoia. There was no intellectual impairment. Her general health improved from the beginning, but there was no change in her mental condition until after she had recovered from her second attack, which made its appearance in April, 1914. Her symptoms were typical of pellagra and very severe, but by August she was considered out of danger. As her physical condition began to improve her delusions and illusions became less evident and finally disappeared. She was discharged from the hospital in December. So far there has been no evidence of a return of the disease.

The number of cases observed was thirty-two, of whom sixteen were women and sixteen men. In eleven of these cases pellagrous symptoms were manifested previous to their commitment, and we believe that pellagra was the impelling factor in their psychosis. Ten had passed their sixtieth year; thirteen were past forty; three between thirty and forty; five between twenty and thirty, and one nineteen. Of those hav-

ing pellagra when admitted all but two came from good homes and comfortable surroundings. Of those who developed pellagra in the institution, twelve previous to pellagrous manifestations had enjoyed robust health; the remaining ten were patients who had been in feeble health and were poorly nourished.

It would be difficult to make a grouping of the psychic symptoms in our cases. In one case cited above the psychosis was suggestive of paranoia; in another dementia precox; some acute confusional insanity; a few of the manic-depressive type, while others had passed through long periods of mental deterioration, resulting in terminal dementia.

Of the nervous symptoms manifested, probably the most marked was the positive Romberg and the exaggerated deep reflexes evident in nearly all of our cases. Some at times suffered with intense headaches, accompanied with great lassitude and mental depression. Dysphagia was common, appearing and disappearing without apparent reason. Early tremors were present in most cases, more marked in the hands, though sometimes observed affecting the tongue, making the speech halting and uncertain. We encountered no contractures such as have been occasionally reported by writers on pellagra. Parasthesias and formication were frequently manifested.

Of the digestive symptoms the most troublesome is the persistent diarrhea. The stools have a peculiar and most offensive odor. Vomiting was rare. In some of these patients during the period of marked stomatitis ptyalism was present.

In some of the cases the dermal manifestations consisted of a roughened condition of the skin extending over the backs of the hands, while in most there was a well marked erythema resembling a sunburn, symmetrical in arrangement and showing a well marked line of demarcation. Among the male patients but one man developed an eruption on the face or neck, while among the female patients five developed lesions covering the face and anterior surface of the neck. We observed no pellagrous erythema on the covered parts of the body.

Marked elevation of temperature was noticed in but one case, note of which was made in the case history.

It will be noticed that the manifestations of pellagra in all our cases made their ap-

pearance in the first four months of the year. It seems that spring has an influence in bringing out the latent symptoms of this disease.

Owing to the lack of knowledge regarding the etiology of this disease treatment is restricted to symptomatic and empirical procedures. All cases were placed on a liberal mixed diet with plenty of fresh meat and diet adjusted as symptoms required. Along the line of medicinal treatment we have employed numerous remedial agents which have been advocated for the treatment of this disease. For the diarrhea opium, vegetable astringents and intestinal antiseptics have been used with but little effect. Good results attending the use of cacodylate of soda was noted in one case, while in five other cases under treatment at the same time no beneficial effects were noticed. In our hands copper arsenite and Fowler's solution have seemed to give the best results. Bulgarian lactic acid bacillus was tried, but the results were disappointing.

For the discomfort resulting from the erythema a preparation containing calamin, zinc oxid, rose water and lime water afforded much relief.

OBSERVATIONS ON THE EFFECT OF PITUITRIN IN 61 CASES OF PARTURITION.

J. L. Miller, M.D., Thomas, W. Va.

(Read before the Barbour-Randolph-Tucker Co. Medical Society, April 6, 1915.)

It is not my purpose to give in detail a study of the physiologic effects of pituitrin upon the human system, or the conclusions derived from the experiments upon animals by a number of observers; but to sum up briefly the results I have obtained in sixty-one cases of confinement in which I used pituitrin.

As we all know, pituitrin and the other similar preparations are derived from the posterior lobe of the pituitary gland situated at the base of the brain in the sella turcica; that the posterior lobe extracts are powerful oxytocics; that the effects upon the circulation of the extracts made from the anterior and posterior lobes of the pituitary body are exactly opposite—that of the anterior lowering blood pressure, while that from posterior lobe elevates the

blood pressure and lowers the pulse rate.

In my use of pituitrin I have not made a study of the effect upon the circulation by blood pressure readings, but have not detected any marked elevation of pressure or lowering of pulse rate by digital examination.

I have not employed the drug in abortion cases or to induce labor, but have used it in the latter part of the first stage, or in the second stage of sixty-one cases at term; and wish to say that I am delighted with the excellent results obtained. I believe that by its use these women were saved several hours of pain—probably two to six hours in most of them—and myself gained a corresponding increase of rest or time for other work, and without any harmful effects upon the mother or child; also that several of these cases would have had to be terminated with forceps, but for the use of pituitrin.

I use the drug by deep injection into the deltoid muscle, and have not observed any local reaction follow the injection, as we often see in the hypodermic use of ergot. Most of my cases are delivered under full anaesthesia at the last, and in many of the pituitrin cases the chloroform was started before the injection was made. The chloroform not only relaxes the maternal soft parts, reducing the chances for a lacerated perineum to a minimum, but also gives the operator an efficient brake upon the too precipitate action of the pituitrin. This doubtless has lengthened somewhat the time of delivery in my cases.

In this series of sixty-one cases forty-six received but one injection of 1 c.c. of the pituitrin, and delivery followed in from five to forty-five minutes, the average time being twelve and one-third minutes. Six were primiparae and the other forty ranging from two to thirteen previous confinements. They had been in labor from six hours to three days when the injection was made; thirty-one had cervical dilatation ranging from three to four fingers breadth, and fifteen had complete or nearly complete dilatation. In about half of the latter the head had been on the perineum from one-half to two hours before the pituitrin was given. In these fifteen cases the average time of delivery was fourteen minutes after the injection was made.

In the remaining fifteen cases of the se-

ries second and third injections were made, the dilatation and other conditions being apparently the same as the single dose cases. The failure of the first dose being due apparently to one of three things—first, a more rigid cervix than was anticipated; second, weaker pains from the drug than were expected; third, greater disproportion between the presenting part and the inferior strait than had been calculated. The average time between the first dose and the delivery in these cases was one hour and forty-two minutes—delivery following the last injection in from ten to twenty minutes.

The pains seem to begin in from two to five minutes after the injection and to reach their maximum in about twenty minutes or less, after which they gradually subside until a second dose will be required at the end of forty-five to sixty minutes, and in some cases less time than that if delivery has not been effected by the first dose. The pains are of normal type, but of greater intensity and rapidity than the ordinary labor pains. However, a number of my patients who had no chloroform made little or no more complaint of these pains than they had previously. In only one case was the pain tetanic in character, there being a contraction of the uterus with apparently no relaxation for about an hour. Two hours later a half dose was given and the pains came on in the usual manner and delivery followed in a short time.

Eight or ten of these cases, I believe, would have been low forceps cases but for the use of pituitrin, several of them having had one or more forceps deliveries previously in the hands of other obstetricians. I will mention two of these in detail. One case (fifth child) had been delivered four times before with forceps after 24 to 36 hours' labor and without anesthetic of any sort. This time when the os reached four fingers dilatation I gave chloroform and made one injection of pituitrin. Delivery followed in thirty-seven minutes, though this child was said to be the largest of any of her children—weighed nine and three-fourths pounds net.

The next case was the fourth child, the two previous confinements having been terminated after 24 and 36 hours' labor with forceps. When dilatation reached four fin-

gers 1 c.c. of pituitrin was given, which completed dilatation and brought head down on the perineum in twenty-five minutes. A second dose was given and delivery followed in ten minutes. These women were both anemic—flabby muscles, etc., but no disproportion between the presenting head and the bony pelvis.

The following untoward symptoms were seen in these cases, but aside from the tetanic contraction mentioned I cannot say that they would not have occurred anyway:

1. Tetanic contraction of uterus lasting nearly an hour in one case.
2. Precipitate delivery of placenta in two cases.
3. Hour glass contraction on placenta in one case.
4. Nine babies showed possibly more than a normal amount of cyanosis, two were resuscitated with difficulty.
5. In the sixty-one cases there were seven lacerations, but only three that required sutures, and my rule is to advise suturing every laceration of one-half inch or more. All of these cases were in primiparae, two being breech cases in which the pituitrin was given when the breech reached the perineum, and the tears of same degree would probably have come anyway.
6. The "after-pains" in the pituitrin cases seem to be of greater severity for a few hours after delivery than in ordinary cases.

Much as I am delighted with the use of pituitrin, and regard it as by far the most valuable addition to our obstetric equipment in recent years, yet the more familiar I become with its powerful action, the more necessary I think that a warning be given against its indiscriminate use without the proper consideration of certain important factors in each case.

In the hands of a physician with little or no obstetrical experience it would be a most dangerous agent.

WHEN NOT TO USE IT.

1. It should not be used in full dose until the cervix is dilated to at least three fingers' breadth, and then only when the os is soft and easily dilatable.
2. It should not be used until after the head is well engaged, and then only in fractional doses for the stimulation of the pains.

if there is much disproportion between the head and the pelvis.

3. It should be used with considerable caution in big muscular women with hard, unyielding soft parts, else severe lacerations might occur.

4. It should be used cautiously, if at all, where an increase of blood pressure is considered very dangerous—as in a pre-eclamptic state.

5. It should not be used if an adequate supply of chloroform is not at hand, lest the contractions endanger the uterus.

THE EFFECT OF PITUITRIN IN HEMORRHAGE

Some observers have said that they noticed a greater relaxation and tendency to post-partem hemorrhage after the effect of the pituitrin had worn off than in cases where it was not used. I have not noticed this, as in my cases I have always given as a routine treatment a dose of ergot, either by mouth or hypodermically, before leaving the case, as a binder to hold the uterus after the effect of the pituitrin has passed off.

I have, however, had an experience of three hemorrhage cases in which it gave almost instantaneous and excellent results. Two were uterine, in which no pituitrin had been used during labor, and the other was pulmonary. Both the cases of post-partum hemorrhage were in patients who had had alarming hemorrhages in previous labors, so that I gave by mouth as soon as the child was born a drachm of fluid extract of ergot, and at the same time a dose of aseptic ergot by hypodermic injection, the uterus in each case being in a state of firm contraction when I left the patient. In both these cases I was called back in about two hours and found that the patients had lost a great quantity of blood, were very pale and thirsty, and in one case there was sighing respiration. I gave a hypodermic of pituitrin immediately and cleaned out the clots as soon as I could disinfect; then followed with a hypodermic of ergot to hold the contraction the pituitrin had produced.

The pulmonary case was one of severe hemorrhage in a big, strong Austrian man twenty-five years old, who claimed never to have been sick a day in his life. When I got to him two hours after the onset of hemorrhage every few seconds he would empty his mouth of an ounce or more of blood. The bed was full of clotted blood, the floor and various utensils about the

room, until the room looked more like a shambles than a sick room, and the patient, a man of a hundred and seventy pounds, was very much exsanguinated. I gave an injection of pituitrin immediately and sent back to my house for ergot and adrenalin, as I had none with me, not knowing the nature of the case, but by the time the ergot arrived the hemorrhage had practically ceased.

This limited experience indicates that pituitrin is one of the quickest and most efficient hemostatics we have, and as an oxytocic it stands in a class by itself, far superior to anything else in this line.

PUERPERAL ECLAMPSIA.

U. G. Cook, M.D., Beckley, W. Va.

(*Read before the Raleigh County Medical Society, April 10, 1915.*)

When I was assigned the duty of writing this paper I accepted it as an irksome task, but as I penetrated more deeply into the intricate mazes of the subject I found it an intensely interesting field, with an almost boundless horizon. It is for many reasons a subject of deepest interest to every obstetrician and general practitioner.

The horrible and ghastly spectacle of a helpless victim, writhing in the throes of puerperal eclampsia, is one of the worst which the physician ever beholds; and yet such convulsion is but a symptom, a single symptom, the neurotic manifestation of a profound general toxemia, due to a long and complex chain of etiologic factors, in the form of multifarious metabolic changes, which received their initiation at the time of conception.

There is a condition which I think is well termed the toxemia of pregnancy and which is present to a greater or less degree in all pregnancies. Yet we almost fear a verdict of contempt of Nature's court when we attribute a pathologic condition to a physiologic process, for pregnancy is a purely physiologic process and the most wonderful of all of Nature's works. Yet we have most valid reasons for attributing a number of pathologic conditions to diversions and perversions of some of the natural changes taking place in this process. So marked are these pathologic phenomena that some prominent writers have even presumed to

call pregnancy itself a pathologic condition.

From the moment of conception a new and momentous task is laid upon the maternal physical economy—that of housing, growing, supporting and meeting all the intrinsic and extrinsic vital demands of a new member of the human family. For the performance of this task and the meeting of these demands, from the moment of the first segmentation of the ovum, Nature adopts a new economic program for the performance of all the maternal physiologic functions. And in the performance of this task and the meeting of these demands there is not an organ, nor tissue, nor cell, nor fluid, nor solid, that is not levied upon to contribute its share and to bear its part of the burden. Not only must the vital functions be performed to such extent and with such degree of activity as to maintain the metabolic equilibrium of one adult human being, but this must be done, plus sufficient energy to meet all the demands of the constructive and destructive metabolism of the growing embryo or fetus, whose anabolism makes strenuous demands on the vital forces and nutrient supplies of the maternal economy. This involves a greatly augmented task and increased activity of all the secretory, excretory and ductless glands of the body, whose duty it is to preside over the quantity and quality and make proper disposition of all the nutrient and effete materials circulating in the blood. This increased metabolism almost if not quite invariably surcharges the blood with waste products in excess of the ability of the excretory organs to eliminate.

Then in addition to the increased maternal catabolic products in the blood there is another source of noxious materials, even more prolific. This new member of the human family must have all his vital demands supplied. He must have import and export facilities, and the same kind stream of navigation which brings to him his living, his nutrient and building material must also become the receptacle of his waste products and bear away his sewage in its own current. Thus the accumulation of these various noxious materials in the blood becomes toxic, and the multiplication of these toxins is but the active mobilization of the forces of the enemy of human life, which must be met, combated and eliminated by Nature's forces of defense.

The first external sound of the battle which is going on within occurs in the early

months, when Nature cries out under her burden in the vomiting of pregnancy.

But I hear a criticism: The vomiting of pregnancy is reflex. But I would ask the critic: Why reflex? Whence the irritant to the vomiting center? Why would Nature demand the immediate evacuation of the stomach by emesis if there were not present some offending material which should be eliminated? Whence the biliary vomitus and the deposition of bile pigments in the skin and mucous membranes? And whence the renal disturbances at this stage?

I believe that at this stage we have a battle royal between toxins and antitoxins, and that the vital forces being usually victorious in this struggle, the vital organs are enabled to establish a tolerance of their environment and to adapt themselves to the great task they have to perform. From this time on the work normally goes on more smoothly.

But the source of toxic materials not only remains, but increases and continues to become more and more prolific. And woe unto those patients whose eliminative organs are not able to push the work of elimination to a successful termination.

The first fort to surrender in the battle of toxins is the kidney, whose work is seriously handicapped by various tactics of the enemy. While its work is being augmented and its tissues being overwhelmed by invading toxins it is at the same time being subjected to the tactics of being starved out. In many instances the pressure of the gravid uterus on the renal arteries prevents sufficient nutrient supply and sufficient water supply for the solution and elimination of its effete materials, hence a number of changes must take place in its substance:

First—Atrophy from starvation.

Second—Passive congestion from stagnation.

Third—A deposition of fat in the parenchyma.

Fourth—A perviousness of its tubules to the serum albumen of the blood.

Fifth—Interstitial nephritis, resulting from the combined influence of the first four.

Thus completely disabled, it lies down upon its job, leaving all its work undone or to be done by other eliminative organs, which already have more work of their own than they can do; hence the blood and nerve centers are overwhelmed with deadly toxins,

and the tremendous tremor of puerperal eclampsia is the result. In the desperate efforts of the other excretory organs to still hold the fort and eliminate the enemy they all become more or less crippled and disabled, and the specific toxins, which it is their function to eliminate, are also left in the blood to complicate the toxemia produced by the renal failure; hence puerperal eclampsia is not simply uremia, but is complicated with cholemia and various other toxemias as well. Sometimes the liver is first to break down, and we may have an eclampsia which is principally choleric instead of uremic. Conversely, we may have a severe and even fatal uremia without eclampsia. This mixed toxemia of pregnancy and the puerperium may culminate at any time from the early months to the *post-partum* period into active symptoms demanding the most serious attention of the physician or obstetrician.

Every pregnancy, even from the early months, should be under the vigilant observation of a competent physician, and no woman who has ever had uremic eclampsia once should ever risk conception again, as it is very prone to recur in aggravated form in subsequent pregnancies. If a woman is so unfortunate as to conceive after having had severe uremic eclampsia in a previous gestation, I believe it a justifiable practice to terminate the pregnancy in the early months.

But the physician is usually called into these cases late in pregnancy, if not late in the disease, and the conduct of the case must depend upon the stage and condition in which it is seen. This is pre-eminently a condition in which an ounce of prevention is worth more than tons of attempts at cure.

Fortunate is the case of eliminative insufficiency which is detected early in its existence before serious organic lesions have occurred. At this time much can be done to prevent disaster by a carefully regulated diet, which inhibits the production of noxious products of mal-assimilation, thus minimizing the work to be done by the excretory organs; also by judiciously encouraging elimination through the excretory channels which have suffered least and are best able to do the work. Thus the skin, the liver and the alimentary canal may all be stimulated to increased activity for the purpose of lightening the work of the kidney, which is usually the first seriously disabled organ.

Mild diuretics may be employed in the absence of severe renal congestion or inflammation, but irritating diuretics should at all times be avoided.

Prophylaxis having failed, upon the appearance of toxic eclampsia in the presence of albuminuria, no matter what the stage of gestation or parturition, three things must be done immediately. Whatever may be the method adopted for their accomplishment, they must all be done simultaneously or disaster will result. Failing to accomplish any one, the other two cannot be done:

First—The formation of toxins must be stopped.

Second—The toxins present must be eliminated.

Third—The distressing symptoms, or eclamptic seizure, must be relieved.

The last of these becomes first, because it plays the two-fold part of both cause and effect. During the convulsive tremor oxidation is in complete abeyance, while at the same time cell disintegration or destructive metamorphosis is a thousand times more rapid than in the most active calisthenics, thus loading the blood with dead matter, so that after a few such seizures the breath has the odor of the cadaver.

Treatment must be vigorous. If the uterus has not been evacuated, that must be done as rapidly as possible. Blood-letting to the extent of tolerance, followed by saline infusion to the point of sufficient but not too high blood-pressure, has worked well in some cases.

Veratrum viride in large doses has controlled the convulsions successfully in the hands of some practitioners.

If very persistent the convulsions should be controlled by general anesthetics.

In the meantime elimination must be pushed vigorously. Active catharsis must be induced. Croton oil acts promptly. High enemas of saturated solutions of sulphate of magnesia are quite efficacious.

When sufficient time can be allowed there is no better cathartic in this condition than calomel and compound extract of colocynth.

Free diaphoresis must be induced. This is best done by hot wet packs in woolen blankets. I think depressing diaphoretics, if employed, should be used with a great deal of caution. And I believe that if active diuretics do anything in these cases they do harm. As soon as the congestion and in-

flammation have been relieved by proper antiphlogistic means the disabled organ will resume its work without being whipped.

AMEBIC DYSENTERY — REPORT OF A CASE.

T. E. Romine, M.D., Charleston, W. Va.

H. L. Male. White. Age 33 years. Weight 107 pounds. Family history negative.

Personal history—Diseases of childhood. No specific history. Married. One child in good health.

Patient had always been in good health until the spring of 1905. He went to New Orleans in December, 1904; in March, 1905, he had an attack of la grippe which lasted ten days. About the first of April he changed drinking water, and the man who formerly occupied the house was known to have dysentery. About July 1st he was advised to leave New Orleans on account of dysentery, which had come on gradually. At this time he was having about twenty-four bowel movements in the twenty-four hours, consisting of blood and rose-colored mucus. He had lost thirty pounds in weight, weighing only about ninety-eight pounds. On July 9th he arrived in St. Louis and stayed in a hospital ten days on beef tea and crackers and left without improvement. No examination of the stool was made, but he was told that he had "chronic dysentery" and that he could not live three weeks.

In September, 1905, he went to Colorado and stayed on a ranch for three months, taking no treatment, but improved.

In December he was examined by a doctor in Denver and told that he had "internal bleeding piles." He continued to improve in spite of treatment. In 1906 he went to Los Angeles and was much worse, having several hemorrhages from the bowel. He then went to Omaha. Here he was told that he had "chronic proctitis." This was in 1906. From this time until 1910 he was having from eight to thirty evacuations in the twenty-four hours. In 1910 a diagnosis of amebic dysentery was made in Omaha. His doctors wanted to do an appendicostomy and irrigate the bowel through this, but he refused.

Later in 1910 he came to Cincinnati,

where he was advised to take salt water irrigations and bismuth by mouth. He took the salt water irrigations for one month. At the end of this he had one formed stool, and this is the only one in the last ten years. The bismuth he has kept up.

In 1911 he came to Charleston and has been having from eight to thirty evacuations in the twenty-four hours, consisting of blood and rose-colored mucus, and usually not more than an ounce at each evacuation.

Physical examination—Patient complained of severe headaches, irritability and an indisposition to do any work; also that he would become sore over the entire abdomen just before he was going to have an acute exacerbation, which would last from three to four weeks.

Patient anemic, clubbed finger nails, pyorrhea alveolaris; the abdomen was somewhat distended and tender on deep pressure. Proctoscopic examination showed ulceration and increased amount of mucus; examination of the stool showed the ameba.

Treatment.—I was unable to obtain emetin in the city and ordered six grains from Merck & Co., and by the time this came he was starting in for three or four weeks of trouble. He had had twenty-one bowel movements in the twenty-four hours just past.

At this visit he was given $\frac{2}{3}$ grain of emetin hydrochloride. On the following day he was given two doses of $\frac{2}{3}$ grain each. He was given this amount each day until the entire six grains were given. At the end of this he was feeling perfectly well and was having only one or two bowel movements a day, and in eight days had gained nine pounds.

I afterwards gave him three doses of 1 grain each at his suggestion. There was no indication for further treatment, but he wanted to be sure. I did not modify his diet in any way, and he said he had no discomfort from the treatment other than a slight local reaction at the site of injection.

I am sorry I did not have his dentist examine the teeth before and after the treatment had been given, but the patient says his gums are better.

This case is interesting to me from the fact that so many diagnoses had been made, the length of time it had lasted, and still the ameba was found present, and that he

should be cured by so small amount of a drug after ten years of constant annoyance.

Nearly five months have elapsed and there is not the slightest evidence of a recurrence.

Kanawha National Bank Bldg.

Selections.

PROGRESS IN OBSTETRICS FOR 1914.

F. T. VanEman, Kansas City, Mo.

It will be well for the sake of order to classify our various subjects and to follow one with the other. Therefore we will discuss the following:

1. Progress due to better education of the laity.
2. Progress due to scientific development, including operative obstetrics.
3. Caesarean section.
4. Placenta previa.
5. Gestational toxæmia.
6. Development of skill in determining progress of labor and diagnosis of foetal position by external examination.
7. Twilight Sleep.
8. Pituitrin.
9. Ophthalmia neonatorum.
10. Puerperal infection.
11. Sero-diagnosis and serum therapy.

SUBJECT No. 1.

Fortunately for the prospective mother, and the doctor as well, there is unquestionably a growing realization of the seriousness of pregnancy and labor; there is an increasing demand for better equipped medical attendants, and in localities affording hospital facilities there is a growing demand for these advantages. This education is due to two things—first, the efforts of the medical profession, and, second, the efforts of many of our leading magazines and daily newspapers. As an illustration of the latter we need but mention "Twilight Sleep."

SUBJECT No. 2.

The use of the pelvimeter, the application of the sphygmomanometer and the resulting knowledge of blood pressure and its relation to the toxæmia of pregnancy and the insistence that every pregnant woman should place herself under her physician's

care as soon as the first menstrual period is missed are all factors in materially reducing the number of women who go into labor blindly, thereby lessening the perils of childbirth and raising the standard of obstetrics.

The question as to the advisability of waiting seven days before repairing lacerations of the pelvic floor and cervix instead of doing so at once has arisen, some excellent men advocating the one plan and again equally good men the other.

E. P. Davis, Philadelphia, advises an immediate repair of a lacerated cervix, claiming that his results are better than those of the usual method; that primary union is the rule, and that involution progresses more satisfactorily. This is well worth our attention.

SUBJECTS 3, 4 AND 5.

These deal with placenta previa, gestational toxæmia and Cesarean section, and are considered together on account of the new co-relation between the first two and Cesarean section. *The American Journal of Obstetrics* (Sept., 1914) published a paper by Dr. George E. Boyd of Philadelphia, who reports a series of 48 Cesarean sections with no maternal deaths and 46 living children. While variously contracted pelvis furnish most of the indications for the section, yet gestational toxæmia was responsible for three cases.

A personal letter to eight or ten of the leading men of the United States within the year as to their views regarding Cesarean section as the operation of choice in cases of placenta previa centralis brought the reply from all but one that this was in their opinion the best procedure.

In an eclamptic of intense severity, especially a primipara in whom the convulsions are severe and follow one another in rapid succession, are difficult to control; with a rigid cervix that promises long delay in securing full dilatation, the classical Cesarean section undoubtedly gives both mother and child the best chance, granting, of course, that the latter is viable, and providing that the preceding treatment has not been such as to make infection likely or to make the mother a poor surgical risk otherwise.

A vaginal Cesarean section may also be considered and wisely, and while this opens the cervix, yet in a primipara at or near term with rigid and unprepared parts there

are still to be met the difficulties in delivery of the child, conditions which would, of course, probably not prevail in a multipara.

In connection with this operative procedure it seems that there is a decreasing number of cases in which a high forceps delivery is indicated, and when we take into consideration the difficulties of a high forceps operation with the resulting almost certain injury to the mother and the great chances for infection, together with the high fetal mortality, and compare this with the results of a clean abdominal section, we cannot help but feel that the latter should be the choice of procedure, podalic version and extraction to the contrary notwithstanding.

As regards the etiology of eclampsia, we must still regard this as a "disease of theories." In the December number (1914) of the *American Journal of Obstetrics* Dr. E. T. Hull, Obstetrician, and G. L. Rohdenburg, Pathologist to Lincoln Hospital, New York City, present an interesting series of experiments on the condition. Summarizing, they say:

1. Ferment active homologous protein (the first product) causes extensive degeneration of the liver, lesions present in the eclamptic human female.

2. Homologous protein (boiled product) damages the kidney, producing an immense amount of albumin and all kinds of casts in the urine, the animals dying in convulsions and coma.

3. Leucin, one of the products of autolysis, produces also marked degeneration of both liver and kidney.

Reasoning from the above, they believe that eclampsia develops as follows: An overload of fetal elements is thrown into the circulation, and is autolyzed with an excess of leucin. Then follows the changes in the liver and kidneys. "It appears from our experiments that albumin urea is an important sign, since severe renal degeneration seems to be the important lesion."

SUBJECT No. 6.

In the September number of *Progressive Medicine* we find the following: "Unterberg (Germany) has devised a plan for determining the degree of cervical dilatation based upon the location of the contraction ring or ring of Bandl, which is the point of

union between the upper and lower uterine segments. While the ring is not strongly developed in all cases, yet it is always present and may be recognized by having the bladder emptied and examining during a pain, when the difference between the thin elastic lower segment and the sharp edge of the upper segment becomes plainly apparent. When this muscular edge is two fingers' breadth above the symphysis the os is dilated to size of a silver dollar; when three fingers above, it is as large as a small saucer, and when four fingers above, full dilatation is completed. At this time the ring extends squarely across the uterus in a normal case and not obliquely, as when the lower segment is excessively distended."

This last point is equally important, for here we have an indication that there is danger of a uterine rupture, and may govern ourselves accordingly.

SUBJECT No. 7—TWILIGHT SLEEP.

So rapidly has the literature accumulated and so recently and thoroughly has this subject been discussed before the society that it seems best only to draw a few conclusions and then pass on.

First—That the scopolamin-morphin treatment has a distinct place in obstetrics.

Second—That the requisites for its administration are such that its field of usefulness must necessarily be limited.

Third—That special hospital facilities and specially trained nurses are necessary.

Fourth—That the general practitioner will not find it practical for four reasons, if not more—(a) The lack of proper environment in the average home; (b) the lack of trained assistants; (c) the inability to give the constant and required hour by hour attention to the case; (d) the inability to collect a fee which will in any way compensate for the time and skill required.

Fifth—An absolute control of the patient and not only of the patient, but of her entire family, her relatives and her friends as well, would seem necessary.

Sixth (and last, but by no means least)—It should not be used indiscriminately, but the cases should be individualized, for most certainly will we find psychical and physical conditions which will furnish counter-indications as well as indications for the use of "Twilight Sleep."

SUBJECT NO. 8—PITUITRIN.

There can now be no doubt in the minds of those who have watched the effect of this drug that it has an important place in our obstetric practice.

SUBJECT NO. 9—OPHTHALMIA
NEONATORUM.

Here again we owe much to the lay journals, magazines and daily press, and as time passes more and more of our law-makers appreciate the definite relation between blindness and gonorrhoea, and each year adds to the number of states in which the law demands that every new-born child shall have instilled into its eyes immediately a silver solution, the best known preventive for gonorrhoeal ophthalmia. Missouri is one of the states which has adopted this law.

SUBJECT NO. 10—PUERPERAL INFECTION.

In looking over the committee report on the treatment of puerperal sepsis made at the June, 1913, meeting of the American Medical Association it is noticeable that there is a difference of opinion as to the active and the conservative plan of treatment, but the general trend was towards conservatism, yet reading between the lines one cannot but be impressed with the fact that no fixed rules can be followed and that each case must be individualized and treated accordingly. The same is true today with an increasing tendency toward conservatism. Meddlesome mid-wifery is more reprehensible today than ever before, and to meddle with a parturient before she meddles with you is utterly inexcusable, yet an occasion must arise at times when active measures must be adopted, and the writer personally is not willing to sit calmly by and watch a patient going from bad to worse without instituting some radical measures. Fortunately our modern management of labor is greatly reducing our percentage of post-partum infections, yet they do and will occur in spite of us. A foul-smelling lochia which scents up the whole house, with a rising temperature and a rapid pulse may continue a few days, but if the Fowler position, ergot and massage does not bring the desired result in a reasonable time, it seems that the time has come when more active methods are in order. True, we should know that the placenta has been expelled in its entirety, yet who does not find that occasionally this is not the case?

The Sloane Hospital in New York in their report this year tell us that their treatment of these cases is an active one, vaginal and intrauterine douches and digital explorations of the uterine cavity.

Barton Cooke Hirst also, in a paper published in the *Journal American Medical Association* (June 13, 1914), advocates an equally active procedure. On the other hand, Dr. Lee says that those cases which are left to nature with good nursing do far better.

SUBJECT NO. 11—SERO-DIAGNOSIS AND
SERUM THERAPY.

There can be no doubt that we have in the Abderhalden test, properly carried out, a most reliable aid in determining the question of pregnancy, and while in the vast majority of cases nothing more will be required to establish a diagnosis than the element of time plus the usual signs, yet cases will come under observation in which the test will be a great value. For example, suspected extra-uterine pregnancy, obscure pelvic tumors or known pelvic tumors which have taken on a sudden growth. While reports of various series of cases give a large percentage of correct reactions, yet it is not 100 per cent perfect. For instance, several cases have come back positive and have later proved to be tuberculosis pyosalpinx only. The same is true of syphilis, and even in males. It seems that the error is most frequently on the positive side. Obviously the test is a delicate one and requires an expert.

Dr. W. K. Trimble, pathologist, University of Kansas, reports the following: 24 cases with a positive Abderhalden reaction, all of which were later proven to be correct. In this series 24 controls were used, of which 21 were negative, one positive and two faintly positive. In four cases of suspected extra-uterine pregnancy all gave a positive reaction. Of these cases two proved to be ectopic by operation and one a normal uterine pregnancy, the other proved to be neither.

Of seven cases diagnosed as pelvic disease, five gave a negative reaction and two positive; the latter proved to be uterine pregnancies. In one case, that of the writer, in which the clinical signs were almost typically those of a tubal gestation, the reaction was positive, but the case proved to be an

ovarian hematoma and histologically not an ovarian pregnancy.

Serum Therapy.—Serum, either human or equine, has given good results in the treatment of certain toxic conditions of pregnancy, *e. g.*, urticaria, prurigo, erythema, pernicious nausea with icterus, and even eclampsia.

In puerperal infections serum therapy appears to be quite universally disappointing, though it still has its advocates.

In closing this report we realize that there are many points which could with profit be considered, *e. g.*, the co-relation between thyroid disease and pregnancy, the different stages of labor with special reference to posture, protection of the perineum and retention of the placenta, symphysiotomy, episiotomy, care of the new-born and so on almost indefinitely, but, the time being already more than exhausted, if the interest and efforts in behalf of the prospective mother and her babe have been stimulated, this report will not have been made in vain. —Bulletin Jackson County Medical Society.

Rural School Sanitation.—"In 1911 the National Council of Education of the National Education Association appointed a committee on health problems in education. At the same time the Council on Health and Public Instruction of the American Medical Association appointed a committee to co-operate with the National Education Association on this subject. These two committees, acting as a joint committee, have for three years been working in this field. The significance and practical value of the co-ordination of the efforts of the teaching and medical professions of the United States is apparent. The possibilities of such co-operation can hardly be over-estimated. After careful consideration the committee was unanimous in feeling that possibly the most important and certainly the most neglected field in school hygiene was the problem of rural school sanitation. When an effort was made to formulate plans and remedies, however, it was soon realized that although every one was agreed as to the paramount importance of this field, there was little, if any, definite information available regarding actual conditions. It seemed necessary, therefore, that before any remedies were proposed or even discussed, a reasonable amount of data should be secured. Fortunately these conclusions were completely in harmony with the views and policies of the United States Bureau of Education. As Hon. P. P. Claxton, the commissioner, was a member of the joint committee, it was possible to develop a plan for the study of rural school conditions in which all the forces interested could unite. During the spring of 1913 a field secretary employed by the joint committee made a careful statistical and photographic survey of about one hundred rural schools in four

eastern states. At the same time Prof. F. B. Dresslar of the Peabody College for Teachers of Nashville, Tenn., special agent of the federal Bureau of Education, was collecting a large mass of material on country school houses in different states. Additional material was secured from various sources, principally through state boards of health. All of this information has been carefully collated, with the result that Bulletin 12 of the United States Bureau of Education, entitled 'Rural School Houses and Grounds' contains in its two hundred pages probably more information on this subject than has ever before been collected. For the details of this survey, the large mass of illuminating facts brought out and general conclusions drawn therefrom the reader is referred to the report itself, which can be secured from the Bureau of Education at Washington. As a result of this study the joint committee of the National Education Association and the American Medical Association has prepared a statement of minimum requirements for rural schools, being a summary of those conditions of location, construction and equipment which are the very least that should be tolerated in rural schools. The pamphlet can be secured from the Bureau of Education at Washington, from Dr. Thomas D. Wood of Columbia University, New York City, or from the American Medical Association. For the first time in the history of education and sanitation in this country a reasonably comprehensive collection of facts regarding the sanitary condition of rural schools has been made and a standard of minimum sanitary requirements formulated. Parents, teachers, school boards, health officers and the general public," says *The Journal of the American Medical Association*, "have now been given a standard easily applied and within the physical and economic possibilities of any community. Adoption of this standard is the very least that can with decency and fairness to its children be expected of any community. As this standard becomes recognized through the distribution of these pamphlets it will in a few years be possible to estimate the relative degree of development in any state by the condition of its rural schools. There are many other questions to be considered in solving the health problems in education, but persons interested in the sanitation of rural schools may feel gratified at the substantial and definite progress which has been made through the joint committee in the last three years in this field."—*Journal American Medical Association*.
S. L. J.

Juvenile Psychosis.—H. H. Drysdale, Cleveland (*Journal American Medical Association*, October 10, 1914), reports a case of juvenile insanity in a lad aged eleven and remarks that the condition is, in his opinion, much less rare at such early ages than is generally supposed. The family history in this case was not good. The mother was at least eccentric and the grandmother had been insane and the father had been at one time intemperate. The child suffered from hallucinations and delusions and had a partial amnesia of his condition after the attack. Prolonged hot packs seemed to be most effective as a therapeutic measure in bringing about his recovery.

The West Virginia Medical Journal

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All articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over 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 will be 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 to the editor and printer.

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Editorial

If your JOURNAL fails to come, do not write to the Secretary, but to the editor. You will thus save time.

Mr. Secretary, I haven't yet received that list of delinquents. We are violating the postal law by sending the JOURNAL to such members. Last year over a hundred failed to pay their dues. They got the JOURNAL, but we did not get the pay. About sixty to seventy dollars net loss to the Society. The House of Delegates has directed us to discontinue the JOURNAL to all delinquents.

OUR FORTY-EIGHTH ANNUAL SESSION.

The annual meeting of the State Medical Association held in Huntington, May 12th-14th, was a pronounced success. The attendance of members and visitors exceeded 220, constituting it the largest meeting in the Society's history. The program was exceptionally good, and interest in the meetings was unabated from the beginning to its close. The Society was favored with most excellent weather as well as by the attendance of a number of very prominent

men from other states. Dr. W. M. Beach of Pittsburgh, Dr. Thomas S. Cullen and Dr. T. A. Ashby of Baltimore, Dr. E. O. Smith and Dr. B. M. Ricketts of Cincinnati, Dr. A. W. Colcord of Pennsylvania, Dr. Bremerman of Chicago and Dr. Crile of Ohio were present and read papers which will appear later in the JOURNAL. Several of these were illustrated by lantern slides, which added much to their interest. The papers presented by our own members were well written and up-to-date. We cannot but note the marked improvement in the papers presented at our annual meetings when compared with those read at the meetings in the early history of the Society. The improvement of the medical colleges of the country brought about largely by the action of the Council on Education of the American Medical Association, and by the State Boards of Health, is manifested by the character of the papers now presented to our Medical Associations. The preliminary education of students has been elevated and their medical teaching has been improved, and they are thus made competent to put into good English that which they may desire to present for our consideration. The time was, in the writer's experience as a member of the publishing committee, when some papers had to be almost entirely rewritten before they were deemed worthy of publication. That day has passed, and nearly all of the papers that come into the hands of the editor of the JOURNAL are found to be comparatively free from errors.

Too much cannot be said for the medical profession and people of Huntington for the work done in preparation for this meeting. There was no hitch anywhere. As a result the members attended faithfully and indulged freely in discussion. The public meeting on Thursday evening was addressed by Dr. Colcord of Pennsylvania, Dr. Wells, President of the Equitable Life Insurance Association, and Dr. Bremerman of Chicago. The latter took for his subject "Sex Hygiene," and the speaker used plainer language than the writer has ever ventured to employ when addressing a mixed audience on a similar topic, but the audience did not flinch, remaining until the close of a long address, hearing much valuable information which will do them good if they take it to heart.

Not the least interesting part of the meet-

ing's program was the mine rescue contests witnessed by a large audience at the baseball park. West Virginia miners have certainly reason to congratulate themselves that such excellent provision is made by the mining companies for their immediate relief in case of accident as was shown here by the careful drilling of bodies of men in rendering first aid.

The meeting was appropriately closed with the usual banquet on Friday evening. President Linsz presided as toastmaster and a number of good speeches were made. While this meeting was exceptionally good, we hope to see a still larger and better one when the Society convenes in Wheeling next May.

S. L. J.

A NEW CANCER CURE.

In the *New York Medical Journal* of May 15th is an article by Dr. S. P. Beebe, Professor of Experimental Therapeutics in the medical department of Cornell University, in which he discusses the treatment for inoperable cancer and presents a number of cases of sarcoma and carcinoma treated by a new method.

"The therapeutic agent employed in this treatment is a complex one, and it is believed that it has not been heretofore employed in the treatment of cancer. Seeds, roots, bark and flowers taken from a number of different plants are prepared in the form of a powder from which a poultice is made. This powder contains the following substances: *menyanthes trifoliata*, *melilotus officinalis*, *mentha crista*, *brassica alba*, *anemone hepatica*, *viola tricolor*, *anthemisis*, *fructus colocynthidis*, *lignum quassiae*, *urtica dioica*, *radix rhei*, *hedge hyssop*."

It seems that this remedy was called to the attention of Dr. Beebe by an Austrian biologist and chemist, Alexander Horowitz, Ph.D., who seems to have directed the treatment of a number of patients with malignant disease, securing some excellent results as testified to by Dr. Beebe. The latter then undertook the treatment of some patients, a detailed account of which is given in the paper here referred to. Some of these cases terminated fatally after temporary improvement and some seem to have been cured. One of these cases in which great improvement was manifested was presented to our State Medical Society at its recent meeting in Huntington by Dr. Andrew Wilson and Dr. Drinkard, who gave an account of the case, of which we here present Dr. Beebe's history:

"Case XII. Man, aged forty-six years. In 1905 was operated on for stone in kidney; stone not found. In 1911 again operated on and stone removed. In 1912 hemorrhage from kidney. Nephrectomy attempted, but failed. In 1913 left kidney removed. Six weeks before admission to the hospital patient noted peculiar growth appearing on the scar of the old operation wound. Growth increased in size, patient sought medical advice, was informed that he had an inoperable sarcoma, and was sent to New York for treatment. At the time of his admission to the hospital patient had a mass in and about the scar of the former kidney operation as large as a grape fruit. The mass had been growing rapidly within the last few weeks. A specimen was removed and a section diagnosed as a sarcoma known as adrenal hypernephroma. Treatment in this case was by means of hypodermic injection of the extract into the tumor mass, except in two instances, when the injection was made into the subcutaneous tissue of the arm. During the period of seven weeks' treatment patient received twenty-two injections. At the time the specimen was removed the patient lost considerable blood and suffered from shock. The injections caused marked reaction, with an occasional chill lasting from twenty to thirty minutes. Tumor softened, quantities of broken down material were discharged, tumor outline decreased in size, and at the time of his discharge from the hospital the indurated mass was about one-sixth the size that it was upon his entrance. There was a small sinus extending under the skin for a distance of an inch and a half. Patient had increased in weight, gained in strength, was free from pain and in markedly better general physical condition than was thought possible. After leaving the hospital patient received an injection of extract in the arm every second or third day; he continued to gain in weight and strength, and the tumor mass was practically gone."

Of this case Dr. Beebe remarked that it is difficult to doubt that the injections of the extract have been the prime cause of the disintegration of the tumor. When presented to our society this patient had the appearance of a healthy man, and the physicians who presented the case testified to the marked improvement and the diminution in the size of a tumor. A dozen cases of sarcoma and carcinoma are now under treatment in Wheeling by this remedy with some evidence of improvement in all.

As first used the treatment with this remedy consisted in the application of a poultice, of which the remedy formed a part, and the internal administration of an extract, either in liquid or pill form, made from certain substances contained in the poultice. The latter has an irritating effect, producing intense reddening of the skin, with blistering if continued too long. Edema was also

noted in the malignant mass with softening of the tissues, and when a section was taken it "showed that the lymphatics were engorged with leucocytes, and if the skin was broken there was a profuse serous discharge. The exudate which later on was produced in considerable quantities in the treated area contained large amounts of broken-down cancerous material, serum and leucocytes." Along with this local improvement the general condition of the patient was seen to improve—relief from pain, increase in appetite and an improvement in the cachexia being noted.

In Dr. Beebe's later experiments a liquid preparation of the remedy was used hypodermically in addition to its local use as above described, and this preparation is, we understand, on the market.

In Wheeling no method of applying the remedy has been used except that by hypodermic injection. The favorable results thus far secured are thus demonstrated to be due to the constitutional effects of the remedy, which would seem to have a selective action on the cancer cells.

Of course the profession will gladly welcome the advent of any remedy that gives promise even of relief in such dread disease as cancer, and there is a natural inclination to grow too enthusiastic over the results thus far reached. However, we should not forget the recent excitement over the results claimed, even by some eminent German clinicians, for the Friedmann tuberculosis remedy which has already passed out of professional notice.

Until we know more as to the essential character of this new remedy, and have the result of further experimentation, scientifically conducted, the profession should be exceedingly careful as to the position it takes. It is sincerely hoped that the commercial spirit will not be permitted to interfere with carefully conducted scientific investigation, and that it may in time be demonstrated that this new remedy has properties that will bring marked relief, if not cure, to those suffering from malignant disease.

 S. L. J.

Dr. Samuel G. Dickson has just been re-appointed Commissioner of Health of Pennsylvania. This is Dr. Dickson's fourth appointment. He has served the State most acceptably for the past ten years, proving himself to be a most efficient officer. The

Health Department of Pennsylvania has over 3,000 employes and the Legislature has recently appropriated for public health work during the next two years \$4,632,387. During the past year the death rate of 13.9 per 1,000 inhabitants was the lowest in the history of the State. More than 78,000 people are alive in Pennsylvania today who would have died had the death rate of 1906 continued. Of these over 40,000 have been saved by the reduction of four principal diseases, namely, typhoid fever 18,865, tuberculosis 11,924, diphtheria 4,648 and whooping cough 40,091. It costs money for the efficient conduct of a public health department, but not as much as is caused by sickness and death. Pennsylvania has three tuberculosis sanatoria.

A new publication of interest to physicians is "*The Medical Pickwick*," a monthly published at Lake Saranac, N. Y., and edited by Dr. Brickner. It is spicy and entertaining and will serve to while away many hours pleasantly and profitably. \$2.00 will bring it for a year.

We can save a little money for any one who is intending to take post-graduate work in New York City. Apply at once, or it may be too late.

We congratulate the State of Oregon on having C. J. Smith, a physician, for Governor. We have one ourselves, who seems to be able to take care of himself as well as the State.

DOC WAS BUSY.

"Doc Blank has been a busy man these days. Doc reports a few births to some of the finest families in the county. Here's Doc's report: Sunday, August 2, a boy to Will Dallison and wife of Gorrells Run; Monday, August 3, a boy to Thomas Boor and wife of Ten Mile; Wednesday, August 4, a girl to Henry Carroll and wife of Elk Fork; Friday, August 6, a boy to Irvin Kirk and wife of Hills Run; Saturday, August 8, a boy to Wash Lemasters of Sancho and a girl to Alex Baker and wife near town."

We haven't learned how much was paid for this ad. Wonder how the mothers liked this notoriety! This enterprising obstetrician practices in Tyler county. But we can beat him in Wheeling. We know one physician who delivered three babies June 3d, and he didn't think it necessary to send the item to a newspaper either. He isn't that kind of a "Doc."

THE TRUE PHYSICIAN.

"Be sure that the physician cannot be a mere intellectual machine. None know that better than we. Through all ages we have insisted that he shall feel himself bound by a code of moral law, to which, on the whole, he has held without question, while creeds of more serious nature were shifting and changing. What the Greek fathers of medicine asked of him we still ask of him today. He must guard the secrets wrung from you on the rack of disease. He is more often than he likes a confessor, and while the priest hears, as I have once said, the sins and foibles of today, he is as like as not to have to hear the story of a life. He must be what About calls him, 'Le tombeau des secrets'—the grave of secrets. How can he be too prudent or too close-mouthed? Honor you must ask of him, for you must feel free to speak. Charity you should expect of him, for the heart is open to him as it is to no other, and knowledge, large knowledge, is the food which nourishes charity in the tender-hearted."—S. Weir Mitchell, Doctor and Patient.

A LITANY.

From lectures on sex hygiene, from the fellow who calls you "Doc," from the patient who wants "something to relieve her condition," from the patient who wants free advice over the telephone, from book agents and drug vendors, from the doctor just out of college, who is "just as busy as he can be," from the patient who has been trying prescriptions recommended by his friends, from hysterical females, from curbstone consultations, from Chiropractors, Christian Scientists and Chinese doctors, from the doctor who has just performed a very "interesting operation," from the doctor who prefaces his remarks by "when I was in Europe," from the doctor who asserts "there are just three drugs that are any good," from mining stock, oil wells and rubber plantations, from punctured tires and night calls, from the "tango" and other modern dances, good Lord, deliver us.—*Medical Sentinel*.

EXAMINATION OF CANDIDATES FOR ASSISTANT SURGEON, UNITED STATES PUBLIC HEALTH SERVICE.

WASHINGTON, April 24, 1915.

Boards of commissioned medical officers will be convened to meet at the Bureau of Public Health Service, 3 B street, S. E., Washington, D. C., and at the Marine Hospitals of Boston, New York, Chicago, St. Louis, Louisville, New Orleans and San Francisco on Monday, June 21, 1915, at 10 o'clock A. M., for the purpose of examining candidates for admission to the grade of assistant surgeon in the Public Health Service, when applications for examination at these stations are received in the bureau.

Candidates must be between 23 and 32 years of age, graduates of a reputable medical college, and must furnish testimonials from two responsible persons as to their professional and moral character. Service in hospitals for the insane or experience in the detection of mental diseases will be considered and credit given in the examina-

tion. Candidates must have had one year's hospital experience or two years' professional work.

Candidates must be not less than 5 feet 4 inches nor more than 6 feet 2 inches in height, with relatively corresponding weights.

The following is the usual order of the examinations: 1, physical; 2, oral; 3, written; 4, clinical.

THE UNITED STATES SUPREME COURT AND MEDICAL CULTS.

In the treatment of human ailments the matter of primary importance to the conscientious practitioner is the diagnosis. What is causing the trouble? On the answer to this question depends the treatment, no matter whether the "doctor" is a physician, an osteopath, a chiropractor, a mental healer, or what not. The diagnosis is the essential, and unless the "doctor" is sufficiently well trained to make a diagnosis he is not qualified to treat the patient intelligently by any method whatever. Treatment is certainly of great importance, and from the patient's point of view is doubtless most essential. But without a knowledge of the disease, how can intelligent treatment be administered? These fundamental facts are so often ignored in the claims of sectarian cults that the clear cut statements in one of several decisions in regard to these matters by the United States Supreme Court are worth repeating. In a discussion of osteopathy the court said:

An osteopath professes to help certain ailments by scientific manipulation affecting the nerve centers. It is intelligible, therefore, that the state should require of him a scientific training. He, like others, must begin by a diagnosis. It is no answer to say that in many instances the diagnosis is easy—that a man knows when he has a cold or a toothache. For a general practice science is needed.

At the same time the court distinguished between osteopaths, who act on their own initiative, and nurses and masseurs, who follow a physician's instructions, as follows:

An osteopath undertakes to be something more than a nurse or a masseur, and the difference rests precisely in a claim to greater science, which the state requires him to prove. The same considerations that justify excluding him (under the requirements of the practice act) justify excluding the lower grades (nurses and masseurs) from the law.

The court, therefore, decisively pushed aside the masses of argument regarding the "rights" of this, that or the other medical sect, and revealed the real point at issue—the necessity for sufficient fundamental knowledge of the human system to qualify one to make a diagnosis. The court emphasized that in order to make a diagnosis the practitioner of osteopathy, or any other cult, must have the same scientific training as is required of physicians. It is clearly the duty of the state, therefore, to provide an educational qualification which will guarantee that every licensed practitioner shall be competent to make an intelligent diagnosis. Certainly the public has the right to expect that only those who are competent will be given the state's endorsement, conferring on them the right to treat human ailments

The American Practitioner, New York, has been purchased by the Urologic Publishing Association and consolidated with the *American Journal of Urology, Venereal and Sexual Diseases*. The consolidated journal will be under the editorship of Dr. William J. Robinson. The publication offices will be at 12 Mt. Morris Park West, New York City.

State News

STATE BOARD EXAMINATION.

The last examination of the Board was held in Charleston, April 13th-15th. It was oral, written and practical. The last was conducted in the McMillen Hospital, by the courtesy of the proprietor, Dr. A. W. McMillen, to whom the Board hereby extends its thanks. The hospital is just new, beautifully arranged and equipped to care for thirty or forty patients. The operating room is well lighted, provided with sterilizers, instruments of all kinds, and the institution presents a home-like appearance that is very attractive. We are quite sure a person can be comfortably sick in such a place.

The following physicians were successful in passing the required examination with a grade of over 80%. Several made over 90%, which is unusual. The examining committee, Drs. Robins of Charleston, Brandebury of Huntington and the Secretary of the Board, regarded the class as a whole the best that had come before the Board:

L. F. Boland, Welch; R. H. Cross, Eccles; J. M. Cofer, Covington, Va.; M. P. Dillard, Huntington; R. M. Fortier, Concho; T. F. Garrett, Cannelton; A. K. Hoge, Wheeling; W. J. Johnson, Manteo, N. C.; J. A. McGraw, McKendree; J. J. South, Bridgeport, Ohio; D. N. Hill, White Sulphur Springs; M. J. Aston, Dobbin.

The next examination will be held in Charleston, July 7th.

Mr. and Mrs. James C. Thorn announce the marriage of their daughter, Audrey Lucinda, to Dr. Claude Emerson Grimm on Tuesday, the eleventh of May 1915, Parkersburg, W. Va.

REMOVALS.—Dr. D. D. Bushong from Hagerstown, Md., to Summit Point, W. Va.; Dr. L. L. Highsmith from Marytown to Coalwood; Dr. C. W. Vick from Gary to Thorpe; Dr. H. C. Beam from Moundsville to Columbus, Ohio; Dr. A. B. Rinehart from Littleton to McMechen; Dr. J. E. Richmond from Colliers to Hollidays Cove; Dr. R. R. Vaughan from Holden to Whitman; Dr. L. F. Kornman from Clarksburg to Adamston; Dr. C. F. Ross from Logan to Virginia.

During the session of the Legislature Dr. E. Forest Harbert took care of the practice of Dr. I. H. Rinehart while the latter was serving the State very acceptably at Charleston.

Society Proceedings

MINUTES OF 48th ANNUAL SESSION W.

VA. STATE MEDICAL ASSOCIATION;

HUNTINGTON, W. VA.

TRANSACTIONS OF HOUSE OF DELEGATES.

The House of Delegates was called to order by President Henri P. Linsz of Wheeling on Tuesday evening, May 11th, at 9:30 P. M., in the Frederick auditorium.

After the credentials were received, the Committee on Arrangements was called upon for its report. The chairman being absent, the report was deferred.

The report of the Committee upon Scientific Work was then called. Chairman J. R. Bloss being absent, Dr. Anderson gave a verbal report. This report was accepted and committee thanked.

The Committee on Public Policy and Legislation was then asked to report. After some delay, owing to a misunderstanding as to who should make this report, whether Dr. Henry, whose term of service as chairman began January 1, 1915, or Dr. MacQueen, whose term of service as chairman expired December 31, 1914. Dr. MacQueen made a verbal report. In this report he stated the committee held its first meeting in July, 1914, at Atlantic City, and carefully went over the suggestions offered by the House of Delegates of 1914 at Bluefield and formulated plans for action when West Virginia State Legislature would be in session. Later they met in Charleston with the members of the Public Service Commission. They were able to secure an increase of approximately 25% in the schedule of fees formulated by the Public Service Commission for application in administration of the workmen's compensation act. He stated that they were unable to secure any compensation whatsoever for the making out of reports injured for the commission.

Dr. Henry then asked to make a minority report, complaining that he felt the committee had not taken a firm enough stand upon certain questions and were too lenient in their demands of the Legislature. He asked that action on the report be deferred.

Report approved and committee thanked.

Secretary Anderson was then called upon for his report, which he read, as follows:

SECRETARY'S REPORT.

It is a difficult task for a secretary to make a report of such an organization as a State Medical Association for a period during which he did not serve as an officer. I was elected in May, 1914. The paraphernalia of my office, in accordance with our by-laws, was not handed over to me until January, 1915. Thus, in four months, I am called upon to familiarize myself with all the workings of the society—prepare for the annual meeting and render a report for a period over which I did not preside as secretary.

Every organization has an occasional slump;

1914 must have been a period of relaxed tension upon the part of the West Virginia State Medical Association.

On December 31, 1914, only 819 membership certificates for 1914 had been issued. Since then I have issued 35 additional 1914 certificates, bringing the total paid membership up to 854, as compared with 904 for 1913.

However, the organization seems to be reviving, for already 711 1915 membership certificates have been issued, and from the interest and zeal displayed by the local secretaries I predict the largest paid membership in the history of the association for 1915.

During 1914 the following societies gained in membership: Harrison, Lewis, L. K. & O. V., Logan, Monongalia, Nicholas-Webster, Ohio, Raleigh, Ritchie and Tyler.

Those remaining the same are Braxton, Doddridge, McDowell and Pleasants.

The others, with the exception of Boone and Upshur, which have practically expired, have lost anywhere from one to nine members. According to districts:

	1914	1913
First District.....	212	223
Second District.....	168	181
Third District.....	145	158
Fourth District.....	116	121
Fifth District.....	209	221

During 1914 we gained 85 new members; lost at the hands of the Grim Reaper, 4 members; have had 27 removals; and 102 failing to pay dues, were automatically dropped. Net loss of 48, considering transfers.

Already during 1915 we have acquired 109 new members, 7 more than the number who automatically fell from the ranks during 1914, and within 24 of the total loss.

I did not receive 1914 data reports from Boone, Brooke, Cabell, Doddridge, Eastern Panhandle, Greenbrier Valley, Hancock, Marshall, Mercer, Nicholas-Webster, Ohio, Pleasants, Preston, Taylor, Summers, Tyler and Upshur, although from some of these I have received 1915 monthly reports and lists of members in good standing.

The greatest drawback in obtaining these reports seems to have been that systematic records were not kept during the open or meeting months of the year, and these reports were called for early in 1915, before many societies had resumed their regular meetings. In the future this will be overcome if the secretary of each society will fill out and send in, promptly at the close of each month, the small monthly report blanks sent them. For any month in which the society does not meet he can record deaths and removals and write "no meeting" across the blank. This will place in the hands of the State Secretary a complete record.

During the past years the American Medical Association attempted to assist us to increase our membership by sending out workers amongst the non-member practitioners in our State. The results of this campaign will not be seen until the end of 1915, and will depend largely upon the energy with which the local society secretaries and the District Councillors follow up and clinch this work. Many men expressed their willingness

or desire to join, but they have not been provided with application blanks and sufficiently urged by the powers that be in the local societies.

Will you delegates not look into this matter upon your return? If your secretary does not have a list of these men, write me, and I will send you a list.

The best way to grow is to have a live, enthusiastic society. My prescription for this is regular monthly meetings, winter and summer, and devote most of the time spent in these meetings in citing and discussing clinical cases occurring during the month in your practice rather than in listening to long prepared papers. One day each month surely can be spared for such a profitable procedure.

The present Secretary has been handicapped by the absence of an up-to-date Constitution and By-laws. Do you realize ours is six years old? No systematic consecutive collection of resolutions and by-law amendments adopted by the House of Delegates during the past six years is in existence. At least, not among the paraphernalia in the hands of your Secretary, except as they are scattered through the bound volumes of the JOURNAL. Thus, when any question comes up, it is a week's work to learn absolutely what action has been taken by the association upon this matter. May we not have a collaborating committee appointed to assemble these resolutions and amendments?

Recently complaints have been filed with the Secretary with reference to the fact that advertising quacks are permitted to thrive in various sections of our State, and asking that some action be brought against them, especially those not possessing license. I mention this that it may be brought before the House of Delegates and counsel taken as to what action may be advisable and possible in this matter.

Your Secretary, in conjunction with the other members of the Committee on Scientific Work, has endeavored to place before you at this session an A1 program. Many distinguished men from outside West Virginia appear thereon, but it was not the purpose of the committee to crowd out members of our association. Each local secretary was asked early in the year to procure papers from members of his society and to forward the subject of the paper and the name of the author as soon as possible, but in all events before April 1st. This is necessary in order to have the program printed and distributed throughout the State before the annual meeting. This year the Secretary, much to his regret, was unable to place some very good papers, written by capable men within the borders of our State, upon the program because they were not reported to him prior to his sending the copy of the program to the printer.

It is understood that this report covers only the period from January 1st to December 31st, 1914, and hence does not make any comment upon the energetic and enthusiastic work which is being done by some of the local secretaries in gathering in new members, looking after old members and keeping accurate records of their societies. Their work is most commendable, and is much

appreciated by the State Secretary, and doubtless will appear in the report of my successor for 1915.

Respectfully submitted,
J. HOWARD ANDERSON, *Secretary.*

President Linsz then appointed the following Committee on Secretary's Report: Drs. T. W. Moore, chairman; H. R. Johnson and C. R. Weirich. Secretary Anderson then handed a copy of his report to the chairman of the committee and a copy of his financial report to P. A. Haley, Secretary of the Council, for their action.

Treasurer Nicholson then read his report, which he, upon reading, turned over to P. A. Haley, Secretary of the Council, for its approval.

REPORT OF HUGH G. NICHOLSON,
TREASURER, TO THE WEST VIRGINIA
MEDICAL ASSOCIATION.

CHARLESTON, W. VA., May 10, 1915.

1914.		
May	28—The Davis News, printing-----	\$ 54.00
	25—Medical Defense Fund-----	112.00
July	25—Dr. S. L. Jepson, salary-----	500.00
	25—Dr. O. H. Hoffman, transport-----	19.83
	25—Dr. A. P. Butt, transportation-----	21.03
	31—Dr. R. E. Venning, postage, etc-----	8.00
Aug.	10—Dominion News Co., printing-----	6.00
Oct.	7—West Virginia Medical Journal-----	563.00
Nov.	9—Lohmeyer, Patterson, goldsmith-----	10.00
	10—Medical Defense Fund-----	217.00
	17—The Davis News, printing-----	5.00
Dec.	23—Dr. S. L. Jepson, salary-----	300.00
Nov.	4—Dr. H. G. Nicholson, half salary-----	50.00
1915.		
Jan.	5—Dr. A. P. Butt, postage, etc-----	26.56
April	6—West Virginia Medical Journal (1913-14 Members.)-----	39.00
	6—West Virginia Medical Journal-----	394.00
	6—Dr. J. H. Anderson, printing, etc-----	102.84
	30—Dr. J. H. Anderson, salary-----	300.00
May	6—Dr. J. H. Anderson, badges-----	30.00
	6—Dr. H. G. Nicholson, salary-----	50.00
	6—West Virginia Medical Journal-----	270.00
	7—Medical Defense Fund-----	662.00
	10—Cash balance in bank-----	1,071.49
		<hr/>
		\$4,811.75

1914.		
May	11—Brought forward-----	\$1,342.17
June	6—From Dr. A. P. Butt, dues-----	320.00
	22—From Dr. A. P. Butt, dues-----	57.00
Aug.	11—From Dr. A. P. Butt, dues-----	255.00
Sept.	30—From Dr. A. P. Butt, dues-----	20.00
Nov.	10—From Dr. A. P. Butt, dues-----	72.00
Dec.	7—From Dr. A. P. Butt, dues-----	68.00
1915.		
Jan.	25—From Dr. J. H. Anderson, dues-----	387.00
	5—From Dr. A. P. Butt, dues-----	56.00
March	5—From Dr. J. H. Anderson, dues-----	315.00
April	6—From Dr. J. H. Anderson, dues-----	403.00
	19—From W. Va. Medical Journal-----	691.58
	30—From Dr. J. H. Anderson, dues-----	825.00
		<hr/>
		\$4,811.75

MEDICAL DEFENSE FUND.

1913.		
May	14—H. R. Johnson, expense-----	\$ 15.00
	14—W. S. Link, expense-----	19.50
Nov.	12—Loan at six per cent-----	100.00
	20—Loan at six per cent-----	75.00
May	10, 1915, check to General Fund-----	8.50
	10—By cash bank balance-----	807.30
		<hr/>
		\$1,025.30

1914.

May	11—To cash balance on hand-----	\$ 34.30
June	25—To cash from General Fund-----	112.00
Nov.	10—To cash from General Fund-----	217.00
May	7—To cash from General Fund-----	662.00
		<hr/>
		\$1,025.30

Total amount out at interest, \$2,412.60.

Dr. Frank LeMoyne Hupp of Wheeling then presented the following amendment to the by-laws:

"The Committee on Public Policy and Legislation shall be appointed from a list, two names to be submitted by each ex-President. The appointment to be made by the incoming President from this list not sooner than ninety days after his election. The term of service to be five years, unless terminated by a two-thirds vote."

The amendment was seconded by Dr. G. C. MacQueen of Charleston and was, as per Constitution, laid upon the Secretary's table for one day.

The House of Delegates for 1915 was again called to order by President Linsz on Friday, May 14th, at 9:20 A. M., in the Frederick auditorium.

Election of officers was made the order of business.

Nominations for President were called.

Dr. R. E. Venning of Charles Town, after paying a glowing tribute to his faithful services in the past as Secretary of the Association, nominated Dr. A. P. Butt of Davis.

Dr. G. C. MacQueen of Charleston seconded the nomination. After a pause, there being no further nominations made, Dr. S. D. Hatfield of Iaeger, made a motion, which was seconded by Dr. C. F. Hicks of Welch, that nominations for President be closed, and Secretary be instructed to cast the unanimous ballot of the House of Delegates for A. P. Butt. Adopted and the ballot cast.

Drs. Venning and MacQueen were called upon by President Linsz to escort President-elect Butt to the desk, where he, in a few words, thanked the House of Delegates for the honor conferred upon him.

Dr. G. C. Schoolfield of Charleston, being nominated for First Vice-President, nominations were closed, and the Secretary was instructed to cast the ballot of the House of Delegates for Dr. Schoolfield, which was done. Dr. A. S. Bosworth of Elkins was then nominated for Second Vice-President. Nominations were closed and Secretary instructed to cast ballot for Dr. Bosworth, which he did.

Dr. S. P. Lawson of Logan was then nominated as Third Vice-President. Nominations were closed and Secretary instructed to cast the ballot for Dr. Lawson, which he did.

Dr. J. Howard Anderson of Marytown was nominated to succeed himself as Secretary. By motion nominations were closed, and Dr. Nicholson was instructed to cast the unanimous ballot of the House of Delegates for Dr. Anderson. Dr. Anderson being called upon for a speech, thanked the House of Delegates for their stamp of approval thus placed upon his past work.

Dr. H. G. Nicholson of Charleston was then nominated to succeed himself as Treasurer. Nominations were closed and the Secretary instructed to cast the ballot for Dr. Nicholson. It was done.

Dr. R. E. Venning of Charles Town then made the following motion, which was seconded by H. C. Steele of Bluefield:

"That the State be redivided into six Councilor Districts, conforming as nearly as possible to West Virginia's new Congressional Districts, and that the House of Delegates proceed to elect two Councilors for each District, one to serve two years and one to serve one year."

The motion was carried.

The following men were then duly elected:

First District, composed of Hancock, Brooke, Ohio, Marshall, Marion and Taylor Societies—J. W. McDonald, Fairmont, one-year term; H. R. Johnson, Fairmont, two-year term.

Second District, composed of Monongalia, Preston, Barbour-Randolph-Tucker, Grant-Hampshire-Hardy-Mineral and Eastern Panhandle Societies—H. W. Daniels, Elkins, one-year term; T. K. Oates, Martinsburg, two-year term.

Third District, composed of Harrison, Doddridge, Ritchie, Lewis, Braxton, Nicholas-Webster Societies—M. T. Morrison, Sutton, one-year term; C. R. Ogden, Clarksburg, two-year term.

Fourth District, composed of Pleasants, Little Kanawha and Ohio Valley, Cabell and Tyler Societies—J. E. Rader, Huntington, one-year term; G. D. Jeffers, Parkersburg, two-year term.

Fifth District, composed of Logan, Mingo, McDowell, Mercer and Summers Societies—Wade St. Clair, Bluefield, one-year term; E. F. Peters, two-year term.

Sixth District, composed of Kanawha, Boone, Raleigh, Fayette and Greenbrier Valley Societies—P. A. Haley, Charleston, one-year term; B. B. Wheeler, McKendrie, two-year term.

The following motion was then made by Dr. Hupp of Wheeling, seconded by Dr. Venning of Charles Town, and carried:

"A committee of three shall be appointed by the incoming President to revise the Constitution and By-Laws, the same to be submitted to the next meeting of the Association and published in the JOURNAL the month preceding the next meeting."

To fix the place of meeting for 1916 was the next order of business.

Secretary Anderson read a communication from the Wheeling Board of Trade inviting the Association to Wheeling in 1916.

Dr. S. L. Cherry of Clarksburg then extended an invitation to the Association to meet at Clarksburg in 1916.

After it was noted that the Association had met in Clarksburg since it had convened in Wheeling, it was, by motion, unanimously decided that the forty-ninth annual session be held in Wheeling, May, 1916.

Dr. J. R. Bloss of Huntington then offered the following amendment to the By-Laws, which was duly referred to the Committee on Revision of By-Laws:

"Be it resolved, that it is the sense of this Association that the By-Laws be so amended that any member of the House of Delegates be eligible to any office in the gift of the Association.

The amendment to the By-Laws proposed by Drs. Hupp and MacQueen on Tuesday evening, May 11th, was then called from the table of the Secretary and passed:

Dr. H. R. Johnson of Fairmont then offered the following resolution, which, after being discussed, was finally carried, with some opposition.

"Be it resolved by this body here assembled that it is the sense of this Association that the order

of the Public Service Commission directing that all patients under its jurisdiction, and entitled to benefits under the recent Compensation Act, be sent to State Hospitals instead of general hospitals is discriminatory and unfair to these general hospitals and to the physicians of the State, and, in many instances, unjust and inhumane to the patient.

"And be it resolved, further, that a copy of this resolution be mailed to each member of the Public Service Commission."

The Committee on President's Address then filed the following report, which was read by Secretary Anderson:

"Mr. President and Members of the West Virginia State Medical Association:

"Gentlemen:—Your committee appointed to report on the President's Address beg to advise that we have noted only a very few of the pregnant suggestions contained therein, and suggest that his recommendations as regards the attendance on medical society meetings is so important that it should be urged on all physicians of the State to affiliate themselves with their County and State Societies, as the concensus of opinion is that no physician can stand alone or by himself; that the society needs his help and he needs the help of the society; that the progressive physicians of today are the men who attend the medical meetings; therefore, we would suggest that all medical societies urge all physicians in their counties to join the county society and attend the State meetings.

"We also recommend there should be one standard only in this United States for examination for license to practice medicine and surgery; that this license should be a passport to any State in the Union, and suggest that this matter be referred to the Committee on Public Policy and Legislation, and urge their bringing this matter forcibly to the attention of the A. M. A.

"We desire especially to add our appreciation to that of our President as regards the work of the State Board of Health. Large bodies move slowly. Medicine cannot get all she ought to have or needs at once, as not all look upon the same thing the same way, at the same time, but we are progressing so favorably to the higher standard that in a few more years of progress West Virginia will be at the fore in her medical legislation.

"In reference to the Harrison Anti-Narcotic law, we feel that this, in the main, is a good law and will accomplish much good in the way it is intended; but we suggest that the ruling of the Internal Revenue Commissioner conform to the Harrison Act as passed by Congress in reference to the dispensing record of compounded drugs in the hands of physicians who dispense their own drugs, and that a copy of this part of the President's address which pertains to this subject be printed and sent to our representatives in Congress, and also to the Internal Revenue Collector, suggesting to each Representative in Congress, if possible, to remove these hardships, and asking the Internal Revenue Collector to kindly confine his rulings to the spirit of the law. These suggestions should also be referred to the Committee on Public Policy and Legislation.

"As we are not acquainted with any dependent physicians or their families at the present, we suggest that this matter stand as it now is, and that the dues of only one dollar a year go on, as it is not unwise for a society to have some finances

back of it, and at some future time, should the society deem it wise, the suggestion of the President can then be carried out.

Respectfully submitted,

C. S. HOFFMAN,
F. L. HUPP,
M. V. GODBEY.

This report was approved and committee discharged, with thanks.

The Committee upon Secretary's Report filed the following recommendations, which were read, approved and committee discharged, with thanks:

"1. We recommend that the councilors' attention be called to the lack of growth of the State Medical Association, and that they co-operate with the Secretary in remedying this.

"2. We concur in the Secretary's recommendation that the County Secretaries fill out and send in promptly at the end of each month the small monthly report blank sent to them, and also his recommendation that the meeting of local societies be held monthly.

"3. We appreciate and endorse his recommendation that the Constitution and By-Laws be revised, and this seems, in our opinion, to be the duty of the Council.

"4. Relative to those practicing medicine who have not procured a license, we think the proper course to pursue in such a case is for the local societies to bring these offenders to the notice of their prosecuting attorneys.

T. W. MOORE,
H. R. JOHNSON,
C. R. WEIRICH."

The Secretary then read an inquiry as to whether members of West Virginia State Medical Association not practicing within the State of West Virginia could avail themselves of the privileges of the Medical Defense Department. He was instructed by the House of Delegates to advise that any member of the West Virginia State Medical Association who legally resided in the State of West Virginia could avail himself of the Medical Defense Department, whether practicing in our outside the State; otherwise, not.

Letters from Secretaries of local societies advising of advertising quacks and so-called "doctors" practicing without license in their respective communities, and inquiring as to proper method of procedure, were then read. The House of Delegates instructed its Secretary to advise those making inquiries that the proper procedure is for the local society to retain an attorney and institute legal proceedings against such individual thus violating the law.

Dr. J. B. Kirk of Elkhorn then made a motion that sectional work in the West Virginia Medical Association's annual session be abolished. After being seconded and discussed a substitute was offered by Dr. Jepson, and after the acceptance of an amendment by Dr. Ogden, was adopted as follows: Resolved, That it is the sense of this association that at the annual session the society be divided into a medical and surgical section, but that arrangements be made for one or more joint sessions of the two sections during the annual meeting.

Dr. John L. Dickey of Wheeling, delegate to the American Medical Association for 1915 from West Virginia State Medical Association, stated he feared he would be unable to attend the A. M.

A. meeting at San Francisco. It was moved by Anderson, and seconded by Triplett, "that Dr. Dickey be empowered to appoint a substitute in case of his inability to attend." Motion carried.

Secretary Anderson then moved that a rising vote of thanks be given to the following guests who honored the Association by delivering papers before or otherwise contributing to its 1915 deliberations, and, further, that those of this number who are not already honorary members of the West Virginia State Medical Association be hereby elected as such:

Dr. George W. Crile, Cleveland, Ohio.
Dr. E. O. Smith, Cincinnati, Ohio.
Dr. B. M. Ricketts, Cincinnati, Ohio.
Dr. A. W. Colcord, Clairton, Pa.
Dr. W. M. Beach, Pittsburgh, Pa.
Dr. Lewis W. Bremerman, Chicago, Ill.
Dr. Thomas S. Cullen, Baltimore, Md.
Dr. T. A. Ashby, Baltimore, Md.
Dr. Franklin C. Wells, New York City.
Dr. J. W. Kincaid, Catlettsburg, Ky.
Dr. Z. A. Thompson, Pikeville, Ky.
Dr. S. S. Gale, Roanoke, Va.
Dr. W. R. Whitman, Roanoke, Va.
Dr. J. W. Preston, Roanoke, Va.
Dr. E. E. Watson, Salem, Va.

Motion was seconded and unanimously carried.

A vote of thanks was then extended to Drs. H. G. Steele of Bluefield and J. Clark Killey of Eckman for taking charge of registration of members, delegates and guests.

The following unanimous votes of thanks were then passed:

To Cabell County Medical Society for their boundless hospitality.

To the Huntington Chamber of Commerce for their hearty co-operation and assistance in carrying on the mine rescue and first aid contest.

To the ladies of Huntington, who so delightfully entertained the lady guests of the Association.

To the Ohio Valley Electric Railway Company for the freedom of their lines.

To the Huntington Drug Company for their beautiful souvenirs.

To the management of Hotel Frederick for the courtesy extended throughout the entire session.

House of Delegates adjourned.

HENRI P. LINSZ, *President*.

J. HOWARD ANDERSON, *Secretary*.

MINUTES OF COUNCIL.

Council convened Tuesday evening, May 11th, upon the adjournment of House of Delegates, Drs. McDonald, Wheeler, Johnson, Daniels and Jeffers being present. Chairman Link being absent, Dr. Jeffers was made chairman pro tem, and presided. Treasurer Nicholson's report was audited and found correct. Secretary Anderson's financial report was audited and found correct. The Councilors then gave individual reports of the growth and progress of the various societies within their respective districts, which were commented upon and approved. Council then adjourned.

Council reconvened May 14th at 12:30 P. M. Dr. Rader of Huntington was elected chairman for the ensuing year, and Dr. Haley of Charleston was made secretary for the same period. The

Committee on Medical Defense were then elected, as follows: J. W. McDonald, Fairmont; H. R. Johnson, Fairmont; J. E. Rader, Huntington.

Council then proceeded to the election of editor of the JOURNAL. It was moved that Dr. J. R. Bloss of Huntington be made editor of the WEST VIRGINIA STATE MEDICAL JOURNAL for the ensuing year. This was unanimously carried.

The salaries of the editor and assistant editors of the JOURNAL, also those of the Secretary and Treasurer, were fixed at the same sums as the preceding year.

Council then adjourned.

Council reconvened, at the call of the President, May 14th, at 7 P. M. The meeting was called to order by Chairman Rader.

Dr. S. L. Jepson, editor of the JOURNAL, then made a complete report of the progress and financial condition of that periodical for the past year, as follows:

REPORT OF PUBLISHING COMMITTEE.

WHEELING, W. VA., May 10, 1915.

To the Council of the West Virginia State Medical Association:

Gentlemen,—In presenting my annual report there is not much new to offer. We have the same complaint this year as in former years, namely, that the JOURNAL goes to many physicians whose membership has been permitted to lapse, the Association therefore losing the total amount expended in printing and mailing the JOURNAL to them. Several months ago I requested the County Secretaries to send to me a list of those who were delinquent on April 1st. But a single response came in answer to this request, and this Secretary, instead of sending the names of delinquents, sent the names of those who had paid their dues, which gave me no information of value. It is contrary to the regulations of the United States Postal Department to continue sending publications to those who are in arrears. I have also been directed by the House of Delegates of this Association to discontinue the JOURNAL to all who have not paid their dues by April 1st, but if the secretaries do not keep me informed as to who are delinquents the JOURNAL will continue to go to all whose names appear on our mailing list. I again urge, therefore, that every County Secretary in the State send me, not later than the first of May, the names of all who have failed to pay their dues for the current year. These names can then be removed from the mailing list and the Association save from \$75 to \$100 a year at least. The secretaries should send these names to me at once, that I may discontinue the JOURNALS.

Advertising agents complain that their clients are economizing in advertising because of the depression in business, and for this reason the year has not been a good one for our advertising department. During the past two months, however, I have secured at least two pages of new advertising, and the JOURNAL is now carrying more advertising than for the past two years. It is hoped that our members will patronize those who patronize us, and in this way encourage those who give us their business. This is only fair treatment and should result in an increase of patronage.

Not all of our department editors have per-

formed the duties assigned to them last year, although I have sent to each a number of our exchange journals from which to draw material. The editor of one department has during the year been disabled by sickness and has contributed to but two issues of the JOURNAL; another has contributed nothing whatever. The remainder have done well.

A financial statement is annexed.

Respectfully submitted,

S. L. JEPSON,

Chairman Publishing Committee.

FINANCIAL STATEMENT FOR 1914.

Receipts.

Receipts from membership dues, 1914,	
and back dues, 1913-----	\$1,012.00
From advertisements-----	744.95
Subscriptions-----	29.00
Total-----	\$1,785.95

Expenses.

Commission on advertisements--\$	6.00
Reprints-----	5.75
Half-tones-----	4.20
Binding JOURNALS-----	6.10
Printing circular letter-----	1.50
Printing JOURNALS-----	928.90
Mailing JOURNALS, and postage	
stamps-----	44.46
Salary of editor-----	600.00—\$1,596.91

Net profit from the JOURNAL-----\$ 189.04

(NOTE.—An itemized account was presented to the Council, audited and approved, but to save space it is here summarized.—S. L. J.)

His financial report having been audited and incorporated in his general report, the entire report was approved, and a unanimous vote of thanks extended to Dr. Jepson for his untiring efforts and the growth and progress of the JOURNAL during his incumbency in the editor's chair.

Dr. A. P. Butt, President-elect, was then called upon, and in response he briefly outlined his hopes and aims for the State Association during the coming year. A motion was then made, seconded and unanimously carried, as follows:

It is the sense of the Council that the department editorships of the JOURNAL be abolished July 1st, 1915; that Dr. Jepson's services as editor be not terminated until January 1st, 1916, and that his salary from July 1st, 1915, to January 1st, 1916, be \$500.

It was then moved, seconded and carried that the salary of Editor-elect Bloss be reconsidered. It was then moved, seconded and carried that the salary of Editor-elect Bloss for the ensuing year, beginning January 1st, 1916, be \$900, and that out of this sum he pay \$50 per year to each of three editors of the departments of Surgery, Medicine and Eye-Ear-Nose-and-Throat, which three departments are hereby created by order of Council. Drs. C. R. Enslow and J. E. Rader, both of Huntington, were then elected as assistant editors and Dr. H. W. Keatley was elected business manager of the JOURNAL.

Council then adjourned.

J. E. RADER, Chairman.

P. A. HALEY, Secretary.

INDEX

A. V. Weinberger—Abderhalden's serodiagnosis of pregnancy	217	Claytor, Thos. A.—Historic review of angina pectoris	7
Abortion, treatment of—W. F. Gardner	250	Coccygodynia, a new treatment	249
Acute diarrhea of children—Wade Gaston	45	Cook, U. G.—Puerperal Eclampsia	413
Acute tubotympanic catarrh—J. McK. Sites	222	Conservation of vision—B. F. Matheny	331
Acquired non-traumatic cataract of the young—C. B. Wylie	298	Constipation and epilepsy—C. A. L. Reed	382
Adrenal therapy—Dr. Sajous	237	County Medical Society, The	380
Alcoholism effects on sexual glands	178	County Medical Society, What is a	22
Alcohol, the truth about—G. D. Lind	109	Criminal anthropology—Arthur Macdonald	190
Alcohol, some more truth about—Irvin Hardy	154	Daniels, H. W.—General subcutaneous emphysema	226
Albuminuria of pregnancy, significance of	36	Deaths of physicians in 1914	354
Anderson, J. Howard—Diphtheria	115	Dementia precox, treatment by nuclein—Keatley and Bobbitt	193
Anesthesia, oil-ether	34	Diabetes mellitus, modern treatment of	390
Anemia, pernicious, splenectomy for	174	Diabetes mellitus, Bulgarian bacillus in	98, 136
Anti-typhoid vaccination in childhood—Major Russell	310	Diabetes insipidus—J. W. Preston	80
Angina pectoris, historic review—Thomas A. Claytor	7	Diagnosis of mediastinal tumors—J. Schwinn	374
Appendicitis in children	36	Diphtheria—J. Howard Anderson	115
Appendicitis in children	394	Diphtheria, enormous doses of antitoxin in an infant—C. A. Flegler	342
Arkin, Aaron—Work in the hygienic laboratory	10	Diphtheria of the skin	105
Asthma in children, treatment of	103	Diphtheria, larger doses of antitoxin needed in	139
Autolacto therapy—C. H. Duncan	135	Diphtheria, staphylococcus spray in	104
Autoserum in obstinate dermatoses	253	Doctor (The) and the law	238
Babcock, W. W.—Newer concepts of gall-bladder surgery	75	Drug addiction, treatment of	211, 346
Barger, F. W.—European correspondence	121	Dysentery, amebic, a case—T. E. Romine	416
Barlow, C. A.—The prevention of insanity	148	Dysmenorrhea, atropin in	216
Blood pressure and nervousness—Tom A. Williams	363	Dysmenorrhea, treatment of—P. D. Bland	202
Bloss, J. R.—Oration in medicine	49	Early diagnosis of tuberculosis—J. W. Gilmore	402
Bobbitt, R. M.—Nuclein solution in dementia precox	193	Editorials:	
Bone implantation in Pott's disease—C. S. Venable	19	Journal changes—S. L. Jepson	26
Bright's disease, modern treatment of—J. Herold	172	Take a vacation—S. L. Jepson	63
Bulgarian bacillus in intestinal diseases	37	The bullet in modern warfare—F. L. Hupp	63
Caesarean section	212	Board of Health investigation—S. L. Jepson	130
Caesarean section predisposes to rupture	71	Medical impostors—S. L. Jepson	164
Cancer, the incidence of—J. Ross Hunter	17	Unlicensed physicians—S. L. Jepson	165
Cancer in children	72	Cancer and the research laboratory—F. L. Hupp	166
Cancer of rectum	102	Federal medical licensure—S. L. Jepson	205
Cancer of uterus	392	Laughable or pitiful, which—S. L. Jepson	240
Cannaday, J. E.—Mississippi Valley Medical Association	229	The dosage of diphtheria antitoxin—S. L. Jepson	242
Cannaday, J. E.—Southern Surgical and Gynecological Association	303, 342	Suffering of Belgian physicians—S. L. Jepson	312
Cherry, S. L.—Diagnosis and treatment of meningitis	227	Stop, look, read—J. H. Anderson	386
Cherry, S. L.—A case of sporotrichosis	303	A new cancer cure—S. L. Jepson	422
Cherry, S. L.—Laboratory work and the general practitioner	334, 377	The Huntington meeting—S. L. Jepson	421
Chiropractic, a judge, a jury	26	Eclampsia prevention, iodid of potash in	359
Chiropractic, editorial on	240	Elampsia, with cases—C. R. Foutche	379
Cholecystectomy vs. cholecystotomy—G. W. Crile	233	Emphysema, general subcutaneous—H. W. Daniels	226
Chronic acetanilid poisoning—H. G. Gordiner	235	Epilepsy, a new treatment—Tom A. Williams	
Circumcision in female infants	142	Epilepsy and constipation—C. A. L. Reed	382
		Erysipelas, phenol and alcohol in	34
		Etiology, pathology and treatment of heart lesions—D. T. Williams	337
		European correspondence—F. W. Barger	121
		European correspondence—R. J. Reed	59, 89

Fever, typhoid—W. W. Morton.....	113	Jepson, S. L.—Laughable or pitiful, which.....	240
Fever, typhoid, and illegal practitioners—W. W. Golden.....	42	Jepson, S. L.—The dosage of diphtheria anti-toxin.....	242
Fever, typhoid carriers.....	67	Jepson, S. L.—The Huntington meeting.....	421
Fever, typhoid perforation, treatment of.....	70	Jepson, S. L.—A new cancer cure.....	422
Fever, typhoid, is preventive vaccination harmless—E. Zueblin.....	161	Jepson, S. L.—Suffering of Belgian physicians	312
Gale, S. S.—Spina bifida, cases of.....	145	Joint-bodies, a study of—Aime Paul Heineck	291
Gardner, W. F.—The treatment of abortion.....	1	Jones, Harriet B.—A tuberculosis campaign.....	124
Gall bladder surgery, newer concepts of—W. W. Babcock.....	75	Laboratory work and the general practitioner	
Gaston, Wade—Acute diarrhea of children.....	45	—S. L. Cherry.....	334, 377
Gillespie, Thurman—The Viewpoint Sanatorium for tuberculosis.....	228	Lind, G. D.—The truth about alcohol.....	109
Gilmore, J. W.—Early diagnosis of tuberculosis.....	402	Linsz, H. P.—Presidential address.....	397
Golden, W. W.—Typhoid fever and irregular practitioners.....	41	Liver resection.....	69
Gonorrhoea, recognition of different periods by microscope—H. G. Steele.....	15	Locomotor ataxia, origin of.....	39
Guthrie, L. V.—Insanity more preventable than curable.....	370	Locomotor ataxia, treatment of.....	39
Hamilton, W. D.—Prostatectomy.....	151	Lumbar puncture as a routine.....	35
Hardy, Irvin—Some more truth about alcohol.....	154	MacQueen, G. A.—The neglected part of surgery.....	120
Haynes, H. H.—Inflammation of nasal accessory sinuses.....	51	Matheny, B. F.—Conservation of vision.....	331
Haynes, R. A.—A case of sporotrichosis.....	303	McDonald, J. W.—Treatment of fractures of long bones.....	181
Hay fever.....	67	McDonald, J. E.—The county medical society	380
Heineck, Aime Paul—A study of joint-bodies.....	291	Medical Education in United States.....	133
Hervey, H. C.—Rights and duties of physicians in court.....	327	Meningitis, diagnosis and treatment of—S. L. Cherry.....	227
Hemoptysis, pneumothorax for.....	174	Meningitis, cerebrospinal, treatment of—Dr. Dunn.....	165
Hereditary mental deficiency—J. W. Williams.....	153	Meningitis, epidemic cerebrospinal—B. B. Wheeler.....	219
Hemorrhoids, treatment of.....	101	Metastatic infection of joints—E. F. Peters.....	82
Highland, S. G.—Sanitary control of waterways.....	194	Miller, J. L.—Effects of pituitrin in obstetrics	411
Highland, S. G.—Purity of streams should be controlled.....	224	Minutes of State Medical Association, House of Delegates, 1914.....	27
Hunter, J. Ross—The incidence of cancer.....	17	Minutes of State Medical Association, House of Delegates, 1915.....	425
Hupp, F. L.—Cancer and the research laboratories.....	166	Mississippi Valley Medical Association—J. E. Cannaday.....	229
Hupp, Frank L.—The bullet in modern warfare.....	63	Morton, W. W.—Typhoid fever.....	113
Hupp, Frank L.—Tracheotomy, a new retractor and tube pilot.....	350	Myalgia.....	99
Impetigo contagiosa, treatment of.....	102	Myxedema, thyroid implantation in.....	249
Incidence of cancer—J. Ross Hunter.....	17	Nose bleed in children.....	394
Infant feeding—J. M. Brady.....	21	Neuralgia, treatment of.....	69
Infantile paralysis, early treatment of.....	322	Obstetrics, advances in—Dr. VanEman.....	417
Inflammation of the nasal accessory sinuses H. H. Haynes.....	51	Opium habit, treatment of.....	211
Insanity more preventable than curable—L. V. Guthrie.....	370	Oration in medicine—James R. Bloss.....	49
Insanities of the puerperal state—F. W. Langdon.....	383	Osteomyelitis, treatment with carbolic acid.....	67
Intestinal stasis.....	34	Ovarian pregnancy—M. Caturani.....	57
Intestinal stasis, more light on.....	126	Pellagra—B. B. Sturdevant.....	405
Jepson, S. L.—Smallpox, diagnosis and sanitary control.....	181	Pellagra in West Virginia Hospital for Insane—Pettit and Denham.....	406
Jepson, S. L.—Journal changes.....	26	Pepper, R. H.—Skiography and the interpretation of the negative.....	86
Jepson, S. L.—Take a vacation.....	63	Perineum in labor, how to guard.....	70
Jepson, S. L.—Board of Health investigations.....	130	Peters, E. F.—Metastatic inflammation of joints.....	82
Jepson, S. L.—Medical imposters.....	164	Pettit and Denham—Pellagra in West Virginia Hospital for Insane.....	406
Jepson, S. L.—Unlicensed physicians.....	165	Pituitrin in Obstetrics—H. G. Tonkin.....	189
Jepson, S. L.—Federal medical licensure.....	205	Pituitrin in Obstetrics.....	143, 179
		Pituitrin in Obstetrics—J. L. Miller.....	411
		Pituitrin, its use and abuse.....	359
		Placenta, new method of loosening.....	359
		Poison ivy, treatment of.....	40

Whooping cough, treatment of.....	139	Vaccination, new method.....	394
Williams, D. T.—Etiology, pathology and treatment of heart lesions.....	337	Venning, R. E.—Twilight Sleep.....	311
Williams, J. W.—Hereditary mental defi- ciency.....	153	View Point Sanitarium for tubercúlosis— Thurman Gillespie.....	228
Williams, Tom A.—Antecedents of high blood pressure and nervousness.....	363	Vincent's angina.....	395
Williams, Tom A.—A new treatment of epi- lepsy.....		Vomiting of pregnancy.....	330
Williams, Tom A.—Faith cures vs. scientific mental healing.....	118	Vomiting of pregnancy, epinephrin in.....	143
Wylie, C. B.—Acquired non-traumatic cata- ract of the young.....	298	Vomiting of pregnancy, thyroid treatment of	143
		Yeatley, H. W.—Nuclein in dementia precox.	193

THE WEST VIRGINIA MEDICAL JOURNAL

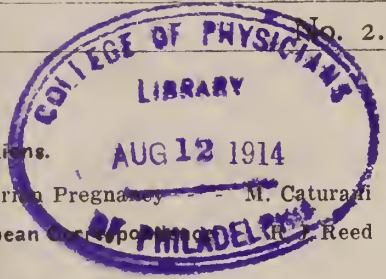
Published by
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Vol. IX.

August, 1914

No. 2.

Contents



Original Articles.

- Typhoid Fever and Illegal Practitioners - - - - - W. W. Golden 41
- Acute Diarrhea of Children, - - - - - Wade Gaston 45
- Oration in Medicine - - - - - Jas. R. Bloss 49
- Inflammation of the Nasal Accessory Sinuses - - - - - H. H. Haynes 51

Selections.

- Treatment of the Toxemias of Pregnancy - - - - - J. Rongy 54

Selections.

- Ovarian Pregnancy - - - - - M. Caturafi 57
- European Oculoplastic - - - - - R. Reed 59
- Editorial.**
- Take a Vacation - - - - - 63
- The Bullet in Modern Warfare - - - - - 63
- Society Proceedings** - - - - - 64
- State News** - - - - - 66
- Progressive Medicine** - - - - - 67

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Vol. IX.

September, 1914

No. 3.

Contents

Original Articles.

Newer Concepts of Gallbladder Surgery - - - W. Wayne Babcock	75
Notes on Diabetes Insipidus - - - - J. W. Preston	80
Metastatic Infections of Joints - - - E. F. Peters	82
Skiagraphy and the Interpretation of the Negative - - - R. H. Pepper	86

European Correspondence - R. J. Reed	89
Medical Notes from the European War F. L. H.	92
Editorial	
The Workmen's Compensation Law	94
Report of the Committee on Public Policy	94
Society Proceedings - - - - -	96
State News - - - - -	97
Book Reviews - - - - -	98
Progressive Medicine - - - - -	98

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THE WEST VIRGINIA MEDICAL JOURNAL

Published by
The West Virginia State Medical Association

Vol. IX.

October, 1914

No. 4.

Contents

Original Articles.

- The Truth About Alcohol G. D. Lind 109
 Typhoid Fever - - W. W. Morton 113
 Diphtheria - J. Howard Anderson 115
 Faith Cures vs. Scientific Mental
 Healing - - - Tom A. Williams 118
 The Neglected Part of Surgery - -
 G. A. MacQueen 120
 European Correspondence, F. W. Barger 121
 Report of the Tuberculosis Campaign.
 Harriet B. Jones 124
 Original Abstract.
 More Light on Intestinal Stasis - -
 W. J. Mayo 126

Selections.

- Relation of Fever to Incipient Tuberculosis - - - - John N. Alley 127

Editorial.

- Board of Health Investigations - - 130
 The Smoke Nuisance - - - - 131
 Editorial Notes - - - - - 131
 Tuberculosis Sanatorium Not Injurious
 to Health - - - - - 132
 Medical Education on the United States 133
 State News - - - - - 133
 Society Proceedings - - - - - 134
 Book Reviews - - - - - 135
 Progressive Medicine - - - - - 135

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PAGE X

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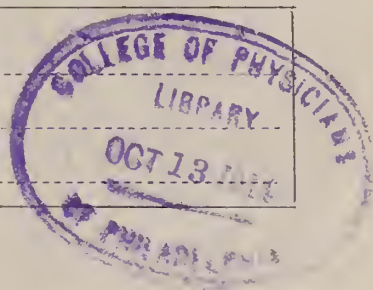
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Published by
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Vol. IX.

November, 1914

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Contents

Original Articles.

- Spina Bifida, With Report of Cases,
S. S. Gale 145
- The Prevention of Insanity - - -
C. A. Barlow 148
- Prostatectomy - W. D. Hamilton 151
- Hereditary Mental Deficiency, - -
J. W. Williams 153
- Some More Truth About Alcohol -
Irvin Hardy 154

Selections.

- Treatment of Cerebrospinal Menin-
gitis - - - - - Dr. Dunn 155
- The Problem of Infection in Tuber-
culosis Families - J. B. Hawes 157

Selections.

- Scientific Medicine vs. Quackery -
W. J. Robinson 159
- Is Antityphoid Vaccination Harm-
less? - - - - Ernest Zueblin 161
- Successful Office Practice, - - -
S. D. Sauer 163

Editorial.

- Medical Importers - - - - - 164
- Unlicensed Physicians - - - - 165
- Cancer and Research Laboratories 166
- State News - - - - - 168
- Society Proceedings - - - - - 169
- Progressive Medicine - - - - - 172

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SEE ADVERTISEMENT
PAGE X

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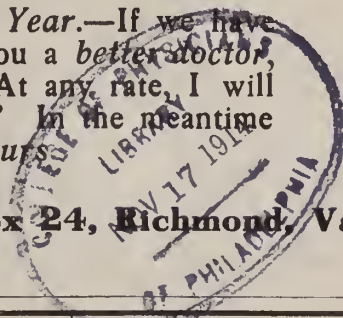
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THE WEST VIRGINIA MEDICAL JOURNAL

Published by
The West Virginia State Medical Association

Vol. IX.

December, 1914

No. 6.

Contents

Original Articles.

- Treatment of Fractures of Long
Bones - - - - J. W. McDonald 181
- Smallpox—Diagnosis and Sanitary
Control - - - - S. L. Jepson 186
- The Use of Pituitrin in Obstetrics
H. G. Tomkin 189
- Principles of Criminal Anthropology
Arthur Macdonald 190
- Report of Five Cases of Dementia Pre-
cox - - - - Yeatley and Bobbitt 193
- Sanitary Control of Water-ways - -
Scott O. Highland 194

Original Abstract.

- The Teumatic Neuses - - - -
Tom A. Williams 196

Selections.

- The Twilight Sleep - Geo. C. Mosher 196
- Treatment of Dysmenorrhea - - -
P. Brook Bland 202

Editorial.

- Federal Medical Licensure - - - - 205
- State News - - - - - 207
- Society Proceedings - - - - - 209
- Reviews - - - - - 210
- Progressive Medicine - - - - - 211

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THE WEST VIRGINIA MEDICAL JOURNAL

Published by
The West Virginia State Medical Association

Vol. IX.

February, 1915

No. 8.

Contents

Original Articles.

- Medical Experiences in the Balkans
Clyde S. Ford 255
- Penetrating Wounds of Abdomen and
Thorax - - - - - A. P. Butt 260
- An Unusual Case of Sinusitis - - -
T. E. Peery 264
- Morphin Heredity - J. W. Williams 265

Abstracts.

- Intrathecal Injections in Tabes - -
Tom: A. Williams 267
- Treatment of Injuries Caused by Elec-
tricity - - - - Sir Oliver Lodge 268

Correspondence.

- The New Cincinnati Hospital - - -
J. E. Cannaday 268

Selections.

- Four Years' Experience with Menin-
gitis - - - - DuBois and Neal 271
- What are Chiropractors? - - - -
G. H. Matson 274

Editorial.

- Get Busy - - - - - 277
- Editorial Notes - - - - - 278
- Society Proceedings - - - - - 279
- State News - - - - - 281
- Progressive Medicine - - - - - 282
- Members W. Va. Medical Association - 288

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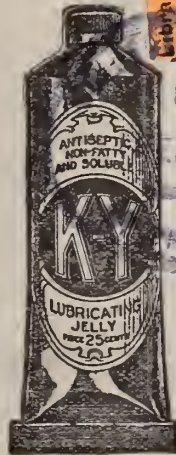
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MEDICAL JOURNAL

Published by
The West Virginia State Medical Association

Vol. IX.

March, 1915

No. 9.

Contents

	Page
Original Articles	
A Study of Joint Bodies	
Aime Paul Heineck	291
Acquired Non-Traumatic Cataract of the Young	
C. B. Wylie	298
Syphilis-Salvarsan-Scepticism	
W. C. Slusher	301
A Case of Sporotrichosis	
Haynes and Cherry	303
Correspondence	
Southern Surgical and Gynecological Association	
J. E. Cannaday	303
Original Abstract	
Standardization of Public Health Officers and Their Work	307

Selections	
Causes of Reduced Rates from Tuberculosis—American Medicine	308
Antityphoid Vaccination in Childhood	
Major Russell	310
Twilight Sleep	
R. E. Venning	311
Editorial	
Suffering of Belgian Physicians	312
New Public Health Bill	313
Society Proceedings	316
State News	317
Reviews	318
Progressive Medicine	319

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THE WEST VIRGINIA MEDICAL JOURNAL

Published by
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April, 1915

No. 10.

Contents

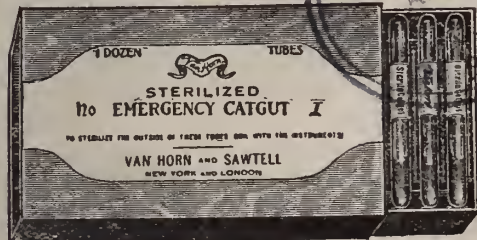
Original Articles.	Page	Correspondence.
The Rights and Duties of a Physician in Court - - - - H. C. Hervey	327	Southern Surgical and Gynecological Association - - - J. E. Cannaday 342
Conservation of Vision - B. F. Matheny	331	Selections.
Laboratory Work and the General Practitioner - - - S. L. Cherry	334	The Treatment of Drug Addictions - Journal Am. Med. Association 346
Etiology, Pathology and Treatment of Valvular Heart Lesions - - - - D. T. Williams	337	Tracheotomy, a New Retractor and Tube Pilot - - - - F. L. Hupp 350
Surgical Treatment of Disturbed Menstruation - - - - J. A. Guthrie	340	Editorial.
Enormous Doses of Antitoxin in an Infant - - - - C. A. Fleger	342	The Huntington Meeting - - - - 352
		Society Proceedings - - - - 355
		Book Reviews - - - - 357
		Progressive Medicine - - - - 358

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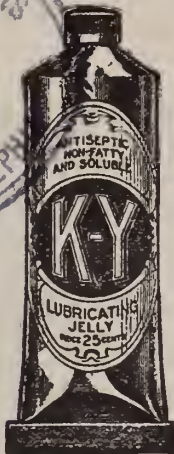
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THE WEST VIRGINIA MEDICAL JOURNAL

Published by
The West Virginia State Medical Association

Vol. IX.

May, 1915

No. II.

Contents

Original Articles.	Page	Selections.	
Antecedents of High Blood Pressure and Nervousness - Tom A. Williams	363	Constipation and Epilepsy - - - -	C. A. L. Reed 382
Rights and Duties of the Physician in Court - - - Judge H. C. Hervey	366	Insanities of the Puerperal State - -	F. W. Langdon 383
Insanity More Preventable than Curable - - - - - L. V. Guthrie	370		
The Diagnosis of Mediastinal Tumors J. Schwinn	374	Editorial.	
The Laboratory and the General Practitioner, Part II - - S. L. Cherry	377	Stop! Look! Read! - - - - -	386
Eclampsia—With Report of Cases - C. R. Foutche	379	Society Proceedings - - - - -	387
The County Medical Society - - - - J. E. McDonald	380	Progressive Medicine - - - - -	390



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THE WEST VIRGINIA MEDICAL JOURNAL

Published by
The West Virginia State Medical Association

Vol. IX.

June, 1915

No. 12.

Contents

Original Articles.	Page	Selection.	
Presidential Address - H. P. Linsz	397	Progress in Obstetrics - - - - -	F. T. Van Eman 417
Early Diagnosis of Tuberculosis J. W. Gilmore	402	Editorial.	
Pellagra - - - - B. B. Sturdevant	405	Our Forty-eighth Annual Session - -	421
Pellagra in W. Va. Hospital for In- sane - - - - - Pettit & Denham	406	A New Cancer Cure - - - - -	422
Observations on the Effects of Pitui- trin - - - - - J. L. Miller	411	State News - - - - -	425
Puerperal Eclampsia - U. G. Cook	413	Society Proceedings - - - - -	425
Amebic Dysentery - T. E. Romine	416	Minutes State Medical Society - - -	425
		Index - - - - -	431

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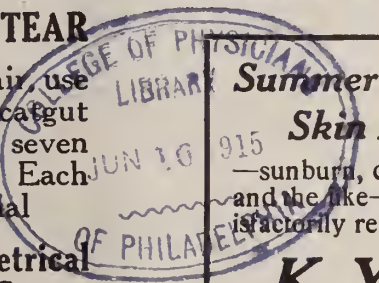
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DR. LONZO O. ROSE begs to announce that he is prepared to make **The Wasserman Blood Test** for the diagnosis of Syphilis in an especially equipped Laboratory. Blood takers and full instructions for their use will be mailed promptly on request.

All Anti-syphillitic treatment must be discontinued for at least 60 days before blood is secured for The Wasserman Test.

Please give a brief History of the case, (including an outline of the treatment) especially where an opinion is wanted.

Examinations of Blood, Stomach Contents, Stools, Tonsillar Exudates, Pus, Sputum, Urine, Semen, Milk, Tumors and Drinking Water.

Serums and Vaccines (both immunizing and curative) furnished Physicians on short notice.

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Dr. Lonzo O. Rose

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