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Original Communications.

PRESIDENT'S ADDRESS TO THE TORONTO PATHOLOGICAL SOCIETY.

By H. B. ANDERSON, M.D., C.M.

Professor of Pathology, Trinity Medical College. Pathologist to Toronto General, Royal Victoria Hospital for Sick Children, and Western Hospitals.

GENTLEMEN,—In assuming the duties of President of the Pathological Society for the ensuing year, allow me to thank you for the honor you have done me by electing me to the position. I appreciate the distinction the more on considering my predecessors in the office, since the organization of the society-men who, by long years of faithful service in the profession, have won for themselves respect and distinction.

I fully realize that many others of our members, by reason of age and experience as well as by services rendered the society, are better qualified and more deserving than myself to preside over your meetings.

However, since it has been your pleasure to elect me, I shall earnestly endeavor to discharge the duties of the office in the best interests of the society and acceptably to you.

If time and attention given to the promotion of the society's welfare can atone for many other deficiencies, they will be cheerfully given, relying at all times upon your kindly counsel and hearty support.

The personal responsibilities of the position will be greatly lessened by the good fortune that has associated with me on the Executive Committee men who have always given the society their faithful service, and are enthusiastic in furthering the objects for which it was organized.

During the coming year your committee will aim at providing programmes of as high a standard of excellence as possible, in which object they will expect the full co operation of all the members. In this connection I would remind you of the article in our by-laws which requires that each member shall submit at least two communications to the society each year. As you will be called on for these during the session, you are asked to accept this as timely notice, that you may have ample opportunity for their preparation. If I may be permitted the observation, we would ask that each member make a special effort to present cases or specimens as fully worked up as possible, which will be greatly to our mutual advantage by giving as high character as possible to the proceedings of the society. To this end, before each meeting longer notice than heretofore will be given, as no doubt we all have felt that the short time left for preparing a subject has not always allowed the full and careful attention we would have desired to give it. Your committee have also asked me to direct your attention to the clause in the constitution which requests "that in the remarks made in reference to specimens exhibited, all discussions on the topics of diagnosis and treatment shall be avoided, except in so far as they illustrate the pathology of the subject."

That we may preserve the individuality of this as a pathological society, it is necessary to bear this in mind. If the rule is not religiously adhered to, the object had in view by those who founded the society—viz., to promote and facilitate the advancement of pathology—will be defeated.

In the discussion of the various subjects members are asked to write on the sheets furnished for the purpose the remarks they desire for publication. This plan, which I believe has been successfully adopted in other societies, will not only lessen the rather arduous duties

of the recording secretary, but will enable us to have more accurate reports of the meetings for publication.

In concluding my preliminary remarks, I can only express the wish that during the coming session the interest heretofore taken in the meetings of the Pathological Society may be maintained, and that, as in the past, we may spend a pleasant and profitable time together.

For a short time this evening, I propose to discuss Pathology in its relation to medical practice. This suggested itself to me as a suitable subject, in view of the fact that the membership of the society is composed largely of men who are interested in pathology for its direct bearing on clinical work—for its assistance in the diagnosis, prognosis and scientific treatment of disease.

I also considered it suitable because, even at this late date, there are men in our profession who have no appreciation of the importance of pathology to the clinician—who speak of it as a subject suited to the amusement of the enthusiastic theorizer, but of little use in the field of practical medicine.

These same men, relying upon that cloak for so much ignorance which they affect to call *experience*, will dispute learnedly as to whether a given case is one of consumption or bronchitis, diphtheria or tonsillitis, malaria or typhoid fever, forgetful or unaware of the fact that a comparatively simple examination could place the matter beyond all dispute. Remarkable as it may seem, we all know that such medical Rip Van Winkles actually exist.

One of the greatest benefits pathology has conferred on practical medicine has been to give us an intelligent conception of what is implied by the term—"disease." For centuries and even up unto comparatively late times, not only among the laity, but in the profession itself, a superstitious haze surrounded the idea of disease, attributing its phenomena to a direct visitation of Providence or to the arbitrary workings of supernatural agencies.

As evidence of the lack of any clear insight into the true nature of disease, we need only recall the various fantastic theories, which from time to time were advanced to explain it, and the equally ridiculous—and irrational to us—systems of treatment that were brought forward. So long as men's minds were continually directed to the supernatural, rather than to their own surroundings, for the explanation of the incidence of disease, it was not to be expected that any progress could be made in etiology and consequently none in rational therapeutics. It was almost a religious act to submit with unquestioning faith to what was deemed the will of God. Even yet, showing the vitality

of these superstitious ideas, we not infrequently hear people piously attribute to the decrees of divine Providence sickness and death, resulting from the grossest violation of natural laws and the ordinary rules of sanitation.

Thanks to the fruitful labors of Hunter, Pasteur, Cohnheim, Virchow, and others, the foundation was laid for a more rational conception of disease. It came to be recognized that there is no essential difference between pathological and physiological processes. They are both governed by the same natural laws. Health and disease are both manifestations of life. The laws governing the actions and mechanisms of our organs and tissues are always the same, both in health and disease, but the external conditions acting upon them, and under which they perform their functions, are continually changing, as the diet we use, the climate we live in, temperature to which we are exposed, the occupation we follow, the exercise we take, the clothing we wear, the bacteria to which we are exposed. Fortunately, our bodies have the capacity of accommodating themselves to a greater or less degree to these ever-changing external conditions—compensatory or regulative mechanisms we call them. These regulative mechanisms are possessed by different individuals in different degrees, and constitute what we ordinarily understand as one's "resisting power." Under ordinary circumstances our health depends upon the *extent* and *energy* of the compensatory or regulative powers we possess.

Thus we get the idea of disease, as defined by Cohnheim, as a deviation from the normal or healthy vital processes due to the action of external conditions, which the regulative mechanisms of our bodies are unable to accommodate themselves to, so that the various functions are properly performed. Therefore we understand that there is no such thing as disease in itself, "as a something *imported* into the system, as a possession of it by a *malign agent*, which may be expelled by some sorcery or virtuous herb." It is the vital reaction of the system to deleterious external conditions, and as such is a conservative process tending to the preservation of the organism.

So from the consideration of disease as an *entity*, men's minds were directed to the study of the causes that produce the phenomena of disease. The outcome of this was the wonderful discoveries of Pasteur, Koch, Lister, and others, of the relationship of microorganisms to the etiology of disease—discoveries that have revolutionized not only the *science* but the *art* of medicine. Etiology now became one of the most important branches of pathology.

Then when it became clearly recognized that we could not alter the mechanism of the organs and tissues of the body, nor the laws that govern their action, but that we have considerable power over the *external conditions* affecting them (and in this power alone had we ability to influence disease), a *definite limit was set to the range of rational therapeutics*. In treatment we have to deal, not with *disease* itself, but with the *causes* producing it. As Albutt says : "Whether the causes be prevented *inside* the body or *outside* it matters not. To kill Laveran's microbe within the body by eating quinine is not to cure an ague, but to prevent the cause of a *future* ague. If we keep clearly before us this distinction between the causes of disease and disease itself, we shall use our remedies more intelligently, we shall see how dominant is the sphere of *preventive* medicine, and that *curative* medicine is often but the ancillary mouse that liberates the body for its own work of recovery."

Not only has pathology given us an intelligent conception of what disease is, led to the great progress made in recent years in etiology, set the limit to our range of action in rational therapeutics, but it has given rise to those wonderful advances in sanitary science which forms one of the most distinguishing features of the nineteenth century. Epidemics which in former days decimated the population, infective diseases which were the scourge of hospital wards, are now practically matters of history.

By its influence in preventing the occurrence of disease, it must also be credited with having had a very direct effect on us as a profession, by very greatly reducing those filthy lucrous tumors, which, in bygone days, so ancient records inform us, were wont to grace the superior antero-external aspect of the femoral region of the medical practitioner. For this service may we be given grace to be thankful.

But apart from these considerations, which have revolutionized medical science as a whole, pathology is of very practical use in the diagnosis, and consequently in directing the treatment of individual diseases, which may now be briefly mentioned.

In the active treatment of disease it has already given us several specific remedies which experience has proved to be of unquestionable value, and the prospects for future results along this line are most encouraging.

Time has confirmed Koch's bacillus as the specific cause of tuberculosis, and its demonstration is now universally used for the early diagnosis of consumption. While the presence of this organism in the sputum may be taken as positive evidence of the exist-

ence of tuberculosis, the failure to find it in a given specimen does not, unfortunately, enable us to say with equal certainty that the disease does not exist.

In genito-urinary tuberculosis, the discovery of the bacillus in the urine renders the diagnosis certain, though from the great dilution, the task is much more difficult, requiring time and patience. The use of the centrifuge and animal experiments are both of great service in its demonstration.

In malaria, the comparatively easy demonstration of the plasmodium in unstained specimens, furnishes us with a simple method for its certain diagnosis. No experienced microscopist, who has once seen this beautiful organism, is likely to misinterpret changes in the red blood corpuscles for it.

Increasing experience with the serum reaction for the diagnosis of typhoid fever seems to justify the early hopes entertained for the usefulness of the method. A positive reaction is given in over ninety per cent. of the cases.

Possible sources of error from an examination of the blood before the agglutinative power has developed, pointing in doubtful cases to the necessity of repeated examinations, and the fact that the blood may retain this power for an indefinite period after convalescence, so that a previous attack of typhoid fever might give rise to erroneous results in the examination of the blood of persons suffering from other diseases must, of course, be given due consideration.

Practical results will probably also be established in the use of the serum diagnosis in other diseases besides typhoid.

The bacteriological examination, though as yet not entirely free from objections, is now generally used for the *diagnosis* of diphtheria. From this same examination, recognizing the association of bacteria, a certain amount of information of prognostic value may be obtained.

In obscure septic cases, the making of cultures from the blood has proved of considerable practical use—cases of septicæmia due to the streptococcus, staphylococcus, gonococcus, pneumococcus, anthrax bacillus, typhoid bacillus, etc., having been cleared up by this means. Where no organism is found the negative results may be of considerable value. The technique is simple, and in such cases as mentioned, the usefulness of the procedure warrants its being more frequently resorted to than it is at present. For the rational treatment of septicæmias by specific serums, its employment becomes a necessity.

In anthrax, an early diagnosis may readily be made by demon-

strating the bacillus in cover slips prepared from the seat of infection, or, if necessary, by inoculation experiments in susceptible animals.

The presence of the gonococcus is generally taken as evidence of the existence of gonorrhœa, though the morphology of the organism alone must not be relied upon. If the other tests—as its presence in the pus cells, its decolorization by Gramme's method, and its cultural peculiarities—are responded to, the diagnosis may be confirmed.

For the diagnosis of diseases of the blood, the introduction of instruments for the estimation of hæmoglobin and for the enumeration of the blood corpuscles has proved of great service. By the use of these instruments, along with the examination of dried blood specimens, the diagnosis can now be made in chlorosis, leukæmia and pernicious anæmia, and an intelligent idea of the condition of the blood in the various symptomatic anæmias obtained. The differential counting of the leucocytes enables us to distinguish the different forms of leukæmia from each other, and from a leucocytosis. While the work of Ehrlich and others has added greatly to our knowledge of the leucocytes, these advances, thus far, have been more of scientific than practical interest, though the future may have good things in store for us, they may, however, throw valuable side-lights in the diagnosis of certain diseases.

Of the clinical value of chemical and microscopic examination of the contents of the stomach I do not propose to speak, as the results here, great as they have been, are as yet of a suggestive, rather than of a positive character.

The same may be said of the examination of the fæces, except that the discovery of the amœba coli clinches the diagnosis in one variety of dysentery.

In urinary analysis the introduction of convenient forms of albuminometer saccharometers and ureameters for quantitative analysis, enables us to easily get results sufficiently accurate for practical purposes. Here, also, the introduction of the centrifuge has proved of great service—a necessity, in fact, for the proper demonstration of bacteria, casts, etc. The application made by Purdy of the use of the centrifuge in the quantitative analysis of the various urinary salts, etc., renders this procedure simple in comparison with the older tedious methods.

Of the histological examination of tumors and other morbid tissues, this is so generally recognized as necessary that I shall say nothing more than to mention the value of the examination of uterine scrapings in the diagnosis of diseases of that organ. This has proved so useful that a more extended use of it is warranted.

In this brief summary I do not pretend to have covered the wide field included in my subject, but sufficient has been indicated to show how essentially pathology is related to the intelligent practice of medicine at the present day.

It would be folly to claim that the advancement made in medical science and practice during the past few years is wholly due to pathology, for the concurrent increase of knowledge in the allied sciences of chemistry and physiology has aided and rendered possible discoveries in medicine which could not otherwise have been attained.

They have all had their part in bringing about what Prof. Richet speaks of as the reconciliation of medicine and science, and as they advance medicine will advance with them.

While most gratifying results have already been attained, much remains yet to be done. How little we still know of the etiology of such common morbid conditions as are found in malignant tumors, or in rheumatism !

Moreover, as in all revolutions so in medicine, the enthusiasm born of newly acquired knowledge and power, while upsetting much that is false, has a tendency to destroy some things that are true. As Albutt well remarks : " The purely scientific physician tends to undervalue opinion as the man of the world overvalues it, and prevalent opinions, though not formal truth, generally contain truth." We are still in the transition period in the evolution of medicine, and it is better for us to hold fast some of the good things, which the accumulated experience of centuries has endorsed, at least, until we can replace them by something better. It is perhaps well, for the present at least, that we have a large conservative element, especially among practising physicians, who temper with " traditional lore " newly formulated opinions and observations until they have been thoroughly tried and proven. Considering what has been accomplished in the recent past, and the present enthusiasm in all departments of medicine, we look forward with bright hopes to the future of what has been called " the most progressive of the sciences."

THE EFFECT OF GRAVITY ON THE CIRCULATION.*

BY R. D. RUDOLF, M.D., Edin.

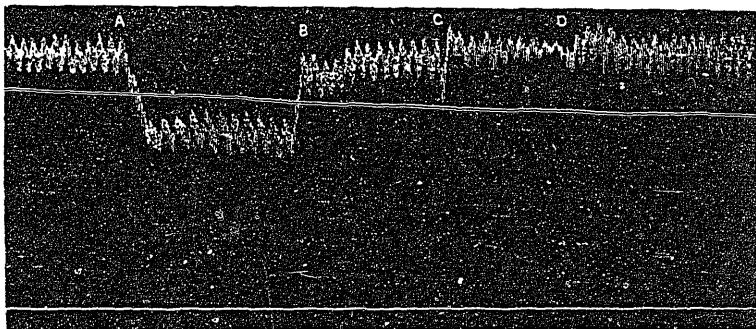
THE effect of gravity upon the circulation has long been known, to a certain extent, and made use of in the treatment of disease, somewhat blindly perhaps, both by the laity and the medical profession. Lately, however, the subject has attracted some attention, and an attempt has been made to investigate the effects of this force more in detail, and, perhaps, it may be not altogether waste of time for us to devote a few minutes to a short *resumé* of the matter.

While everyone is aware of the fact that the force of gravity, unless counteracted in some way, must have an effect on the circulation, it is wonderful how little notice is taken of it by most authorities, and Foster, in his otherwise so complete work on physiology, does not even allude to it. Marshall Wall, in a search on the effects of loss of blood, found that after recovery from a severe hæmorrhage, the syncopal condition could be at once reinduced in dogs by placing them in the vertical feet-down position, then the countenance and eye languish, the head droops, the mouth opens, the respiration is panting, and the heart is scarcely to be heard. Immediate relief was given by reversing the position. To Mr. Leonard Hill, of London, belongs, I think, the credit of having placed the subject on a thoroughly scientific basis. And the tracings here given are taken from his book on "The Cerebral Circulation." The Hyderabad Commission also, with Dr. Lauder Brunton at their head, did numerous experiments showing the effect of various postures on animals during the administration of chloroform.

Looking first at the effects of gravity on the circulation in the lower animals, we find that experiments on dogs, cats and rabbits, show that alteration in the position of the body from horizontal to vertical produces a considerable change in the blood pressure; *e.g.* let the blood pressure be measured by a manometer in the carotid artery of a dog when the animal is in the normal; *i.e.*, horizontal

*Read before the Ontario Medical Association, Toronto, June, 1897.

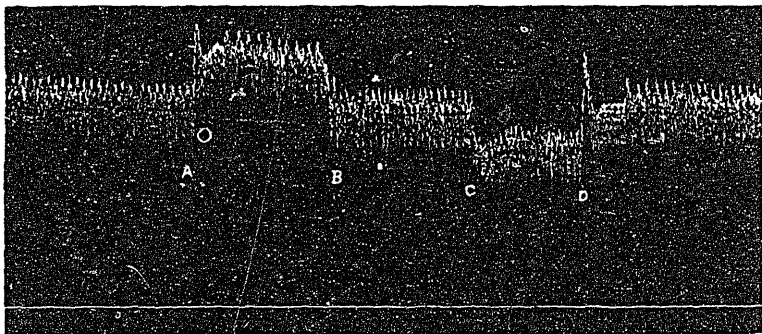
position. Then place him vertically, with the hind feet downwards, and the carotid blood pressure falls promptly.



TRACING I.

A, feet down. B, horizontal again. C, vertical, feet up (note very little effect). D, horizontal again.

Again, measure the pressure in the femoral artery and it is found that this is highest in the vertical feet-down position and lowest in the opposite, or head-down one.



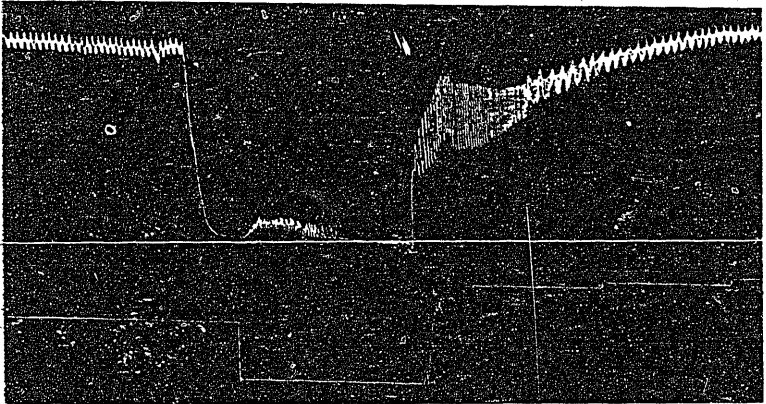
TRACING II.—FROM FEMORAL ARTERY.

A, vertical, feet down. B, horizontal. C, vertical, feet up. D, horizontal.

It was further found by Hill that the pressure in the femoral and the splenic *veins*, *i.e.*, in the systemic and portal venous systems, varied in an even more marked manner under the influence of gravity, showing, as we would expect, that the venous circulation is even more under the influence of this force than is the arterial.

As has been conclusively proved by physiologists, it is the portal system of blood vessels, presided over by the splanchnic

nerves, which specially is concerned in the upholding of the general blood pressure of the body. The blood pressure markedly falls if the portal flood gates are thrown open by section of the splanchnics and on the other hand rises if these be stimulated. These nerves may be paralyzed by other means than section—nitrite of amyl, chloroform, and curarè, all acting in this way. Now, given such a paralysis, note the effect of gravity. Here is a chart showing the blood pressure in the carotid. The cord was divided in the upper

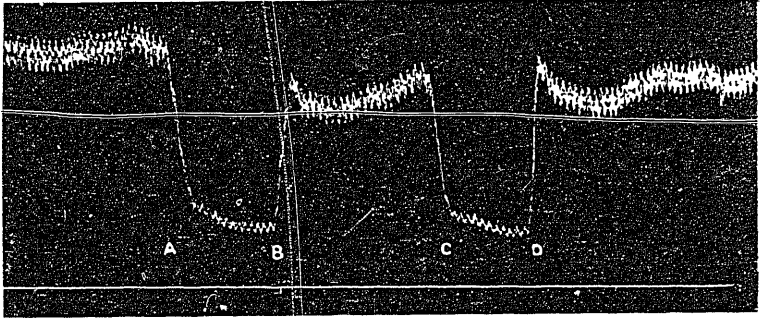


TRACING III.

dorsal region with the animal in the feet down position, and at once the pressure fell to zero and the heart became weak, and the respirations gasping. The abdomen was maintained in a retracted state. Evidently the blood was accumulating in the abdominal veins, and the animal, by retracting the abdominal muscles and gasping, was unconsciously doing its best to empty the paralyzed and engorged abdominal vessels and so get some blood into the heart. When the animal was reversed, and the feet put upwards, the blood pressure rose at once, gravity then coming to its assistance instead of being an impediment. The same effect was produced by bandaging, or pressing the abdomen, thus driving the blood out of the abdominal vessels.

As regards the effect of abdominal pressure, it is interesting to note that Stephen Hale, in his classical experiments on blood pressure, recorded that "when the blood has subsided in the tubes which were fixed to the arteries of these dogs, it would, as in the horses, rise, on a sudden, considerably on deep sighing, as also on pressing the dogs' bellies hard with the hand. The blood would

rise immediately about six inches and subside as much on removing the hand."



TRACING IV. (OF BLOOD PRESSURE IN CAROTID.)

Splanchnics weakened with a mixture of chloroform and ether in equal parts. A, feet down. B, broad bandage drawn round abdomen, C, bandage removed. D, horizontal.

Again, if the abdomen be *first* of all rightly bandaged, then it is found that putting the animal in the vertical, feet-down position produces almost no fall of blood pressure in the carotid, even if the splanchnic nerves be cut or paralyzed by chloroform or curarè. To quote Leonard Hill's words : "a dog was placed in the horizontal position . . . the abdomen firmly bandaged, and the spinal cord divided in the upper dorsal region. On placing the animal feet downwards, the blood pressure in the carotid fell only a few millimetres. After a few minutes I removed the strapping from the abdomen, the pressure immediately fell to zero, and the animal died. If the wall of the abdomen be very freely divided by a crucial incision when the animal is in the feet-down position, the blood pressure will fall, largely in consequence of the withdrawal of mechanical support from the splanchnic vessels."



TRACING V.

Shows the effect of chloroform in lowering the blood pressure and also the effects of position and abdominal pressure on the same. A, feet down. B, chloroform pushed. C, chloroform removed (note that low pressure continues). D, abdomen compressed. E, compression removed. F, feet up.

It is seen that compression of the abdomen and putting the animal in the feet-up position have just about the same effect on the carotid blood pressure.

This tracing confirms what MacWilliam stated in the *British Medical Journal* of 1890, Vol. II. He wrote as follows: "The fall of blood pressure caused by chloroform is due primarily to a depressing influence of the drug on the vaso-motor centre. Later on the heart is weakened. When a great fall of blood pressure has been produced by the inhalation of chloroform, inversion of the animal exerts a slight effect in raising it. But by far the most powerful means of influencing the carotid pressure under chloroform is by applying continual firm pressure over the intact abdomen."

So much for the effect of gravity in lower animals, which normally assume the horizontal position. To summarize, it is found that in them:

(1) Gravity *acts* on the circulation, producing, in the vertical feet-down position, a lowering of the carotid blood pressure and a rise in the portal and lower part of the systemic systems.

(2) If the great vaso-motor nerves, *i.e.*, the splanchnics, be cut or paralyzed by drugs, the effects of gravity are very much more marked, thus showing that this force chiefly acts on the portal circulation.

(3) Any artificial support, such as bandaging, neutralizes the effect of gravity on the contents of such paralyzed vessels.

(4) Version to the head-down position acts in the same way, emptying the engorged abdominal circulation.

Turning next to the effect of gravity on normally upright animals, in monkeys it is found that inversion of the body does not alter the general blood pressure, and probably in normal man the same state of things exists. Dr. Oliver, of London, by an ingenious instrument called the arterio-meter, has investigated the effects of different positions on the diameter of the radial pulse in man, and finds that in health the pressure here is actually greater when he is vertical than when recumbent. In other words, the human vaso-motor centre compensates fully, or even over-compensates, for the force of gravity—this being effected by a quickened heart-beat and probably an increased constriction of the abdominal blood-vessels. If, however, the person be weakly, then gravity acts and the blood-pressure becomes less in the radial artery in the vertical than in the horizontal posture.

In animals, as we have seen, the vertical head-down position has very little effect upon the blood pressure, raising it, however, a little

in the carotid artery. In man the compensation for this position is not so complete, and it produces an engorgement of the vessels of the head and neck in a way which standing does not do in the feet. The power of compensation for the head-down position seems capable of cultivation, however, as seen in people whose occupations necessitate their stooping much. Natives of India stoop for many hours a day planting out rice in the flooded fields, and this in the hot sun, without any evil effects, and Gerdy mentions that vine-dressers become able to work all day in a bending position with the head down.

Thus normally gravity gives man little or no trouble when standing, sitting or lying down, his vaso-motor centres being fully able to neutralize its effects.

Very different, however, is the state of things when the circulation becomes weakened from any cause. Here we find that gravity is a most potent factor in the production of the signs and symptoms of various diseases. Especially important is it in diseases of the circulation. Diseases of the heart may, for our present purpose, be roughly divided into (1) those interfering with the flow of blood towards and into the left ventricle; and (2) those which hinder or weaken the free flow of blood *out* of the left ventricle. In the former class, engorgement of the venous system, with cyanosis and dropsy as signs, predominate, while in the latter insufficient filling of the arteries with blood, with cardiac dyspnoea and tendency to syncope as symptoms, is the chief result. In both these classes gravity finds a fair field for action, and hence come in the venous type of cases; for example, in an advanced case of mitral stenosis, the dropsy and swelling of the feet after standing, and in the arterial type of cases, for example, in aortic regurgitation, the tendency to fainting and dizziness in the vertical position. It is evident also how by placing the patient in a horizontal position in bed we remove an impediment to the lagging venous flow in the one case, and in the other make it easier for the weakened or hampered left ventricle to do its work. Again, the action of gravity explains, at least in part, why in a case of weak and dilated heart, *e.g.*, in far advanced exophthalmic goitre, sudden sitting up in bed may cause the already yielding heart to stop in diastole. It had all it could do to work when the patient was horizontal, and when called upon to act in addition against a column of blood extending from the heart to the head, it gives in, and he dies suddenly. Inertia also comes into play here, the blood tending to lag behind when the body is suddenly moved in any direction. Dr. Lauder Brunton, in his recent work

on "The Action of Medicines," mentions how "Before the introduction of chloroform, a curious plan was employed in Paris for causing temporary anæsthesia. They laid the man who was to be operated upon flat upon the ground. At either side of him they had three strong men, who at a given signal raised him quickly from the recumbent to the standing position. The head was raised quicker than the blood could follow it, and this temporary anæmia of the brain brought about a faint, during the continuance of which the operation was performed." In emaciating diseases, such as carcinoma, when death is near and the strength of the circulation is small, hypostatic congestion of the superficies and different organs of the body may set in, due to gravitation of the blood to the most dependent parts. In more acute conditions, such as shock and syncope, there is a tendency to paralysis or weakening of the splanchnic nerves, and as a result the patient "bleeds into his abdominal veins," as it has been graphically described. This is, as is well known, much more apt to occur when the body is vertical, gravity then helping the blood to thus accumulate.

Examples of the action of this force in aggravating different diseased conditions might be enumerated almost indefinitely, but I will only mention two more. First, the distension of the spermatic veins in varicocele when the body is vertical, as contrasted to their comparative emptiness when it is horizontal, and, second, the congested and cyanosed condition of many ulcers of the leg when the patient is standing, this sign largely disappearing when he lies down or raises the limb.

The lessons to be learned from a study of the action of gravity on the circulation seem to be that, while in health, we may ignore its existence, in disease its consideration is of importance, and we may do good (1) by neutralizing its effects, (2) or occasionally by actually making use of the force.

Whenever there is a weak state of the circulation from any cause, then it will help the patient much to keep him horizontal, and the good effects of this are well seen in cases of commencing failure of compensation. But even long before this break-up occurs, the more the patient can rest in this position the less his overworked heart has to do, and hence the longer compensation will be likely to be fully maintained. This is, I think, a very important point, and worth emphasizing. If the heart beats, say ten times less a minute when the patient is lying as compared to standing, then it is saved a certain amount of work, and hence will not so soon give out.

And in those who *must* go about, some mechanical support to the dilating veins of the lower limbs and abdomen should help to prevent the blood from lagging here—elastic webbing, stockings, and belts of various sorts no doubt act in this way, and this may explain to a large extent the popularity of so-called galvanic and other patent belts—their giving a support to the abdominal veins. And may we not here find also a reason for “the girding up of the loins,” practised by the ancients before entering upon any very fatiguing exercise, such as running great distances?

We saw how the splanchnic nerves, or their centres, were easily paralyzed in animals by various drugs, such as chloroform, and how then gravity produced a rapid fall in the arterial blood pressure in the carotids when the feet-down vertical position was assumed.

Without entering upon the much-debated ground of the effects of chloroform on the body, it seems that here we have a most urgent reason why this anæsthetic should only be given with the patient horizontal. I would further venture to suggest that a firm bandage previously applied round the abdomen, might be a safeguard, especially in women, where the respiration is chiefly thoracic, and hence would not be much interfered with by such treatment.

Hill suggests that the reason why chloroform is taken with such immunity by pregnant women is that the intra-abdominal pressure produced by the enlarged uterus prevents accumulation of blood in the abdominal veins. While not going quite so far as this, I think that there is probably some truth in the explanation, but the physiological hypertrophy of the heart in this condition must not be ignored.

Lastly, we may not only neutralize the effects of gravity by placing the patient more or less horizontal and by judicious support, but may, on the other hand, occasionally make use of this force by raising above the level of the heart a part of the body in which the blood has accumulated to an abnormal extent. A good example of this is the beneficial result obtained by placing a limb, affected with varicose veins, on a level above that of the body.

Also in cases of too high blood pressure, placing the patient in the vertical position, *e.g.*, making him sit up in bed ought to assist the compensation for the excessive tension, especially if all constrictions round the abdomen be removed, the splanchnic vessels then being given every chance of dilating freely. This position, too, with an unhampered condition of the abdominal walls should assist the action of nitrite of amyl and nitro-glycerin, or the slower and more persistent effects tetranitrate of erythrol.

It is impossible in a paper like this to do more than enumerate a few examples of the wide-spread effects of gravity in diseased states of the human body, and this I have in a very feeble way attempted to do.

Selected Articles.

THE MEDICAL TREATMENT OF TOOTHACHE.

BY FREDERIC C. COLEY, M.D.,

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BEYOND all question the treatment of toothache is mainly surgical. An aching tooth is usually carious and should be "stopped," if that can be done with a fair prospect of success. Carious teeth which cannot be "stopped" had better be extracted as a general rule. But I need not waste time in enumerating the circumstances which often arise to make these simple rules inapplicable; and no one who has recently suffered from a "jumping" toothache will be inclined to think that I need apologize for asking a little space in which to enumerate the remedies which I have found successful in such a common and painful ailment.

I may say at once that I believe that very few toothaches are incapable of permanent relief without extraction of the tooth. That operation is very often the most desirable way of procuring relief, but it is very rarely the only way. Thousands of people have carious teeth without toothache, which proves that caries is only one factor in the production of pain. The other factor may (and commonly does) prove to be removable, and then the pain ceases, though the carious tooth remains. And, on the other hand, it is only too common to find that neuralgic pain persists after the extraction of tooth after tooth, which might perhaps have done good service *in situ*.

A toothache which is "scotched" by appropriate means often ceases permanently; or it may return once or twice (being again relieved by the same, or some other, remedy) and then finally disappear.

To attack a pain of this kind by a mere narcotic, such as opium or morphia, seems to me rather clumsy therapeutics, and we can

usually find much more suitable methods. Alcohol in any form is still more objectionable. One of the most melancholy cases of alcoholism that ever came under my own observation had its origin in the inconsiderate recommendation of stout as a remedy for dental neuralgia. It is partly because I desire to replace these dangerous narcotics by more effectual and safer remedies that I have determined to write the present paper.

The pain of a hollow tooth may generally be entirely removed by inserting in it a pledget of cotton-wool soaked in carbolic acid liquefied by the addition of an equal quantity of water. A pledget of dry wool should be placed over the carbolized wool, to retain the acid. The aching usually ceases in a few minutes, but may recur after a few hours, to be again relieved on a reapplication of the carbolic acid. A very few repetitions commonly suffice to make the cure permanent. But of course the hollow tooth should be stopped, if possible, afterward.

A gentleman came to me one day in terrible agony from a raging neuralgia located in the part of his lower jaw from which he had lately had several teeth removed. I applied to the gum rather less than half a grain of cocaine in powder. In a minute or so he exclaimed, "It is gone!" and the changed expression of his countenance showed how complete was his relief. Better still, the neuralgia never returned, though he had previously suffered from it at intervals for a considerable time. Probably the permanence of the cure was attributable to a quinine mixture which I also prescribed.

It would, however, be very unwise to give the patient a prescription for cocaine or a quantity of the drug to be reapplied p.r.n. Such a course would involve no little danger of setting up a habit leading to cocanism.

Persons who have been for some time deprived of a proper allowance of sleep, from any cause, are very liable to be painfully reminded of the existence of any bad teeth which they may happen to possess by an attack of dental neuralgia. If this is not soon relieved by appropriate means, it tends to aggravate and perpetuate itself by still further depriving the patient of sleep. I have found the following prescription very useful in such cases :

R Quin. Sulph.	gr. ii.
Acid. Hydrobrom.	m. xv.
Tr. Gelsem.	m. xv.
Syrup.	℥i.s.
Aq. ad.	℥j. t.d.

I have seen a raging toothache completely relieved in a few minutes by a single dose of two grains of exalgin. It is best given in solution. Half a drachm of rectified spirit will dissolve as much as gr. xx of exalgin, and this does precipitate on dilution with water. Exalgin is, however, a somewhat uncertain remedy. Sometimes it is a brilliant success, and sometimes it is an utter failure.

There is a kind of toothache which comes on a while after taking food, when the contents of the stomach are naturally acid. This is often relieved with quite astonishing rapidity by the administration of an alkali. The best way is to give a Seidlitz powder, minus about a quarter of the acid, so leaving an excess of alkali. In a typical case of this kind the pain ceases instantaneously—almost as soon as the effervescing draught is swallowed.

But of all medical remedies for toothache I know of none which is so successful as salicylate of sodium. I believe it is especially useful in those cases where the pain is started "by taking cold." Even in the condition which is called by dentists "periostitis," where the carious tooth becomes slightly loosened and projects beyond its neighbors, and is exquisitely tender when eating is attempted, I have often known sodium salicylate to be completely and permanently successful. A dose of gr. xv. will usually relieve the pain very promptly, and if this is repeated every four hours the inflammation may entirely subside, leaving, of course, a carious tooth to be disposed of according to circumstances. The addition of belladonna is often advantageous. Fifteen grains of sodium salicylate, with fifteen minims of tincture of belladonna, will often procure refreshing sleep instead of a night of agony.

I believe that this use of salicylate of sodium is not generally known. I first became aware of it by experience in my own person; and since then I have used it with many brilliant successes and a few failures in a very large number of patients. I have, once, however, known phenacetin to succeed where the salicylate failed. But the salicylate is much more worthy of confidence as a rule. It is especially valuable in children, where extraction of teeth is to be avoided, if possible, lest the development of the maxilla should be injured.—*The Practitioner*.

Progress of Medicine.

OBSTETRICS

IN CHARGE OF

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WALCHER'S POSITION IN LABOR.

I have had a case recently in which I used with great advantage Walcher's position in parturition, the use of which was advocated at the Carlisle meeting last August, and in the *British Medical Journal* of October 31, 1896. The details were as follows:

Mrs. P. had menstruated regularly and without pain since the age of 15, and had been married two years. At her first confinement on December 28, 1895, she was delivered with forceps, after great difficulty, of a child, which was dead when born.

On January 11, 1897, she was at full term. Pains began in the night and the waters broke at noon the following day. During the afternoon and evening of January 12 she had severe pains. Early the next morning the midwife, who was in charge, sent for me, and I thus first saw the patient at 6 a.m. on January 13. I found dilatation complete, the head presenting in the L.O.A. position but arrested above the brim of the pelvis. I at once gave chloroform and applied Professor A. R. Simpson's axis traction forceps in the left lateral position, and made three separate and prolonged attempts to pull the head past the brim, using much more force than I ordinarily find necessary for that purpose.

I then decided to try Walcher's position. Having put the patient in the lithotomy posture, with the buttocks well over the edge

of the bed, I allowed the legs to hang down. The feet then rested on the floor. I therefore raised the pelvis by placing two pillows under the buttocks, and then found that the feet swung clear of the floor, so that the whole weight of the legs pulled the pelvis down and away from the sacrum. I then applied traction, and, though I was using less force than before, the head began to enter the pelvis, and passed the brim almost suddenly. Delivery was completed deliberately, and without further difficulty. After artificial respiration, the child breathed freely, and has developed no head symptoms, though the right frontal bone was bulged to an extent that suggested fracture.

The following measurements indicate the degree of disproportion between the head and the brim: The circumferences of the child's head were—occipito-mental, $15\frac{1}{2}$ inches; occipito-frontal, $14\frac{1}{4}$ inches; sub-occipito-bregmatic, $13\frac{1}{2}$ inches. The diameters of the pelvis were—interspinous, 10 inches; intercrystal, 11 inches; external conjugate, $7\frac{1}{4}$ inches; diagonal conjugate, $4\frac{1}{4}$ inches; estimated true conjugate, $3\frac{3}{4}$ inches. The pelvis was generally contracted with a somewhat projecting promontory. In this case the advantages of Walcher's position were very great, as but for it I am sure the life of the child could not have been saved without symphysiotomy, which, like craniotomy, would have exposed the mother to grave risk, exhausted as she was, by prolonged labor.—G. H. MITCHELL, M. B. in *British Medical Journal*.

SALINE INJECTIONS AFTER FLOODING.

Amillet (*L'Obstétrique*, July 15th, 1897) insists that after grave hæmorrhage in pregnancy or labor a saline intravenous injection is the best method for encountering acute anæmia. A 1 per cent. solution of chloride of sodium is the only available mixture which has no evil influence on the corpuscles. At least 1,500 to 2,000 grammes must be injected. In less serious cases 200 grammes can be injected under the skin; more than one dose may be required. Amillet recommends an intravenous saline injection or a subcutaneous injection before any obstetrical operation is performed on a woman exhausted by loss of blood. When the patient has clearly been revived by these means she must, in any case, be closely watched, as sometimes the good effects do not last. The injections must be repeated, if necessary, till all danger has passed away.—*British Medical Journal*, Sept. 4th, 1897.

ANÆSTHESIA IN NORMAL LABOR.

At the sixth congress of Russian physicians, Dr. Bakoemsky related his experience with fifty-three women, with normal labor, to whom he administered anæsthetics. To forty-five he gave ether, and to eight chloroform. The investigations carried on partly by the aid of the tokodynamometer, and partly by other instruments of precision, showed that during the administration of ether the pulse and the respiration remained almost the same, and the contractile force of the uterus was increased; the duration of labor was shorter; in no instance was there albumin in the urine; the involution of the uterus seemed to progress more rapidly; in the new-born, icterus was more rare; they lost less weight during the first week. The experience with chloroform was not quite so favorable, as it somewhat slows the progress of labor. In conclusion, the author says that in ether we possess an ideal remedy to abolish the suffering in labor, and we should employ it much more frequently than we do. He is surprised that this view is making such slow headway among physicians.—*American Medico-Surgical Bulletin.*

PREMONITORY SYMPTOMS OF PUERPERAL INFECTION.

Ferré (*L'Obstétrique*, September 15, 1897,) lays stress on the success of intra-uterine treatment for puerperal fever. This success stands in direct ratio to the earliness of intervention. Hence very careful clinical researches have been made in lying-in hospitals in order to detect true prodromata. The true rigor, local pains, and conspicuous pulse and temperature are known to all, and when combined indicate more or less advanced infection. Ferré denies that these symptoms ever come on suddenly, though certain milder types of infection now observed may represent sepsis modified by anti-septic agents. These milder types, however, will assuredly develop into deadly septic infection if neglected. Ferré finds, after long clinical research, that even the severest form is preceded for a day or two by distinct elevation of temperature and pulse, and by insomnia. An evening temperature of about 100° in the axilla, with a fall of about a degree in the morning, without a corresponding drop in a somewhat rapid pulse, is a distinctly suspicious symptom. The rise in the pulse often precedes the rise in the temperature; the observer must, therefore, make sure that acceleration of the heart's action is accounted for even in a patient who seems otherwise convalescent. Reaction after the fatigue of labor, hæmorrhage and emotions all send up the pulse. Insomnia, Ferré has noted, is

often observed in the earlier stages of infection, distinct want of sleep without restlessness is usual for a day or two before bad septic symptoms. The lochia may remain free from odor in the premonitory stage of puerperal septicæmia, nor are the discharges always fœtid when the disease is established.—*British Medical Journal*, October 9, 1897.

THE PRODUCTION OF MILK.

Budin (*Sem. Méd.*, May 21, 1897,) reports on an investigation made by him as to the amount of milk furnished hour by hour by the fourteen wet nurses in his maternity department. The nurses had their own and fifty additional children to suckle. By a kind of systematic training the milk production was gradually increased. On October 1, 1896, the average daily production of each nurse was 1,657 g. It was raised successively to 1,868, 1,953, and on November 29 to 2,270 g. Analysis showed that the quality remained uniformly good, and the condition of the infants confirmed this. The conclusion is that within given limits the supply of milk varies with the demand. To obtain a large quantity of milk the nurses must suckle the infants freely. It is found that if a woman has barely enough milk for one child the supply is much increased by giving her one or two infants to suckle.—*British Medical Journal*, June 26, 1897.

[We would commend this to the serious consideration of some of the charitable institutions in Ontario.]

THE TREATMENT OF PLACENTA PRÆVIA.

G. Fieux (*Annales de Gynéc.*, August, 1897, *British Medical Journal*, October 2, 1897) reports five cases of placenta prævia which have come under his notice. In the first two the treatment consisted in the use of the Champetier de Ribes bag and rupture of the membranes; in the next two, packing the vagina very tightly was first tried, and found ineffectual, while rupture of the membranes immediately arrested the hæmorrhage. In the fifth case hæmorrhage occurred at the sixth month of pregnancy, natural rupture of the membranes then occurred, and the gestation nevertheless persisted for seventy days thereafter, a viable child being ultimately born without incident. Fieux, therefore, sums up strongly in favor of rupture of the membranes as the best treatment of placenta prævia. Even when the placenta covers the os uteri, he would still rupture the amniotic sac through the placenta; in fact, this was

done in the third case although the leg of the foetus was also drawn down into the opening. The rupture need not be immediately followed by complete emptying of the uterus, as is learnt from the fifth case.

CONSTIPATION IN THE PUERPERIUM.

Hubert (*Revue Médicale*, Louvain, June 30, 1897) writes on alarming symptoms in childbed, which depend entirely on constipation and disappear when the bowels are opened. No doubt the bowels are naturally slow to act after delivery. Sometimes the retention of faecal matter simulates metro-peritonitis. Not only is there loss of appetite with foul tongue and breath, but tympanitic distension of the abdomen sets in with rigors, and temperature occasionally as high as 104°. When a purge succeeds all these symptoms vanish. If the constipation be neglected true peritonitis may undoubtedly set in. This complication is not the peritonitis of puerperal infection due to the streptococcus, but a peritonitis of stercoral infection where the offending germ is the bacillus coli, which, passing through the intestine, infects the serous coat. There is also a later form of constipation in the puerperium, accompanied with hæmorrhages, hæmorrhoids, and great pelvic congestion.—*Epitome. British Medical Journal.*

THE ABUSE OF TOPICAL APPLICATIONS TO THE ENDOMETRIUM.

Samuel L. Webber, Chicago, believes that severe tubal infection frequently follows applications to the endometrium, and that a very large percentage of these cases are the result of the pre-existing gonorrhoeal endometritis following the commonly used medicaments, and the harm that is done is that valuable time is wasted, and that the woman continues to suffer. The use of the curette is a rapid method of terminating the trouble. Curetting removes most of the thickness of the endometrium, leaving only a thin layer behind. Following this, antiseptic applications may be made with the expectation of penetrating the thin layer of the endometrium left, and thus reaching and destroying all the bacteria. Frequent curettement in rapid succession is occasionally necessary. Strong antiseptic applications of such substances as remain on or in the affected tissue for some time are desirable—hence the value of iodine and iodoform. He considers the antiseptic applied and not the curettement the essential factor in the treatment.—*American Gynecological and Obstetrical Journal.*

PÆDIATRICS

IN CHARGE OF

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THE BECHTEREW TREATMENT OF EPILEPSY.

Eight cases of epilepsy treated for a period of six weeks with a mixture of bromide of potassium, codein, and adonis vernalis, are reported by De Cesare (*Rif Med.*, August 13, 1897). The medicine is given twice daily. In four cases there was complete suspension of the fits; in three other cases the fits were replaced by infrequent attacks of vertigo, and in the last case there were four attacks of vertigo and two convulsions. In each case the attacks were very much reduced in frequency; no bad results were observed. The digestion was not impaired, the pulse was fuller, the temperature normal, diuresis increased, sleep uninterrupted and calm, and the mental condition unchanged. The author believes the results were due to the combination of drugs, and not to the bromide alone.

THE BACILLUS OF FRIEDLÆNDER IN PHARYNGITIS AND TONSILLITIS.

In the *British Medical Journal* for March 20, 1897, W. C. Pakes, Assistant Demonstrator of Bacteriology at Guy's Hospital, directs attention to the investigations of Nicolle and Hébert to determine the bacterial forms present in the throats of patients suffering from tonsillitis, follicular tonsillitis, or membranous pharyngitis. In an investigation of 1,600 serum tubes these observers found the pneumobacillus of Friedlænder eight times, six times alone. The author, following these investigations, has examined 500 serum tubes from the throats of patients from the wards and out-patients at Guy's. In five cases he found the bacillus of Friedlænder; twice it was found on the surface of the serum in pure cul-

ture, twice in association with the Klebs-Löffler bacillus, and once with the staphylococcus aureus.

PICRIC ACID IN ECZEMA.

In the *Sem. Med.*, May 26, 1897, Gaucher reports good results in the treatment of acute eczema from applications of a solution of picric acid. The acid is applied in one per cent. solution, and the part covered with cotton-wool soaked in the same fluid. The dressing is changed every second day. The acute inflammation subsides rapidly under this treatment, and itching is quickly relieved. The author considers that this mode of treatment is applicable in other acute skin diseases, such as pemphigus.

THE BACTERIOLOGY OF THE SIMPLE BASIC MENINGITIS IN YOUNG INFANTS.

The proceedings of the Pathological Society, of London, published in *The British Medical Journal*, Oct. 23, 1897, contain a report by Dr. G. T. Still of investigations carried on to determine the nature of the attacks of simple basic meningitis in young infants. The morbid anatomy was distinct from suppurative forms of meningeal inflammation. It was a specific inflammatory lesion due to a specific microbe, prevalent in England and America, and commonest during the spring. The cases observed by the author were sporadic, and seven in number. They were all more or less alike, the chief symptoms being convulsions, retraction of the head, rigidity, opisthotonos and hydrocephalus. The anatomical lesion found after death was thickening of the arachnoid about the base of the brain and spinal cord; in recent cases there was a softer exudation—lymph rather than pus; in later stages fibrous thickening alone was to be observed. The microbe might be absent in certain stages from the membranes, and would then be discoverable in the fluid of the ventricles. It was a diplococcus, with flattened or concave faces of apposition, smaller than the pneumococcus; no lanceolate forms were encountered, as in the latter; it closely resembled, however, the gonococcus. It did not stain by Gram's method, was devoid of capsule, and occurred free in the exudation or cerebro-spinal fluid, or in the cells; it could be stained with a saturated solution of aniline blue. No growth took place at the room temperature. Cultures might readily be made on agar, glycerine agar, blood agar, or in broth or milk. Milk was not coagulated; in this behaviour it differed from the pneumococcus. The author

thought that the microbe was identical with the diplococcus intracellularis of Weichselbaum, although it was more hardy in its growth. Nevertheless, the last named coccus varied much in this respect; it might live as long as fourteen days. It was seldom present in large numbers, hence fluid should be withdrawn from the ventricles of the brain by means of a sterilized pipette; or a piece of the meningeal exudation, as large as a pea, should be removed on the loop inserted through a hole in the dura mater. The author had not found it in the blood. There was no affection of the viscera accompanying the meningitis, but a peri-arthritis was at times observed, and possibly the exudation found about the joint arose from a metastasis of the microbe to these situations. Experimental inoculations made beneath the skin or into the peritoneal cavity of mice, rabbits and guinea pigs gave negative results, or at most produced only a transient general illness. The author, in conclusion, expressed his opinion that such slight differences as existed between the microbe and the diplococcus intracellularis were probably naturally acquired ones, and that the disease in question was etiologically allied to epidemic cerebro-spinal meningitis.



TONSILLITIS WITH PERICARDITIS WITHOUT ARTHRITIS OR OTHER RHEUMATIC SIGN.

The following interesting case is reported (*British Med. Jour.*, Oct. 23, 1897), by W. Campbell MacDonald, of London:

P. S., aged six and one-quarter years. March 18, 1897: She is a pale, nervous child, but not anæmic; complains of being tired and cold. Temperature 100.6°, axilla, 5 p.m.; pulse rapid (nervous), tonsils enlarged, pharynx hyperæmic, as also is the uvula, which is also elongated. No secretion seen at mouths of tonsillar crypts, and none on palate. There is no complaint of pain, no cough, no rash. She was put to bed and given sodii salicyl. gr. iij every four hours. Next morning the throat was a little better; temperature normal. At the base of the left lung there are heard a few *rales*, but no pleuritic friction. There is no pericardial friction detectable; no increase in cardiac dulness.

March 21. Throat better; uvula retracts now. Pericardial friction heard over a large area. Pulse 132; no pleurisy; no pain in joints on rough manipulation. This sudden supervention of pericardial friction heard over an area which excludes endocarditis as the cause of the *bruit*, associated with tonsillitis of a very moderate degree, should lead to the heart being examined as a routine duty,

so that the early detection of pericarditis may give the patient the best chance.

June 30. The area of friction sound had diminished but a little from its size of March 21. The child has now no palpitation on exercise, and feels well.

EMPHYEMA OF THE ANTRUM IN A CHILD AGED EIGHT WEEKS.

An interesting case of abscess of the antrum in a child aged eight weeks is reported by D'Arcy Power, in the *British Medical Journal*. The child was brought to the hospital on account of an abscess which had opened, and was discharging at the lower part of the right lower eyelid. The right side of the face was swollen, and the skin hot and red. Pus could be squeezed out, and on looking into the mouth, pus could be seen exuding from the alveolar border of the upper jaw. A probe passed along the sinus showed that the upper part of the superior maxilla was bare. An opening was made through the floor of the antrum, and a drainage tube passed from the eyelid into the mouth. About a drachm of thick pus came away. The child died ten days after the operation. The history was that forceps had been used at its birth, and that both sides of the face had been badly bruised, the right more than the left. When the infant was a month old, he refused the bottle and had difficulty in closing his mouth. About the same time, redness and swelling appeared, and eventually an abscess formed, and was opened by the medical man in attendance.

Cases of antral empyema in the young are extremely rare. The writer could only find one other case reported in detail.

SCARLET FEVER TREATED BY ANTI-STREPTOCOCCIC SERUM.

Reported in the *Lancet* (1897, No. 3827) by A. K. Gordon. The patient was a boy aged six years. Cultures from the throat showed streptococci and staphylococci, but no bacilli. Ten c.c. serum from the Pasteur institute was given at 5 p.m., up to which time the child had been steadily growing worse. Some improvement noticed on the following day, and at noon 10 c.c. serum again given. On the day following, temperature had fallen to 99.5; pulse 96; throat lost offensive odor and fauces were clean; rash fading.

This case has seemed to the author to be worth publishing on account of the rapidity with which the improvement followed the administration of the serum. On admission the child seemed

moribund, but he rallied from the effects of the journey in the ambulance and commenced to improve a little till the seventh day of the disease; then he grew rapidly worse and was to all appearances dying from septicæmia. He was semi-comatose, with a failing heart, dusky rash, and diarrhœa. After one dose he rallied, and after the second a rapid improvement took place and was maintained, his convalescence occurring very much sooner than is usually the case with patients who have had any septic symptoms.

CONGENITAL TEETH.

Details of three cases and references to 70 more are given in the *Edinburgh Med. Journal* by J. W. Ballantyne. From a study of these cases he arrives at the following conclusions: (1) Congenital teeth form a rare anomaly, but one which has long been known both to the profession and to the public. (2) Their presence has often an ill effect upon lactation, partly on account of the imperfect closure of the infant's mouth, and partly by the wounding of the mother's nipple; sublingual ulceration may also be a result, and infantile diarrhœa and atrophy are more distant consequences. Sometimes, however, symptoms are altogether absent. (3) Congenital teeth have probably little or no prognostic significance as regards the bodily or mental vigor of the infant carrying them. (4) The teeth usually met with are lower incisors, but sometimes upper incisors may be seen, and very rarely molars of either the upper or lower jaw. Other facial or buccal malformations may occasionally be met with. (5) They are caused by the premature occurrence of the processes which normally lead to the cutting of the milk teeth; in a few cases it would seem that the anomaly is due to a true ectopia of the dental follicle and its contained tooth. (6) In a few instances a hereditary history has been established. (7) As the congenital teeth are usually incomplete and ill developed, and more likely to be more an inconvenience than an advantage to the infant, they are best removed soon after birth, an operation which can be easily and, except in very rare instances, safely performed. (8) The occurrence of premature teeth in certain historical personages is an interesting fact, the importance of which has been much exaggerated.

TREATMENT OF CARIES OF THE SPINE.

The author, A. H. Pubby, London (*Pædiatrics*, August 15, 1897), first deals with general treatment, the importance of which he emphasizes.

Treatment directed to the spine. The principles are three in number :

- (a) To fix the vertebral column.
- (b) To remove the weight of the upper part of the body.
- (c) To prevent unnecessary deformity.

To carry out these principles two methods are at our disposal, viz., recumbency and the use of appliances.

Recumbency has for its chief indication—relief of pain in acute cases, and, when the palm pressure test is applied to the back, it is found to be yielding anteriorly.

The advantages and disadvantages are then dealt with, and the proper duration of recumbency. Under the heading of “Points to be observed in placing a patient in the recumbent position” he deals with—the material of which the mattress is made, air beds or water beds, retentive apparatus, the use of extension, the use of a couch or bed or a carriage, and the choice of position prone, or supine, the former to be chosen when bedsores are present.

Suspension of the head is absolutely essential in cervical disease. It can be arranged by carrying the plaster bandages of a Sayres jacket around the neck and forehead, leaving the face and vertex exposed, or a jurnyast may be used.

Suspension should be employed when the disease is above the fourth dorsal vertebra. This is very important.

Then follows a comparison of the advantages and disadvantages of plaster and poro-plastic jackets respectively—generally speaking, the plaster has the advantage of cheapness and greater ease of application. But for a skilled hand the poro-plastic is the more desirable.

The paper is concluded by asking the very important question: “When may treatment be dispensed with in spinal caries?” He answers it under the following heads :

1. The absence of pain is no test—if pain returns on removal of the support the disease is not cured.
2. When the spine is firmly fixed and the deformity has remained stationary for several months.
3. If a recession of the deformity has been gained and maintained for several months.
4. If a compensatory lordosis, just below the kyphosis, is established.
5. Dorsal caries is very seldom cured in one year ; cervical and lumbar may require less.
6. If the improvement in general health is maintained.

7. Supports must always be worn longer in tubercular cases. If the support is worn too long, the muscles atrophy rapidly. In any case, begin to dispense with the support gradually, especially if the patient is increasing in weight.

DIAGNOSIS OF TRAUMATIC SEPARATION OF THE EPIPHYSES.

This subject is discussed under six headings by Jno. Poland, F.R.C.S. Eng. (*Pædiatrics*, July 15, 1897.)

1. *Age of patient.* These injuries only occur in patients under twenty-one or twenty-three years of age. Each epiphysis is usually limited to a certain age. In the London museums of fourteen specimens of fracture of the lower epiphysis of the femur, eleven cases were between fourteen and eighteen years of age. The age for the lower end of the radius was from twelve to sixteen years. If injury to an epiphysis occurs at an earlier or later date than the time mentioned, we are apt to have a very complicated condition, owing to the anatomical development of the parts.

2. *Mobility of an epiphysis.* Next to age this is the most important sign. If mobility is found at an epiphysis in a patient under twenty-one years, we may be tolerably sure of our case.

3. *Displacement at an epiphysial line of junction.* Each epiphysial line may be known and its distance from the joint. (The epiphysis of the humerus includes the tuberosities; that of the lower end of the femur all the portion below the adductor tubercle; that of the lower end of the humerus only includes the external epicondyles with the trochlear and capitellar processes). Displacement may be sufficient to compress important vessels and nerves and thereby cause serious trouble. With displacement separation of the periosteum from the shaft occurs, and if the case is not seen for several days, exudation under the periosteum occurs, and instead of sharp, well-defined edges being felt at the seat of trouble, the angles and depressions are filled up and a comparatively smooth surface felt. Again, if epiphysial separation with displacement be not recognized, a good deal of trouble may ensue. If the limb is not kept quiet long enough to allow firm union to occur, bending will follow. Instances of this are given.

4. *Modified crepitus.* It must not be looked for, but may be felt during the examination. It may be merely a movement or a more distinct crepitus.

5. *Character of displaced diaphysis or epiphysis.* There is no such injury in children as Colles's fracture. They are, in reality, separ-

ated epiphyses. Separation may be partial or complete, or associated with dislocation. Cases are given of each of these conditions.

6. *The joint is often uninjured.* Treatment is satisfactory if the fracture is properly reduced and if the limb is kept quiet for a sufficient length of time.

MALFORMATION OF HEART—TRANSPOSITION OF AORTA AND PULMONARY ARTERY.

H. D. Rolleston, London (*Pædiatrics*, August 1, 1897): the septum ventriculorum was patent near the top. The aorta arose from the right ventricle; the valves were healthy and the innominate, left carotid and subclavian crossed normally from the arch.

The pulmonary veins opened into the left auricle, and the pulmonary artery was given off from the left ventricle.

Remarks. It has been stated by Carpenter that transposition of the blood vessels is generally accompanied by transposition of the viscera. In this case it was not so. The foramen ovale and the ductus arteriosus were nearly closed, so that the only way arterial blood could pass from the left ventricle to the right was by the deficiency in the septum ventriculorum. Since the walls of the ventricles were of equal thickness, the blood pressure would be the same in each, and very little interchange would take place. The result of this malformation is simply this—that the pulmonary and systemic circulations are independent of each other, one circuit of blood is from the left ventricle to the lungs and back by the pulmonary veins and left auricle; the other is from the right ventricle to the aorta, and back to the right auricle by the venæ cavæ—a condition clearly incompatible with life. The discussion of the cause of the developmental error is interesting.

NEW METHODS OF RESUSCITATING STILL-BORN AND FEEBLE-BORN CHILDREN.

Dr. B. Brown, of Alexandria, Virginia, in a paper read at the section on diseases of children at the American Medical Association (*Pædiatrics*, August 1, 1897), divides his cases into dead-born, still-born, and feeble-birth. The point of distinction between dead-born and still-born is interesting. Definition of still-born—the general features present all the appearance of suspended animation. No arterial pulsation can be detected. All the functions of the body are in a state of temporary suspension. By treatment the distinction between this class and that of dead-born is made.

Treatment. The subcutaneous use of m. iv. or m. v. of whiskey with m. i. of tr. bellad. If there is no response, or a very feeble one, one or two drachms of warm water is injected with one or two drachms of water (hot), with m. i. of spirits ammon. arom. If these measures do not produce a reaction we may conclude that the infant is dead born and not still-born.

Dr. Geo. Ackers, of Washington, said that the external application of whiskey with hypodermic use of styrch. sulph. gr. $1/200$ had been used in that city a great deal since Dr. Pryer had reported some cases.

Dr. Larrabee, of Louisville, spoke favorably of strychnia. He had saved a child after tongue pulling and chest pressure failed by calling on the reflexes through the anal sphincter. In his opinion the best method was to bend the child back, like a book, for inspiration, and then bending it forward, like closing a book, for expiration.

A SIMPLE METHOD OF REMOVING FOREIGN BODIES FROM THE NASAL CAVITIES OF CHILDREN.

Close the child's mouth firmly, says G. Bisser, M.D., New York, in *Pædiatrics*, July 15, 1897.

Take one end of a rubber tube in your own mouth, place the other end in that side of the child's nostril opposite to the one in which the foreign body is. Blow suddenly and vigorously.

This may also be accomplished by using O'Dwyer's forcible respiration apparatus. The only contra-indication is where the foreign body is so firmly impacted that it cannot be displaced.

ON ETHER NARCOSIS IN CHILDREN.

Since the work in 1882 by Demme and Gerhardt on anæsthetics, the study of ether narcosis in children has appeared in German literature. The views preferring chloroform have been accepted. The author's experience with 200 cases of ether narcosis has convinced him that in the youngest child this anæsthetic did not produce the disadvantages with which it was charged. The irritation produced on the mucus membrane of the trachea and bronchi was light. Narcosis can be produced in from two to five minutes. The stage of excitation is no greater than in chloroform, and vomiting is not so frequent. Sudden arrest of respiration was never observed. Recovery from the anæsthetic is more rapid than from chloroform. Infants usually take the breast or the bottle within a

short time after waking, and do not vomit. Pneumonia and nephritis were never occasioned by the ether.—Stors, in *Munich Med. Wochenschr.* 1897.

DEFECTIVE EYESIGHT IN CHILDREN.

This subject is attracting much attention at the present time. The intellectual activity of a nation may be fairly gauged by its eyesight. The higher the brain development, the worse the sight. A nation of students and bookworms as the Germans show an enormous percentage of myopia. Statistics vary. Dr. Wm. Carhart in an examination of 1,000 children in the United States found 48.5 per cent. astigmatic; 44 per cent. hypermetropic; 3.5 per cent. myopic.

Dr. F. Allport, as a result of 8,000 examinations, found 30 per cent. myopics; while in some examinations made in London only 4 per cent. had normal vision. The worst feature of the subject is the probability that these defects will be handed down to posterity. The following causes are suggested:

- (a) Living and reading in badly lighted and ill-ventilated rooms.
- (b) Using small print.
- (c) Uncomfortable seats, with faulty postures for reading.
- (d) Too long hours of study.—Editorial in *Pædiatrics*, July 15, 1897.

ADENOID VEGETATIONS.

Etiology. (1) Catching cold in an ill-nourished or delicate child produces some swelling of lymphatic tissue, which never completely subsides. This renders the child more susceptible to colds, etc., etc. And thus the vicious circle is kept up.

(2) Any disease which produces nasal catarrh and pent-up secretions, *i.e.*, measles, and bronchitis.

(3) Rickets.

(4) Hereditary—the writer says that he is old-fashioned enough to consider adenoids as due sometimes to a tubercular habit of body. Very many cases were found in which adenoids existed in the parents. In 30 per cent. of the author's cases the vegetations occurred in other members of the family. A family of seven came in one day to have their adenoids removed. (This would be due not so much to family influence as to the probability of a similar cause operating in the different members of the family).

Symptoms. (1) Snoring occurred in 90 per cent. of my cases.

(2) Dribbling, the discharge often being bloody, in 72 per cent.

(3) Deafness in 60 per cent.

- (4) Otorrhœa in 33 per cent.
- (5) Nasal discharge in 36 per cent.
- (6) Epistaxis in 14 per cent.
- (7) Headache in 55 per cent.

(8) Mental dulness in 28 per cent., but thinks this is due to the deafness rather than the adenoids.

Treatment. Always operative. Chloroform or the A.C.E. mixture always used. Allow the head to hang over the end of table. Use finger nail and Gottslein's curette.

Ill effects after operation. Acute earache, deafness, otorrhœa, fever and delirium lasting a week; acute cervical adenitis, lobar pneumonia. In one case, four weeks after operation, a discharge from both ears started, followed by cerebral abscess and death.

Cause of these bad effects. Cases were all hospital cases, and the children were removed immediately after operation. Author thinks that this removal in inclement weather caused some of the sequelæ.

Results. (1) Quite successful, 72 per cent.

(2) Practically successful, 12 per cent.

(3) Improvement only, 12 per cent.

(4) No improvement, 4 per cent.

Recurrence took place in 11 per cent., *i.e.*, return of the adenoid tissue.—Ralph H. Crowley, M.D., London, from *Pædiatrics*, May 1, 1897.

NON-TUBERCULAR POSTERIOR BASIC MENINGITIS IN INFANTS.

J. Walter Carr, at the Royal Medical and Chirurgical Society, London (*Pædiatrics*, Sept. 1, 1897), says :

This is a distinct form of meningitis, occurring exclusively in infants, which has not yet received sufficient attention. Described by Drs. Gee and Barlow, in 1878, under the title of "The Cervical Opisthotonos of Infants" (St. Bart's. Hospital Reports). The disease affects the posterior part of the brain, is independent of tubercular disease, runs a sub-acute or chronic course, with characteristic symptoms, can be diagnosed during life, and presents very definite and constant p.m. symptoms. Dr. Carr gave the history of eleven cases. Symptoms were severe vomiting, extreme head retraction, and stupor, passing into coma of remarkably long duration, generally several weeks. Cases all terminated fatally; none in less than five weeks, while some lived for three months. Post mortem findings were: inflammation of pia and arachnoid over a very definite area; hydrocephalus was present in all the cases.

He then proceeded to discuss etiology and treatment.

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

WILLIAM OLDRIGHT, M.A., M.D. Tor.,

Professor of Hygiene in the University of Toronto; Surgeon to St. Michael's Hospital;

ASSISTED BY

J. W. SMUCK, M.D.

REPORT OF PROVINCIAL BOARD OF HEALTH FOR AUGUST.

Total number of municipalities in the province, 745; number which made returns for August, 405.

Table showing total deaths returned from the several contagious diseases for a population of 1,289,661 were 189, or at the following rate per 1,000 for municipalities which made returns, calculated on a per annum basis. (Total population of the province, 2,233,117.)

	Population and % of whole.	No. of deaths from and rate per 1,000 per annum.						Total.
		Scarlatina.	Diphtheria.	Measles.	Whooping-Cough.	Typhoid Fever.	Tuberculosis.	
Cities reporting.	419,972 (92%)	2 (0.06)	12 (0.3)	1 (0.03)	6 (0.17)	12 (0.3)	50 (1.4)	83
Towns and vil- lages reporting.	233,684 (52%)	1 (0.05)	3 (0.15)	1 (0.05)	2 (0.1)	4 (0.2)	23 (1.2)	34
Townships re- porting.....	636,005 (54%)	3 (0.05)	7 (0.13)	5 (0.09)	4 (0.07)	6 (0.1)	47 (0.9)	72
	1,289,661 (60.4%)	6 (0.06)	22 (0.2)	7 (0.07)	12 (0.1)	22 (0.2)	120 (1.11)	189

Of the 40 counties reporting, Lennox, and Addington, and Prince Edward returned no deaths from contagious diseases.

REPORT OF PROVINCIAL BOARD OF HEALTH FOR

Total number of municipalities in the province, 745 ; number making returns for September, 506.

Table showing total deaths returned from the several contagious diseases for a population of 1,382,008 were 204, or at the following rate per 1,000 for municipalities which made returns, calculated on a per annum basis. (Total population of the province, 2,233,117.)

	Population and % of whole.	No. of deaths from and rate per 1,000 per annum.						To
		Scarlet Fever.	Diphtheria.	Measles.	Whooping Cough.	Typhoid Fever.	Tuberculosis.	
Cities reporting.	419,850 (92%)	0	6 (0.2)	0	4 (0.1)	22 (0.6)	45 (1.2)	77
Towns and villages reporting.	293,808 (59%)	2 (0.08)	9 (0.3)	2 (0.08)	5 (0.2)	8 (0.3)	38 (1.5)	64
Townships reporting . . .	668,350 (67%)	1 (0.01)	9 (0.1)	2 (0.03)	3 (0.05)	9 (0.1)	39 (0.7)	63
	1,382,008 (61.9%)	3 (0.02)	24 (0.2)	4 (0.03)	12 (0.1)	39 (0.3)	122 (1.0)	204

HEALTH OFFICERS FOR CITY SCHOOLS.

In Berlin an effort is being made to have a physician attached to every four or five schools in the city, and whose duties, according to the proposed law, shall be to see that every child when it enters the school shall have a certificate from the family physician, stating the child's physical condition, its weight, what illness it has had since its birth, and if it has any special tendency towards certain diseases by inheritance. Upon this short account shall be based the child's course of study, and nature and amount of exercise. Furthermore, the physician is to see that all sufferers from epidemic diseases are to be kept from the schools, together with brothers or sisters, to examine each child for optical defects, and to insist that it be properly fitted with glasses ; to arrange the hours for study and when recesses shall occur.

PUBLIC MEDICINE SEC. C., AT THE BRITISH
MEDICAL ASSOCIATION.

At the recent meeting of the British Medical Association in Montreal, this section, which should have been most popular and interesting to public and practitioner, was sometimes poorly attended.

TUESDAY, AUG. 31.—FIRST DAY.

The meeting held in the large hall of Laval University was presided over by Dr. Rottot, Dean of the Medical Faculty. Professor Ch. Richet, the delegate of the French government and of the Faculty of Medicine of Paris delivered an address on

THE WORK OF PASTEUR AND THE MODERN CONCEPTION
OF MEDICINE.

It is hardly possible to condense this brilliant and eloquent plea for the recognition of the services rendered to medicine by science. The work of Pasteur is a convincing demonstration of the fact that it is by experimental science alone that medicine has made and can make any progress. The steps of Pasteur's life work were traced, commencing with his early analysis, by polarization, of the two forms of tartaric acid. This led to his memorable demonstration of the true nature of fermentation, which opened a new world to science. Then came his series of experiments disproving the theory of spontaneous generation, and conclusively showing that organic fluids undergo no change until living germs gain entrance into them. This was the first step in the microbic theory of disease, proved in the first instance by Pasteur's research, in 1867, on silk-worm disease, and importing into pathology a fact which has revolutionized medicine. Nor did Pasteur's work stop here; his discovery of the principle of vaccination is known to all. "Fermentation, infection, contagion, vaccination; here in four words we learn the work of Pasteur. What more need I say? Do not these four words possess in their simplicity, unequalled eloquence?" Pasteur's researches have been extended by Lister and others, until modern medicine scarcely knows how much painstaking investigation was required to lay the foundation.

WEDNESDAY, SEPT. 1.—SECOND DAY.

The meetings of the section proper were held in the large lecture room of the Redpath Museum, Dr. E. P. Lachapelle, President of the Quebec Provincial Board of Health, presiding. The chairman opened the meetings of the section with an address on

THE PROGRESS OF SANITATION IN CANADA.

Dealing first with the history of hygienic legislation under the French *régime* prior to 1763, and then with the period covered by the next hundred years until confederation in 1867, an exceedingly interesting account was given of the measures adopted in early times for the perservation of public health. With the advent of confederation began a period of positive systematization. Sanitary laws in reference to immigration and quarantine, the prevention of contagious diseases in animals, the suppression of food adulteration, and the compilation of statistics were controlled by the federal authority. With the exception of the decennial census, this latter is done by the provinces. The prophylactic treatment of local contagious ailments, the sanitation of public and industrial establishments, of dwelling-houses and of schools, the routine food inspection, and the compilation of vital statistics is done by the provinces, assisted by the municipalities. Provincial, and under them the local boards managed these matters, at all times subject to the legislature's approval. Canada is making rapid strides along the path of progress, and in the near future she will not be inferior in sanitary matters to any other country.

Next came a discussion opened by Dr. P. H. Bryce, secretary of the Ontario Board of Health, on

HOW FAR SHOULD MANDATORY MEASURES GO IN DEALING WITH MEASLES, WHOOPING COUGH AND LEPROSY.

Four points had to be taken into consideration: (1) the rate of mortality, (2) the method of communication and contagiousness of the disease, (3) the duration of the disease, and (4) the public opinion which existed.

In England measles and whooping-cough caused a very large number of deaths, but this had not led the authorities to adopt or the public to submit to the same measures as for scarlatina or small-pox. The speaker saw no way to stamp out measles in Ontario but by the daily notification by schools of every absentee reported sick; then investigate and isolate in the homes. For whooping-cough it would be necessary to exclude from school every child with a cough or cold. For tuberculosis the Pan-American Medical Congress, by resolution, insisted on compulsory notification by householders and physicians, regulation of residence of patients, and the establishment of hospitals. Until county and provincial sanatoria are established there is little use in compulsory notification for tuberculosis.

Dr. C. A. Probst, secretary of the Ohio State Board of Health, advocated mandatory measures strongly, especially in regard to tuberculosis. Although at first these might have limited success, he believed they would ultimately succeed, and should, therefore, be carried out. He condemned overcrowding of tenements, and lack of sufficient yard space.

Dr. H. Handford, Medical Officer of Health, Nottingham, England, presented the British view of the case and opposed anything like mandatory measures, which had been a complete failure in England. There the people had been so educated that moral pressure alone was sufficient.

Dr. William Oldright, of Toronto, spoke regarding sanitary regulations and compulsion. He dwelt on the value of education and persuasion, but thought compulsion was sometimes necessary. In England measles was more severe than in this country, but here whooping cough was much more to be dreaded. He had known several cases where death had occurred from children being allowed to go into homes where whooping-cough existed. The moral sentiment of the people needed cultivating with regard to this disease. Children affected by it were allowed to go on boats and street cars regardless of danger to others.

Greater care should be taken with consumptives at health resorts. Often the rooms occupied by such patients are not disinfected, and hence arose a great source of danger—such as when persons traveling infect sleeping cars, their blankets and their rugs.

HEALTH OFFICERS SHOULD SEE TO THIS.

With respect to milk, the Ontario Legislature passed an act enabling cities to have the tuberculin test applied to the cattle of all milk vendors coming into the city, but the milk dealers came down in force and had the operation of the law suspended. The medical officer of the city, however, adopted a very strong persuasive measure, which had been applied with considerable success. He gave certificates to those milk dealers whose cattle had undergone the tuberculin test, stating that such was the case. This was placarded on the wagons and shop windows, and acted as an inducement to the public to buy, and to other dealers to have the test applied. With regard to isolation hospitals for several diseases, the danger of patients coming with one disease and contracting another must be borne in mind. With regard to leprosy, he should be glad to hear from gentlemen who had had experience of the disease.

Dr. Wolfred Nelson, of New York, formerly of Montreal and

Panama, referred briefly to his experience of leprosy in the Isthmus of Panama. Speaking generally, he deemed it non-contagious.

Dr. Benjamin Lee, secretary State Board of Pennsylvania, stoutly contested this view.

Dr. Ebenezer Duncan, of Glasgow, emphasized the necessity for more ample air space and ventilation, and removal of consumptives from overcrowded houses.

Dr. Carr, of England, suggested that, as the section seemed to be in accord in essentials, it might be well to point out the differences. All agreed on the advantages of isolating cases of scarlet fever and of phthisis. He deemed ventilation very necessary.

Sir James Grant, of Ottawa, referred to scarlet fever in Ottawa before they had drainage, and cited a case where scarlatina maligna killed four in one family in two days. He traced it to a damp cellar and defective drainage. He dwelt at length on scarlatinal infection and glandular infection.

Dr. Alex. Johnston, of Glasgow, thought much might be done by oversight in the schools.

Dr. James Neech, M.H.O. of Alberton, read a paper on "The Period of Infection in Scarlet Fever." He thought this should be regarded at a minimum of eight days and a maximum of thirteen.

Also one by Dr. Hough, of New Bedford, and Dr. Mother, on "The Organisms which feed on the Cadaver." This was illustrated.

THURSDAY, SEPT. 2.—THIRD DAY.

In opening the proceedings Dr. Lachapelle made a few remarks on the existence of smallpox in the city, tending to counteract the mischievous reports which have been sent abroad.

Dr. James MacLeod, of Charlottetown, P.E.I., made some observations on the pollution of ground air in some parts of his city which had no sewerage system. There are tubular sewage wells supposed to dispose of the sewage by means of the underground waters. He described the condition of affairs in Charlottetown, and stated his belief that the ground was unable to take in a continuous supply of sewage without becoming surcharged. He asked the section to condemn the system, as inefficient and dangerous.

Drs. Oldright and Bryce, of Toronto, spoke condemning the system.

Dr. F. Montizambert, Supt. of the Canadian quarantine service opened the discussion on

THE UTILITY OF QUARANTINE.

He contrasted the English and Canadian systems, and pointed out that in England, owing to the number of ports, the comparative

smallness of the area, the most perfect system of sanitation in the homes, the compulsory vaccination, and the vast amount of shipping which touched upon the shores of Great Britain, the Canadian system would be found undesirable and impracticable. England was so thoroughly organized inland that she could afford to relax a little at the port of entry, while in Canada it was necessary to carry out strict quarantine regulation, for if a case were allowed to proceed inland, the person might travel a week, spreading contagion before detection. The best triumphs of sanitation were negative. The chief thing in a country like Canada, a country of distances, was prevention.

Surgeon-General Wyman, of Washington, Supt. of the United States quarantine and marine hospital service, detailed the national and state systems now in vogue. The present system commences with the examination of vessels and passengers at the port of departure, and is continued at the port of arrival. Dr. Wyman made an appeal for an international sentiment regarding the sanitation of sea-ports.

The conclusions of a paper from Dr. Duncan, secretary of the British Columbia Board of Health, were read by Dr. Littlejohn. The paper suggested the vaccination of all Chinamen before leaving the ports of that country, the barring out of all diseased Celestials, and a union of the Canadian and United States quarantines on the Pacific coast.

Dr. J. B. Kaye, Wakefield, Medical Health Officer for the West Riding of Yorkshire, said that England trusted more to the various local authorities and to compulsory notification than to quarantine.

Dr. Monkton Copeman, Medical Inspector to the Local Government Board of England, described what was done to keep out cholera in 1893.

Sir James Grant, Ottawa, paid a tribute to the work done by Dr. Montizambert, and the efficiency of Canadian and United States quarantines.

The discussion was continued by Drs. Reynolds, Chicago; Oldright and Bryce, Toronto; Felix Formento, New Orleans, and others.

Dr. Copeman read a paper on

THE ALLEGED DANGERS OF VACCINATION AND THEIR PREVENTION.

He laid stress on the necessity for strict precautions in having pure vaccine, and an aseptic condition of instruments and hands. Although erysipelas, abscesses, and other outward manifestations

followed, yet the mortality was not one-seventh of that caused by the administration of chloroform. Lymph mixed with fifty per cent. glycerine gave the speaker the best results.

A short discussion followed.

Dr. Wyatt Johnston, of the Quebec Provincial Board, read some notes on "The Disinfection by Means of Formaldehyde," and Dr. McTaggart explained the apparatus.

Dr. May read a paper on the "Relationship of the Health Office to the Registration and Certification of Deaths."

FRIDAY, SEPTEMBER 3.—FOURTH DAY.

A paper by Mr. George Janin, C.E., formerly of the Corps des Ponts et Chaussées of France, and now of Montreal, was read by Mr. C. de Martigny on

THE DIFFERENT PROCESSES RECOMMENDED FOR THE TREATMENT OF SEWAGE—MECHANICAL, CHEMICAL, AND EPURATION BY THE ARABLE SOIL.

In a concise manner the paper described the attempts which had been made in other countries to purify sewage, with the indifferent results attending the same. This led up to the purification through filtration or irrigation of permeable soil. The effects of this system in both France and Germany were successful from a hygienic and economical point of view. The chief features of sewage farms were described, and how the crops were nearly doubled by them. Sanitarians in France, Germany, and England had approved of them.

Dr. Bryce, of Toronto, said that sewage farms had been conducted with success in various parts of Ontario. At the London Asylum for the Insane a foreman, with a few of the milder lunatics, had in 1895 realized two to three hundred dollars' worth of vegetables.

Dr. La Chappelle asked whether the freezing of the land would not prevent the filtration of water.

Dr. Bryce replied that sub-surface irrigation had been found very successful, besides, the snow prevented the earth from freezing to the depth it would otherwise.

Dr. Oldright instanced Dantzic, Pullman, Ill., and a State asylum at Augusta, Maine, where sewage farms make a success in spite of intense cold. He pointed out that, contrary to the supposition of some of our English confrères, the protection of streams has given rise to serious consideration and legal complications in this country.

Dr. Alex. Johnston, of Glasgow, said that in Scotland the rivers were found to become more and more filthy, and his city was now

spending millions of dollars to counteract the effects of making the Clyde an open sewer. He wished it were possible to cleanse rivers from time to time.

The discussion was continued by Dr. Probst, Ohio; Dr. Shrader, Iowa; Dr. Herrick, Cleveland; Dr. Hutchinson, Buffalo; and Dr. Carr, England.

Mr. J. J. Mackenzie, Bacteriologist to the Provincial Board of Health of Ontario, read a paper on "Results of Mechanical Filtration Plants in Ontario." The percentage reduction of bacteria had varied with varying circumstances, but had been very satisfactory, and Dr. F. F. Westbrook, Bacteriologist of the State Board of Health of Minnesota, a paper entitled "A Preliminary Communication on the Baccilli of Diphtheria when it is Epidemic."

Prof. Shuttleworth, of the Toronto Health Department, contributed a paper on "Etiology and Dissemination of Diphtheria." An interesting and practical discussion took place as to the period of contagion, as laid down by the clinician and bacteriologist respectively.

There was an interested audience in Windsor Hall in the afternoon when Dr. Herman M. Biggs, of New York, delivered the address on public medicine. He took for his subject

PREVENTIVE MEDICINE IN THE CITY OF NEW YORK.

He acknowledged the honor conferred, not on himself alone but upon the New York Board of Health and its work. The custom of sanitarians has been to look to England for guidance in such matters. The advance in sanitation in Great Britain had preceded that of any other country. In the United States each State has its own health board, but the agitation for a national board is beginning to be felt. The larger cities have very good organizations, but many smaller towns and rural districts do not receive sufficient attention. The sanitary arrangements in New York (which was taken as a type) consist of inspection, removal, and disinfection, where certain contagious diseases are found to exist. The first municipal bacteriological laboratory was established by that city in 1892. Since that time a great deal of valuable work had been done, and the speaker pointed out the methods pursued. The city of New York has taken advanced ground regarding the reporting of cases of tuberculosis. In the beginning of this year tuberculosis was declared by the health board to be "an infectious and communicable disease, dangerous to public health," and required notification of cases. They have also elaborated, with great care, methods for protecting

the public, as far as possible, from infection by the meat and milk of tuberculous animals.

A system of school inspection is now in force, by which children are excluded if suffering from a disease capable of being communicated. The educational work done has been chiefly by bulletins to the various medical journals and daily press of the city, and sending reports outlining the most recent investigations for prevention and cure of infectious diseases to the practitioners. The rate of mortality will compare favorably with that of any other city in the world, and although sometimes they seemed to be autocratic, the public cheerfully submitted when of public benefit.

In concluding, Dr. Biggs said that although England led in sanitary matters, she must look well to her laurels if she is to continue, or if her cities are to be kept cleaner and healthier than those on this side of the Atlantic.

Dr. Montizambert, in moving a vote of thanks to Dr. Biggs, referred warmly to the good work which is being done by the New York Board of Health, and to the unfailing courtesy shown by the United States health authorities to their Canadian confrères.

Dr. Harvey Littlejohn seconded the motion, which was carried unanimously.

J. W. S.

Editorials.

THE DEATH OF THE DUCHESS OF TECK.

THE Duchess of Teck was dearly beloved by all classes of people in England, and the recent announcement of her death, after a very brief illness, caused universal regret. About seven months ago Her Royal Highness suffered from strangulated umbilical hernia, but an operation performed by Mr. H. Allingham gave immediate relief. Her convalescence was rapid and she was able to take part in the ceremonies of the jubilee. During the month of October, she was in her usual health, until the 25th, when she became indisposed, and consulted Dr. Wadd, of Richmond. The next morning she had slight symptoms of obstruction, which became so urgent in the evening that Mr. Allingham again operated, and found a strangulation in the neighborhood of the old umbilical sac. Death occurred two hours after the operation from cardiac failure.

UNIVERSITY OF TORONTO.

THERE is an opinion in the minds of many that the University of Toronto should be freed entirely from government control. The feeling in this respect has grown with amazing rapidity in recent years; and this fact is perhaps better appreciated by outsiders than by those within the university circles. At the last session of the Ontario Legislature an interesting discussion occurred on this subject. The members of the Opposition boldly attacked the policy of the Government in reference to University matters.

While in "Committee" on the supplementary estimates, Mr. Whitney, the leader of the Opposition, moved the following amendment: "That this House is of opinion that the interests of the University of Toronto, and the availability of it for educational purposes, will be best served by its complete separation from, and independence of, the Provincial Government, and by vesting the property and entire control and management of the institution in a properly representative and independent body."

In speaking to the amendment, he quoted from Professor Goldwin Smith, of Toronto, as follows: "The most important of the suggestions which I have to offer, and which I believe will meet with extensive concurrence, is that the university should be separated from the political Government of the province and placed, like the English universities, under a government of its own, subject only to the law of the land." "It is well known also that connection with Government operates as a bar to private benefaction. The Government would lose little by the change, while it would be relieved of some embarrassments."

The Minister of Education, in reply, stated that the Government had abstained from undue interference with university matters, and that he had purposely avoided attendance at meetings of the Senate so that there could be no suggestion that he could not deal fairly with statutes which came before him. He thought the proposed changes would disorganize the whole system of education, and would materially affect the university's affiliations.

It is in some respects unfortunate that the proposed change of policy has become an issue between the two parties, because it embarrasses those who have no fault to find with the Mowat and Hardy Government in its administration of university affairs, and yet are strongly opposed to the present system of Government control.

We believe the majority of the friends of the university are in favor of a change in the direction indicated by Mr. Whitney, but the supporters of the Government may hesitate to take a stand which may injure their leaders. We think, however, very few will characterize as incorrect the statement of Professor Smith that the connection of the university with the Government operates as a bar to private benefaction.

THE CHAIR OF SURGERY IN GLASGOW AND THE WESTERN INFIRMARY.

IT appears that serious difficulties have arisen between Dr. Macewen, the highly distinguished surgeon of Glasgow, and the managers of the Western Infirmary. We learn the following particulars from the *British Medical Journal*. In 1893 Dr. Macewen was appointed Professor of Surgery in the University of Glasgow, and by virtue of such appointment became senior surgeon to the Western Infirmary. According to an arrangement made between the authorities of the infirmary and the Senate of the University, Dr. Macewen was to have forty-one beds placed at his disposal ;

but, as a matter of fact, he was "requested in the meantime to take charge of ward 18, containing twelve beds, as a convenience to the managers." Thus for four years he has had fifty-three beds instead of forty-one.

Dr. Macewen found the operating theatre in such an unsatisfactory condition, from a sanitary point of view, that he refused to operate in it, and used, instead, a corridor on one of the landings from which his wards open, which he had fitted up as suitably as possible under the circumstances. Recently the managers appreciated the importance of Dr. Macewen's views in this regard, and erected three new theatres. Dr. Macewen wishes to have sole control over one of these theatres, and also wishes a larger number of nurses for the work in his wards. At the same time he objects to the action of the managers in deciding to take from him the twelve beds in ward 18.

The managers reply that as "there are at least six surgeons on the visiting staff, all of whom have important operations to perform, it is hardly reasonable, in justice to the others, to suppose that the managers will be able to set aside one of these theatres for the exclusive use of any individual member of the staff." With reference to the nurses, they say after careful investigation, that Dr. Macewen's "requests for extra nurses have been adequately met by the superintendent," and they add that "his wards are an integral part of the Western Infirmary, and that he himself is only one of the staff; that there are rules applicable to the institution which it is the duty of managers and their officials to administer uniformly; that, on the one hand, emergencies arise in the administration, in the inconvenience of which Dr. Macewen must share; and, on the other, while a certain amount of the work of the surgical wards comes without warning, a great deal of it can be arranged and distributed by the staff surgeons, so as not to cause any strain upon the resources of the house, or put the nurses and others to unnecessary inconvenience." With reference to the twelve beds which were temporarily allocated to Dr. Macewen, they decided that the requirements of other departments justified the change, which did not conflict with the agreement of 1893.

The *British Medical Journal* replies in an angry article, which contains but little in the way of dignity or logic, and supports Dr. Macewen's claims in their entirety. Dr. Macewen has certainly done magnificent work for many years, and deserves the most kindly consideration; but it is not well for any individual member of a surgical staff to ask for too much, or show a disposition to "want the earth."

ANNUAL ANNOUNCEMENT OF THE ONTARIO
MEDICAL COUNCIL.

WE have received the announcement of the Ontario Medical Council, with a report of the proceedings of the July meeting ; and, after examining it with some care, have concluded that the reports with reference to the "bear-garden" character of the discussions were to some extent exaggerated. We find that many subjects of considerable importance received very careful and apparently conscientious consideration. Since our comments appeared in the August number we have been told by various parties, members of the Council and otherwise, that our strictures at that time were too severe, considering the proceedings as a whole.

We are quite willing to acknowledge that there is some truth in such allegations. The lay press, in its reports, evidently took a certain amount of pleasure in referring only to those portions of the proceedings that were most objectionable, *i.e.*, the spicy passages-at-arms which occurred at times, while at the same time the creditable parts of discussions were overlooked.

Unfortunately, there can be no defence of the tone and character of the discussion of the following clause of the report of the Executive Committee: "Your committee deems it only right to report to the Council that we deeply regret that one of the members of the Council, who was present as a member of the Legislative Committee, should have felt himself called upon to denounce the petition before the Premier and Government, notwithstanding that an agreement had been entered into beforehand that the Executive Committee and Legislative Committee should be unanimous in their presentation. Your committee expresses their sincere regret that the denunciation by the member of the Council present had the effect of showing a divided Council, and took away from the petition, to some extent, the good which it would undoubtedly have produced." After a prolonged and very "bitter" discussion the clause was carried, the following voting nay: Drs. Armour, Barrick, Hanly, Henry, McLaughlin, Reddick, and Shaw. This was practically a vote of censure on Dr. Sangster.

We are pleased to notice that the conduct of the president, Dr. Thorburn, was highly appreciated. Dr. Williams, in moving a vote of thanks, spoke of the "pleasant, agreeable, dignified, and impartial manner in which he conducted the business of the Council." Dr. Sangster, in seconding the resolution, said "his conduct in the chair has been courteous and dignified in the extreme." When Drs. Wil-

liams and Sangster are so thoroughly in accord we feel inclined to accept their views without reservation. After some favorable comments from Drs. Moore and Geikie, the motion "was carried unanimously amid much applause."

THE VICTORIAN ORDER OF NURSES.

WE again refer to the proposed new order of nurses with a certain hesitation, having in connection therewith a high appreciation of the motives of its promoters. The subject has been discussed in all its bearings in various parts of Canada with fairly uniform results as far as the medical profession is concerned. In Ontario we believe that 99 per cent. are opposed to any such establishment. Sir William Hingston and Dr. Borden are surprised and shocked that such should be the case; and, yet, Ontario remains unmoved. Winnipeg, Victoria, Halifax, and various other cities and localities are opposed to the scheme. In fact we know of no city, town, village, or municipality of any sort in any part of Canada where a majority of the physicians support the new order.

We have heard comparatively little from nurses, but can speak for those in Toronto, where there are a number of training-schools. The feeling among the nurses of this city is one of consternation. From their point of view the equilibrium between supply and demand has already been seriously disturbed. It is well known to all who pay any attention to the subject that the supply of trained nurses has for some time exceeded the demand, and this is probably more pronounced to-day than ever before.

As for physicians we cannot see that an influx of new and cheap nurses will materially affect their interests; but among our trained nurses, many of whom are not yet earning a livelihood, there exists a fear that the new order, if as successful as its promoters hope and desire, will bring practical ruin.

A correspondent in this issue calls attention to the work that is being done in a quiet way by our nursing-at-home mission in Toronto. This worthy charity is sadly crippled for want of funds. We had pleasure in referring in a recent issue to the magnificent work which has been accomplished through this institution during the last few years. We are glad indeed to find that its promoters and supporters feel greatly encouraged on account of the interest which the charitably disposed are taking in its welfare. If the wealthy people of Canada aid this and sister institutions by substantial gifts in the way of money we believe it would do more good than the importation of an army of new nurses from Great Britain and the United States.

Correspondence.

THE NURSING-AT-HOME MISSION *VERSUS* THE ROYAL VICTORIAN JUBILEE ORDER OF NURSES.

To the Editor of THE CANADIAN PRACTITIONER.

SIR,—I see that at the monthly meeting of the Nursing-at-Home Mission, held on Friday last in the Y.M.C.A. Hall, the managers presented a report showing \$56.45 on hand. There were thirty-eight patients on the books for October, and the district mission nurses paid in all to poor patients 375 visits. Surely this good work need not and should not be interfered with by the irregular introduction of nurses from abroad, through the projected scheme, now being floated under vice-regal patronage, called “Royal Victorian Jubilee Order of Nurses.”

We have enough good women in Toronto and in Canada to do this work without the importation of foreign or extraneous material, very likely to be picked from the streets of London and New York, whose only semblance to modesty is the “quiet and unassuming garb” of a trained nurse.

Let us as Canadians protect our own good women and the name of “nurse” with a hallowed reverence from all outside interference, and let the pulpit and the press thunder their disapproval of a scheme so justly unpopular among the medical profession of the Dominion as being a dangerous innovation in this new country of ours, where even “trained nurses” have vested rights.

Our M.P.P.'s will be called upon to take action in the Houses of Parliament should this very unsavory and unnecessary institution be planted in our midst against the wishes and advice of those of our citizens who alone are competent to express expert opinions on its value or usefulness at the present time.

CANADIAN GRADUATE.

Meetings of Medical Societies.

TORONTO MEDICAL SOCIETY.

THE regular meeting of the Toronto Medical Society was held in the Council Building, Oct. 14th, 1897. The last meeting's minutes were read and adopted. Present: Drs. McMahan, Parsons, Oakley, Graham, Dwyer, Bryans, Chambers, Clarence Starr, Hunter, Carveth, Hay, Bascom, Galloway, B. E. McKenzie, McPhedran, G. B. Smith, W. J. Wilson, Wm. Oldright, C. J. O. Hastings.

Dr. R. J. Dwyer presented a laborer, aged 60, with a large abdominal tumor of a year's growth. It had caused no pain, but was now distressing his breathing. It had caused vomiting at first. Nodular masses and fluid could be felt on palpating it. Patient emaciated, but in fair health, bowels being regular and urine normal. Diagnosis: probable carcinoma of the peritoneum. Drs. McMahan, Oakley and Graham briefly discussed the case.

Dr. T. F. McMahan presented a girl, aged 20, with an ankylosed elbow, following rheumatism. The patient gave a decided rheumatic family history and had several attacks herself. He asked if the adhesions should be broken down. These cases were rare.

Dr. J. E. Graham reverted to two or three similar cases of ankylosis he had seen following what was probably a septic arthritis.

Dr. B. E. McKenzie reported a case of this sort in which he had broken down the adhesions in the two elbows several times, one then being put at rest and the other given passive motion, but only to be followed by a condition of ankylosis again. He thought breaking down was justifiable in the case presented.

He has seen ankylosis in the knee-joint follow rheumatism in a woman aged 35. He suspected in this case the poison, as in other cases of the sort, was gonorrhœal.

Dr. John Hunter presented two patients he had referred to Drs. B. E. McKenzie and H. P. Galloway.

The first case was a girl, aged about ten, suffering from spinal curvature. It commenced about two years ago and was accounted

for by a valgus condition of the feet. This was a most suitable case for therapeutic gymnastics. The feet would also be treated.

Dr. W. J. Wilson asked how plates for supports would do for the feet.

Dr. McKenzie said he would not use plates, but rather try to develop the muscles whose tendons ran along the inner side of the foot and induce supination. He pointed out that this was not flat-foot in the literal sense of that term, but a condition of over-pronation. A proper boot should be fitted to the foot.

Dr. Oakley spoke of a patient, aged 60, under his care, who had been a life-long sufferer. The condition was due to talipes equinus which was very marked in one foot.

Dr. T. Webster explained how bicycling would be beneficial in these cases of over-pronation.

Dr. Hunter's second patient was a young man, aged twenty, who had with his spinal curvature suffered a great deal of pain in the lower part of the spine, and over the lower abdomen, accompanied by frequent micturition. Dr. Galloway pointed out the condition of the spine—a distinct scoliotic condition with some rotation of the vertebræ. The symptoms of the case indicated a possible lesion of the bones at that point. The kyphotic condition pointed to Pott's disease. Dr. McKenzie said that the kyphosis was a distinct condition present, apart from the lateral curvature. Taken with the fact that râles had been found in the lungs, it pointed to ordinary caries; although there were certain things against this. There had been pain in the back for five years at the seat of the lesion, which was not usual in caries. Again, he was able to use the back pretty freely. There was a possibility it was malignant.

Dr. Frederick Fenton read a paper on

INTESTINAL AUTO INTOXICATION IN CHILDREN.

The first indication of this condition in many children, except for some malaise, not infrequently, was a convulsion. The doctor finds the temperature usually elevated, and the tongue lightly coated with a whitish fur, and a tendency for the fit to return. This state being due to some irritant, the treatment should be directed toward the removal of it. The best means of doing this, in the essayist's experience, was the rectal douche. Immediate relief was usually afforded by this means. A number of cases were then cited in which the convulsions due to auto-intoxication had been so treated with pronounced success. Intestinal antiseptics were of little value. "Imagine," said the speaker, "a surgeon attempting

to sterilize a sinus fifteen feet long by introducing one-sixtieth of a grain of bichloride of mercury every three hours." They might, of course, delay fermentation. The irritant, in these cases, Dr. Fenton holds to be a chemical one, either the product of disordered digestion or a germ toxine.

Dr. Harold Parsons spoke of the great value of the douche, not only in the acute, fulminating cases, but also in the chronic. He thought the irritant was usually bacterial or chemical. He praised the work of Bucher on bacterial intestinal intoxication. He thought the mechanical irritants would give rise to colic rather than to nervous disturbances.

Dr. W. J. Wilson believed the intoxication manifested itself in different ways. In some cases there was drowsiness instead of convulsions, little rise in temperature, headache, perhaps symptoms of typhoid etc.; the symptoms usually disappeared upon clearing the bowel.

Dr. Oakley said his practice was to give calomel and the bromide in these cases.

Dr. C. Hastings said the plan of irrigating in these cases was important. His practice was to give two injections, the first to allow the tube to be inserted high up, the second time to get the bowel well emptied.

Dr. McPhedran thought there was a good deal of absorption in these cases from the small bowel. He believed in making patients fast, but in allowing them plenty of water. He called attention to the value of injections, repeated at close intervals.

Dr. Webster advised beside the rectal douche the administration of castor oil.

Dr. W. Bryans said he gave chloroform to subdue the convulsions, or bromide of potash, and calomel in repeated doses to clear the bowels.

Dr. Fenton closed the discussion.

It was moved by Dr. Hay and seconded by Dr. Galloway that inasmuch as high grade microscopes are not manufactured in Canada, it is the opinion of this society that they should be admitted free of duty, and that a copy of this motion be sent to the Federal Government.—Carried.

The society then adjourned.

The regular meeting was held in the council building, Nov. 4th. Dr. T. F. MacMahon presided.

The minutes of the last meeting were read and adopted.

PERNICIOUS ANÆMIA.

Dr. Alex. McPhedran presented a man, aged about 55 years, who had entered the hospital last summer for treatment. He was prostrate, delirious, and presented a very anæmic appearance. Blood count showed 480,000 per c.m., hæmoglobin 20 per cent. There was a good deal of vomiting and some diarrhœa. He was treated by subcutaneous injections of normal saline solution on every alternate day, and the intervening by saline enemata. He was also given arsenic. The patient is practically well, although there is some weakness of the legs, the muscles being tender. He may have had a peripheral neuritis. The sensory nerves were only slightly affected. In another case the speaker had, there was well marked peripheral neuritis with recovery.

Dr. Geo. Bingham read a paper on

INJURIES TO THE VERTEX.

In opening, the essayist pointed out how nature was more handicapped in effecting cures to injuries to the brain than in other parts of the body, owing to its enclosure in a closed, bony cavity, and the susceptibility of that region to the invasion of pathogenic organisms. After referring to the various sequelæ of injuries to the brain, the doctor pointed out the increased danger to the old and the young from depressed fractures, owing to the absence of the diploe. It was worthy of remark the amount of hæmorrhage which might occur from a brain sinus, and the amount of brain tissue which might be sacrificed without apparent injury to the patient. Trephining was as justifiable an operation, and as free from disaster as an exploratory incision of the abdominal wall. Wounds of the scalp varied according as they were subcutaneous, sub aponeurotic, or epicranial. The two contingencies were hæmorrhage and sepsis. The importance of the first dressing could not be overestimated. The scalp was a hard portion to sterilize. Strict antiseptic precautions were very necessary. Wounds of the skull might be inflicted by gunshot, pointed instruments, or blunt instruments. He would consider the last two. They might be penetrating or non-penetrating. In the latter, the expectant plan of treatment was indicated. One must not always trust to nature. The diploe might be penetrated. If there was any doubt about the extent or asepticity of the wound, it

would be safe to trephine the diploe to ascertain the extent and character of the wound. In penetrating wounds of the skull, the trephine was invaluable, not only to ascertain the amount of injury, but to relieve anything which might cause pressure. Wounds through mouth or nares should be carefully antiseptized. Blunt instruments were likely to cause fractures; and these might be classified as simple undepressed, simple depressed, compound undepressed, and compound depressed. The difficulties in diagnosing simple depressed fractures were very great. The sensations of the patient were to be noted. The introduction of a needle through the soft parts was of value in determining the presence of a depression. An exploratory incision, under strict asepsis, was to be commended. The diagnosis of compound depressed fracture was more simple; but it was well to remember that the site of the fracture did not always correspond to the site of the wound in the soft parts. The wound should be enlarged and the surrounding area examined. In the simple depressed, surgical interference to raise the depressed bone was called for.

In compound fracture of the vertex surgical interference was always necessary. The wound should be enlarged and the trephine used.

All splinters should be removed from the membranes or the brain substance, all angles rounded, and hæmorrhage checked. The wound should be closed, drainage being provided for. Temporary sutures should be introduced, ready to be tightened at the end of twenty-four or forty-eight hours. Early dressing was called for. Every such case should be operated on, as well as those in which there was injury to the structures inside the cranium, and the sooner the better for the patient. Dr. Bingham presented three patients; one of whom he had operated on immediately after the operation with a perfect recovery; a second after a lapse of eighteen months, where epileptic attacks had supervened with recovery, except for some slight loss of function of muscles of the face and arm; a third case after a lapse of two and a half years with partial relief of the epileptic condition. The history of these interesting cases were fully given. The society then examined the patients.

Dr. R. B. Nevitt alluded to the success which attended brain operations, since the resuscitation (if he might use the word) of trephining, by the inauguration of antiseptic principles in treatment. The temptation to palpate cranial injuries before carbolicizing or mercurializing the hands was to be overcome. The doctor said it was exceedingly difficult in some cases to know whether to operate.

He recalled a case recently seen by him where the whole of one side of the head had been flattened and the base fractured, where the expectant plan was decided on owing to the supposed impossibility for recovery to occur, where the case did get better. Other cases in his practice were cited, explaining his technique. The flap should be made with regard to the preservation of its vitality, to drainage, and to the prevention of hernia cerebri. Such a flap was that employed by Horsley, whom he followed.

Dr. Wm. Oldright said that, in opposition to the rule laid down by the essayist, he had seen two cases of depressed fracture recover, in which trephining had not been done. The symptoms at the time should guide one. The doctor explained the technique he had observed Horsley employ. The essayist had not touched on cases where extravasation of blood had taken place beneath the membranes. Trephining was done over the seat of injury, and the bulging membranes opened. Unsuccessful in finding anything, the trephining was repeated at the site of *contre coup*, but as there was no bulging the membranes were not opened. *Post-mortem* revealed a clot under the membranes at the site of the second trephine opening. They had forgotten that on account of the presence of first opening there would be no bulging of the membranes at the site of the second.

Dr. Cameron said that, if there was reason to suspect depression, he did not agree that it was right to trephine, unless there was evidence of damage to the brain. It might be the outer table alone that was depressed. A great danger in opening up was due to the great difficulty of obtaining asepticity of the scalp, and a simple fracture was converted into a compound. He thought it was a question whether we should not hesitate to adopt the rule, which was just becoming fashionable, of operating in every case of injury to the skull. The speaker was not much in favor of secondary sutures. In clear cases of depression prompt trephining, elevation and disinfection were indicated. In the third class of cases spoken of by the essayist—the epileptic—there was always great doubt as to the fact whether they had to do with injury received long before. He had had the same experience as the leader of the discussion in seeing a temporary respite from the convulsions. He remarked on the ease with which hæmorrhage could be allayed where a sinus had been opened.

Dr. A. Primrose thought there was no question of the value of immediate operation in the first case presented. The result was a brilliant one. He thought the matter of the occurrence of Jacksonian

epilepsy was seldom or never taken into account in dealing with the primary injury. The surgeon's aim was to put the patient in the best possible condition for subsequent recovery. His practice in scalp injuries was to drain when the pericranium was cut. Scalp wounds healed with great readiness and without suppuration in his experience.

He cited a case where the scalp wound reaching from the sphenoidal to the occipital bone, and the flat was turned down over the ear, which he treated with 1 in 20 carbolic and a nail brush, healed by first intention.

Dr. N. A. Powell said that he has had about the ordinary degree of success in cases of trephining, which he had been called to do in the earlier days of his practice among lumbermen and other engaged in dangerous occupations.

He did not believe in operating on idiots. A comparison had been made of the comparative dangers of cerebral with abdominal operations. He considered those on the brain much more critical, and gave his reasons therefor. The strictest care was necessary as to antisepsis. He instanced a case of cerebritis occasioned by the operator having handled a light during the operation without subsequently cleansing the dirtied hand. He commended the use of Seneca Powell's electric saw as an exact and scientific instrument for going through the skull.

Dr. Bingham closed the discussion.

The society adjourned.

TORONTO CLINICAL SOCIETY.

THE opening meeting of the Clinical Society was held November 10. President Albert A. Macdonald occupied the chair.

In his opening address, Dr. Macdonald referred appropriately to the following topics: The deaths of Drs. Strange and Cook, late Fellows of the society; to the visit of the Old Country scientists to Toronto during the past summer; to the position medicine was taking as an experimental science; to the work of Lister and the possibilities of as great discoveries yet being made in surgery; to the relation of the profession to charities; to the observations he had made while on a recent visit to Europe; to the necessity of medical men upholding medical ethics; and lastly, plead for the earnest co-operation of the Fellows that the society might have a most prosperous year.

Dr. G. S. Ryerson reported two cases of abscess of the brain, resulting from middle ear disease. He laid especial emphasis on the necessity of treating all cases of suppuration of the middle ear until cured.

Dr. Anderson reported having seen five cases of death resulting from neglected ear disease. This was a strong commentary on the remarks of Dr. Ryerson.

Dr. Trow said that there was no disease neglected so much as middle ear disease.

Dr. Ryerson, in speaking of treatment, said he had found the best result from silver nitrate solutions from 60 to 120 grains to the ounce. He drops three or four drops into the ear after cleansing out.

Dr. A. H. Garratt presented a heart with two wounds in it. They had been made by a stab with a pair of scissors. One wound was through the auricular appendage and the other in the aorta just outside the valves.

Dr. Geo. Bingham reported a case of spina bifida in which he had operated. The specimen was shown. The tumor had attained the size of a foetal head and was found (after aspiration, sometimes before) to protrude through an opening about three-quarters of an inch in diameter. The case, which was still under observation, was doing favorably.

TORONTO PATHOLOGICAL SOCIETY.

THE meeting of the Toronto Pathological Society was held on September 25th, Dr. H. B. Anderson in the chair. Dr. Carveth presented a patient with the left testicle out of place. The condition had existed since birth and the patient had suffered no inconvenience therefrom. Later in life a hernia developed on the same side. The testicle lies just external to the external abdominal ring and is found to be very small, but testicular sense is distinct. In front of the organ lies the hernia which has a knotty feeling as though consisting of omentum. No impulse on coughing.

Dr. Oldright asked why an undescended testis was usually undeveloped?

Dr. Primrose had seen two cases of intra-abdominal testis, in which the organs were well developed.

Dr. McPhedran remarked that a normally descended testis may also be immature.

Dr. Anderson said he had found at autopsy, a few days ago, an undescended and immature testicle complicated with a hernia of the sigmoid flexure of the colon.

Dr. Carveth showed a case of

SPLENO-MYELOGENOUS LEUKÆMIA.

Two months after an injury the patient noticed enlargement of his abdomen. Now the abdomen is very prominent, and the spleen found greatly enlarged, extending past the middle line to the right. The notch is distinctly felt, and the lower border of the organ reaches to within a few c.m. of the pubic spine. There is marked anæmia and emaciation—no history of hæmorrhages. There have been several attacks of gastro-intestinal derangement.

When first seen the blood showed one white to six red blood cells, but under treatment with arsenic for six months the proportion was one to twelve, the red cells numbering 3,500,000 per c.m.m.

Dr. Parsons said he had seen the case with Dr. Anderson some months ago. At that time the spleen was much enlarged and the case showed every evidence clinically, of leukæmia. The blood also was typical, the myelocytes of Ehrlich being characteristic, and in considerable numbers. He referred to a case quoted by Dr. Osler (Pepper's System of Medicine) which clearly shows that leukæmia may exist without an increase in the leucocytes. In this case, when first seen, the blood showed 2,000,000 red corpuscles and 500,000 white, and a color analysis gave 14.7 per cent. of myelocytes. Later the white cells increased to 714,000 per c.m.m. After three weeks' treatment with arsenic the white cells had fallen to 7,500 per c.m.m., but the myelocytes were four per cent. of the total leucocytes. At this point, a diagnosis would have been impossible without a color analysis and differential count of the white cells, for the proportion of whites to reds was almost normal; 7,500 whites to 3,500,000 reds.

The direct history of recent trauma in Dr. Carveth's case was interesting.

Dr. McPhedran—with regard to the sudden disappearance of the leucocytosis in the case referred to, mentioned the case of a child recently under his care. The patient was first seen on a Friday. Glandular enlargement was very marked, and the blood count showed a great increase in the white cells. On the following Monday, glands were much diminished in size and the leucocytes were very few in number. At autopsy no enlarged glands were found. Spleen was not enlarged.

All the leucocytes in this case were of the small variety.

Dr. Graham spoke of a patient of his—a boy with enlarged glands of the neck, the blood showing a marked leucocytosis. The glands soon disappeared, but the leucocytosis persisted. Later the abdomen became prominent, the result of a nodular mass. The patient died.

Dr. Graham thought the case was likely one of lympho-sarcoma.

Dr. Parsons referred to the cases in literature by Pel & Elestein, in which, with enlargement of the glands, there were recurring attacks of fever lasting a week or ten days and subsiding, to reappear in a week or two, and so on for an indefinite period. He had seen one such case. The etiology seemed to be infective, but cultures from blood and urine repeatedly made, aërobically and anaërobically, were negative. These cases were usually classed as pseudo-leukæmia.

Dr. Carveth brought up the question of etiology, traumatic or infective.

Dr. McPhedran gave the case of a butcher previously healthy. Early in the spring he cleared a large amount of filth from his yard. He was taken ill in the following May. Entered hospital in June, and died of leukæmia in six weeks from the onset. The case was evidently infective.

Dr. Graham—A healthy boy after working hard in the sun lay down and slept. He died of leukæmia in a few weeks. It was suggested that this was also an infective case.

Dr. Anderson then delivered the presidential address.

Dr. McPhedran eulogized Dr. Anderson on the unusual character and interest of his address.

Moved by Dr. McPhedran, seconded by Dr. Graham, that a vote of thanks be tendered Dr. Anderson for the presidential address so greatly enjoyed by the meeting.—Carried.

Dr. Graham read a paper on

ACUTE YELLOW ATROPHY OF THE LIVER.

(Notes by Dr. Fletcher.)

Mrs. B., aged 27 years. Father died at fifty-four, said to be of abscess of the lung. Mother living and healthy. Sisters all living and well. Mrs. B. had typhoid fever five or six years ago. Dr. Strange, who saw her at the time, said she had been suffering of malaria. Has had no other disease since childhood. Was married at nineteen and had two children. Mrs. B. was very unhappy in her marriage relations. Her husband began to abuse her two

weeks after their wedding, and continued to do so up to the beginning of this year, when she instituted proceedings for a divorce on the grounds of cruelty, neglect and unfaithfulness. In the month of March both her children died of scarlet fever, but she seemed to bear all her troubles bravely and never murmured. On July 6 Mrs. B. came to my office complaining of feeling weak and said she was a bad color. She was slightly jaundiced, motions pale; temperature and pulse normal. July 11—Patient worse, with a constant feeling of nausea and prostration. Spends nearly all her time in bed; jaundice very much greater. Tenderness over the liver, but area of dullness about normal. Bowels move freely, owing to laxative medicines. Takes milk, bovine and broths.

From July 11 to 16 the symptoms grew progressively worse. Jaundice became very deep, patient vomited occasionally, and was scarcely able to recognize me on the morning of the 16th. She had been very restless all night. Passed urine freely up to this time. During the day developed a condition of stupor. Pulse and temperature normal. Pupils dilated but readily contracted when a light was brought near them. Area of dullness over liver less than normal, tympanitic resonance one and a half inches above lower border of ribs. Difficulty in swallowing; tactile sensation impaired. During the night the patient perspired and passed urine in the bed.

17th.—Patient unconscious (temperature at night 104, pulse 120) (in the morning temperature 101, pulse 80). Bowels had not moved for two days. Cannot swallow. Sweating freely. All sensation gone. Patient died at 5 o'clock on the morning of the 18th.

Conversation with various members of the family, since the death of Mrs. B., reveals the fact that the deceased, while appearing cheerful when in the presence of others, yet spent a great deal of the night weeping. She felt keenly her husband's cruelty and unfaithfulness. Her two children died about two months previously, and the necessity of appearing at the divorce proceedings caused her great anxiety.

(Notes by Dr. Graham.)

I saw the patient on the evening of the 16th, with Dr. Fletcher. The patient, jaundiced, but not deeply, was lying across the bed with her head extended backwards. She was in a state of stupor, from which she could be aroused with difficulty. My first impression was that the patient might be in a hysterical coma, but on further examination I gave up the idea. On examination I found all the organs in a fairly healthy condition, and noticed the diminished hepatic dullness. It did not occur to me that the case might

be one of acute yellow atrophy until, afterwards, in discussing the case with Dr. Fletcher. We concluded that the brain symptoms were due to a toxæmia, and the fact of the much lessened area of hepatic dullness led us both to the idea of acute yellow atrophy. A sample of the urine was produced, and examined on the 17th by Dr. Hamilton and myself. Both leucin and tyrosin were found, sp. gr. 1.023, reaction, acid, albumen and sugar absent, bile pigment present; bile stained casts, leucin globules and tyrosin needle crystals; urea 7 grs. to oz.

At the *post-mortem* examination urine was drawn by catheter. This did not contain leucin, and very little tyrosin. This I looked upon as a case of acute yellow atrophy, in which death occurred so soon that the hepatic degeneration did not proceed so far as is often the case. The early death of the patient was due either to the previous weakness or the intensity of the poisoning.

Post-mortem twelve hours after death: We were only permitted to examine the liver. On opening the abdomen we found the anterior margin of the liver at least two inches above the costal margin, and had some difficulty in bringing it into view. The organ was not so much atrophied, the volume being about one-third less than normal; the capsule was decidedly wrinkled; the gall bladder was small and contained a small quantity of bile. There were no gall stones. On section the cut surface presented different appearances in different places. Some parts were stained deep yellow, and quite soft and pliable, in other portions the staining was not so deep, and the consistence almost normal. Fatty matter exuded freely from the cut surface. Portions were removed for microscopical examination. Dr. Anderson kindly prepared the specimen, and made the section which you will have an opportunity of examining to-night. We shall be glad to hear Dr. Anderson's opinion with regard to them. In my examination I found parts in which the true liver structure had entirely disappeared, and which were made up of a more or less fibrous network, with a large number of leucocytes. In the other portions there were a few hepatic cells, some of them in a more or less broken down condition. In other places, again, the cells were in a fairly healthy condition, arranged in columns, which were separated by disintegrated tissue. The possibility of phosphoric poisoning suggested itself in either case. There was no phosphorescence either of the portions of the liver or of the urine. The elevation of temperature before death is generally put down as a differential sign in favor of acute yellow atrophy; besides there was no history of poisoning.

Dr. Fotheringham : According to Delafield it is doubtful whether acute yellow atrophy of the liver be a disease primarily or an acute infectious disease with local lesions, and that it is not unlikely that more than one form of lesion is grouped under the heading. Ziegler thinks the etiology of the process may not always be the same.

In phosphorous poisoning the liver is not so small, it is firmer, of greyish yellow or yellow color, and of greasy feel.

Cohnheim distinguished between icterus gravis and acute yellow atrophy by the constant presence in the former of intense jaundice and complete suppression of bile, which are both wanting in acute yellow atrophy.

Fagge uses acute yellow atrophy and icterus gravis as synonymous terms and says the cerebral symptoms are what kills the patient. He lays great stress upon these, saying that apart from jaundice the symptoms are mostly cerebral.

Fagge's diagnostic points are : (1) diminished liver dulness ; (2) leucin and tyrosin in the urine ; (3) internal hæmorrhages and petechiæ ; (4) cerebral symptoms ; (5) temperature frequently low and pulse rapid.

Under etiology the speaker mentioned mental emotion. Sex and pregnancy were important factors. As to age, five out of every six cases were under thirty years, and in favor of the contagious theory, he spoke of the family quoted by Graves, in which two sisters died of this condition at an interval of eight months, and a third developed it three months later but recovered. The fact has also been noted that several sailors in the same vessel have suffered from acute yellow atrophy of the liver.

As to treatment : none is known.

Dr. McPhedran : Our colleague, Prof. A.B. Macallum, made the pathological report on his case, reported in the *British Medical Journal*. He looked upon that report as very valuable.

From the advanced degeneration of the periphery of the lobules, while the central part of many were comparatively healthy. It seems probable that the poison entered the liver by way of the portal vein.

The liver in that case was greatly atrophied, some parts were yellow and others red. It seems probable that the different parts had undergone different degrees of degeneration.

Mr. McKenzie called attention to Flexner's paper on "Toxalbumin Poisoning and the Changes in the Cell due to and Karyolysis." He also mentioned Babe's case, in which there was a streptococcus infection, but the liver was sterile.

Dr. Graham, in reply, said the amount of flatulence in these

cases is often very moderate, and a decided diminution of the area of hepatic dulness when the distension of the abdomen is not great is an important differentiating sign in favor of acute yellow atrophy. The sterile character of the liver tissue, in cases in which bacteria are found in other parts of the body, may be due to the direct action of the hepatic juices in the destruction of micro-organisms. In tuberculosis of the liver Koch's bacilli are usually found in very small numbers, and the pus of hepatic abscesses is frequently sterile.

Dr. B. E. McKenzie then read a paper on

TUBERCULOSIS OF JOINTS,

presenting three specimens.

CASE I.—G. C. 44. About six years ago struck right elbow against a door and hurt it so that it remained troublesome for a long time. Continued to do his ordinary duties as a student, and found the elbow never quite recovered. While in Germany had some injection made, but does not know what it was. The reaction and pain following were very intense. During succeeding years he gave the joint periods of rest more or less prolonged, during which it improved greatly, so that several times he considered the arm "nearly well." Then using it again, it soon became stiff and painful.

At my first examination movement of the joint was not more than half the normal. There was infiltration especially about the head of the radius, and to a lesser extent at both sides of the olecranon, dulling greatly the natural expression of the joint.

For several months the arm was kept at an angle of about 120° and at rest in dressings of plaster of Paris, during which time the infiltration became less; but during a severe attack of la grippe the inflammation became acute, and the part afterward remained tender and painful. One injection of iodoform in glycerine was given; but the gentleman resolved to have an operation with a view of definitely ending the trouble.

Family history and personal habits and history good.

Incision was made with a view to excise the joint, but on inspection it was felt that there would be some uncertainty as to the result, whereas our instructions from the patient were that we must amputate if in doubt. Above it one third of the humerus was removed.

Inspection shows caries of the head of radius, of the olecranon process, and of the external epicondyle and periarticular thickening, extending for several inches above and below the joint. The

amount of disease is not extensive, and there would have been a fair chance of recovery with a good arm after excision.

CASE 2.—S. S. 16. Family history of tuberculosis. Has had chronic pleurisy, regarding which there is still doubt. Left knee swollen and stiff.

For several months a Thomas knee-splint was used, but the joint was not well cared for, and several falls occurred, doing considerable violence. Several places broke down and local curettage was done.

Amputation a little above joint of lower and middle third.

Inspection shows quite extensive rarefying osteitis extending down the tibia, but still more markedly up the femur. When amputating, the medullary canal was cleared out through its entire length, several long pieces of bone coming away also.

This case contrasts with the former in having marked taint in family history and in the more rapid destruction of tissues

CASE 3.—C. A. 38. Good family history. Injured knee about ten years ago. Always previous to that time was strong and healthy. Ever since then, has seemed to enjoy good health except that the knee never fully recovered.

Treatment during these years has been irregular and intermittent. The joint never got any satisfactory period of complete rest. Through frequently repeated small traumatism, the knee has gradually grown worse. Larger than its fellow one inch. Expression of joint much hidden. Infiltration all about the joint.

May 12th, 1897. Excision. Found it impossible to remove diseased tissues thoroughly; but had not obtained permission to amputate.

Sept. 20th. Disease continued to progress, and amputation was performed at junction of middle and lower third to-day.

The bone is much softened and thinned for several inches both above and below the joint. Progress since amputation has been most satisfactory.

Statistics show that amputation is an important life-saving measure in tuberculous affections of the limbs. Even where other lesions have manifested themselves, as *e. g.* in the lungs, these latter generally improve in a very satisfactory manner.

Dr. Primrose referred to certain extraordinary effects produced by operative procedure on tuberculous disease. Thus Dr. McKenzie referred to the fact that a tuberculous focus in the lung may improve after removal of disease in one of the extremities. Some recent

observers have recorded the marked effect upon tuberculosis of the hip produced by amputation at the knee. The disease under such circumstances has been observed to become more localized and circumscribed so that subsequent amputation at the hip became feasible and was performed successfully.

Dr. Amyot remarked the absence of disease in the cancellous tissue, when surrounding it for almost the entire circumference of the bone, the disease was marked, also for about four inches the compact tissue was much eroded, and in spots very thin.

Mr. J. J. McKenzie presented a specimen of pericarditis in a heifer. From the history of the case the question of infectiousness had arisen, as a similar case had occurred some months before on the same farm.

The meeting then adjourned.

THE AMERICAN ELECTRO THERAPEUTIC ASSOCIATION.

THE seventh annual meeting of The American Electro Therapeutic Association was held at Harrisburg, Pa., in the Academy of Medicine, on September 21, 22 and 23, under the presidency of Dr. William T. Bishop, of Harrisburg, who called the meeting to order at 10 a.m. on Tuesday, September 21. The Rev. Leroy F. Baker, of St. Paul's P. E. church, offered an opening prayer, after which Mayor Patterson welcomed the delegates to the city. Dr. Robert Newman, of New York, a former president, responded in a very witty strain and took occasion to remark that electricity was not treated with the consideration it deserved in the medical colleges.

The privileges of the floor were extended to the many visiting physicians.

Dr. Margaret A. Cleaves, of New York, chairman of the Committee on Meters, presented her report. She drew attention to the fact that several makes of meter had been withdrawn permanently from the tests of the committee because of their demonstrated inefficiency, and that a new company had come into the field with a novel apparatus—a milleampere-meter and a volt-meter for use on alternating current circuits, both sinusoidal and the interrupted or faradic.

Dr. Robert Newman, of New York, read a paper on "Electric Treatment in Gout and Uric Acid Diathesis." From careful

observation and experience he could positively assert that gout and kindred diseases could be checked, relapses prevented, and in many cases a cure effected by the judicious application of electricity, particularly the static form. He cited himself as a case in point. The advantages of static electricity are that it is generally diffused through the body, penetrating deeply: it is a general tonic; the "breeze" generally allays the pain in a few minutes, and secures freedom of motion; headaches and mental confusion are dissipated, and the temperature and circulation equalized; the icy coldness of the feet relieved; nervous debility removed, the secretory and excretory organs stimulated, inflammatory products absorbed; it also gives passive exercise. Urinary analyses were presented verifying the claim for static electricity to abate gout.

Dr. Francis B. Bishop, of Washington, D.C., presented a paper on "Chorea." It was reasonable to believe that an unstable condition of the higher nerve centres predisposed to the condition, and that a poison affecting these centres might produce in one person epilepsy, in another general neurasthenia, and in a third chorea. In his section of the country malaria was largely responsible for chorea. Treatment consisted in attention to the bowels and diet, securing proper rest, and the use of static electricity by means of the "static cage," which, while gently stimulating the periphery, soothed the general nervous system; at the same time the patient is made to inhale the ozone, thus supplying oxygen to the impoverished blood.

"Sources of Atmospheric Electricity," by Dr. R. J. Nunn, of Savannah, Ga. He considered the solar system a vast static induction machine; the atmosphere close to the earth's surface must revolve with the earth as the latter turns upon its axis, while the tendency of that portion of the atmosphere at a distance from the earth's attraction is to accumulate behind the earth. At some point the atmospheric inertia must neutralize the earth's attraction, and where this occurred there must be friction, which would necessarily cause electrical phenomena; other factors were of importance, such as variation in pressure, temperature, humidity.

"Some Thoughts and Considerations on X Ray Work," by Dr. Eugene R. Corson, of Savannah, Ga. The author thought that the experiments on polarization and refraction had been conducted too close to the tube and that there might be a point at which they would come within the control of present methods. He thought that the X ray would prove even more valuable in dislocations than in fractures. He suggested that a careful outline tracing be

made of the negative by transmitted light, all extraneous light being shut off. The eye could much more readily pick out the essential features in such a tracing than from the usual print or radiograph. Radiographs were shown, proving that the X ray penetrated a deposit of urate of soda much more readily than it did bone. Many useful suggestions were made.

"Some Considerations Relative to the Therapeutic Application of the Current," by Dr. George E. Bill, Harrisburg, Pa. The writer threw out many suggestions as to the best methods of applying electricity, especially as to polarity.

"The Early Electrolysis of Nævus," by Dr. Charles R. Dickson, Toronto, Canada. Two cases were cited in support of the contention that nævus should be operated upon as early as possible, that the operation was much simpler, less prolonged, and the chances of scarring much less than when the operation was deferred until later in life.

"Heart Failure in Cardiac Diseases due to Defective Circulation," by Dr. Eli H. Coover, Harrisburg, Pa. Many suggestions as to appropriate treatment were made.

"Expenditure of Electrical Energy," by Dr. Margaret A. Cleaves, New York. In order to have an intelligent conception of the force by means of which electricity is made available, or of the laws governing its action, it was necessary to use a voltmeter as well as a milleamperemeter. In the treatment of an acute neuritis, or acute pelvic inflammation, the wise physician would employ the minimum rate of expenditure in volt-amperes; our purpose is to expend the energy in such a way as to exercise a directive influence upon the molecules and atoms, not to cause any disruptive action. In the treatment of a fibroid tumor, on the other hand, greater pressure would be required in order to overcome the resistance of the denser structures, in the conducting path; current density in its practical bearings was carefully gone into. Numerous tabulated clinical records were exhibited, containing the data mentioned in the paper.

"Molecular Effects of Electricity," by Professor Dolbear, of Tuft's College, Boston. The laws governing molecular motion were discussed in a masterly manner; physical laws are immutable, and the effects produced by what we call electricity are really due to heat.

"The New Electro-Mercuric Treatment of Cancer," by Dr. G. Betton Massey, Philadelphia, was a further elaboration of a paper presented to the American Medical Association in June, 1897. It was only applicable in cases where the general system had not yet been infected.

"Current Regulating Apparatus," by Mr. Edward Jewell, E.E., Chicago, described methods of controlling dynamo currents and adapting them to therapeutic work. Absolute protection could only be secured by using the "motor-dynamo," which was made by connecting together by insulated coupling the shafts of two one-eighth horse-power shunt motors, the winding on one of them having been reversed.

"Report of the Committee on Electrodes," Dr. Charles R. Dickson, Toronto, chairman. A binding post was presented, devised by one of the members, which could be used with any existing tips. The metric system of measurement was again recommended. On motion of Dr. Robert Newman the report was accepted, and on motion of Dr. John Gerin the Association accepted the metric system for all measurements.

"Galvinism as an Aid in the Treatment of Goitre," by Dr. Caleb Brown, Sac City, Ia. His cases ranged from twelve to fifty-six years of age, 33 per cent. being "hard" (a preponderance of connective tissue), and 67 per cent. "soft" (a predominance of fluid in the follicles or vascular tissue), every case of the first was benefitted, but none completely cured. By galvinism in fully 75 per cent. of recent cases of "soft" goitre occurring mostly in young women, the gland returned almost if not quite to its normal size, and had remained so in 25 per cent. of the cases. Mild currents, frequently repeated, was his rule.

"Further Studies of the Manifestations of Uric Acid, and their Treatment, Electrically and Otherwise," by Dr. J. Griffith Davis, New York. Special emphasis was laid on the statement that uric acid and its salts are the result or product of nerve and muscle waste. Among cases cited was one of very severe puerperal eclampsia followed by a most obstinate form of insomnia, which latter yielded finally most satisfactorily to general faradization. Among methods of prevention of the retention in the system of uric acid, the bicycle was lauded as a means of obtaining exercise in the fresh air; it was advised that the body be clothed in wool. For acute manifestations the writer preferred medicine, but for the more chronic forms had found the galvanic and faradic currents very useful.

"A New Electrode for Use with the Static Machine" was presented by Dr. Lucy Hall-Brown, New York, who sent a communication on the subject. An efficient spray current could be administered by means of a wire brush on a handle, consisting of about four hundred fine steel wires arranged like a small whisk.

Dr. Bergonie, of Bordeaux, France, sent three short communications, entitled :

(a) "A New Localizing Electrode to Prevent the Diffusion of the Current."

(b) "Palliative Treatment of Tic Douloureux of the face."

(c) "The Action of the Roentgen Rays on the Vitality and Virulence of Koch's Bacilli in Cultures."

These were translated and read by Dr. F. Schavoir, of Stamford, Conn.

The localizing electrode consisted of eight or ten narrow electrodes, connected alternately with the positive and negative poles. The current must have an extremely high intensity in order to become diffused.

In the treatment of tic douloureux, he uses a large electrode on the face, and an indifferent electrode to the dorsal region. A continuous current of 50 volts and 30 to 50 milleamperes is employed, and the periods of ascension and diminution last from seven to ten minutes. The maximum intensity should be maintained for at least twenty minutes. As the cases had been kept under observation for several years, he could say positively that the treatment always brought relief from intense pain, and sometimes after a considerable time caused its permanent disappearance.

The author described in detail the manner in which his investigations into the action of the Roentgen rays on the tubercle bacilli had been conducted, and concluded from his experiments that the exposure of the culture for one hour did not destroy the virulence of the culture, but retarded its evolution ; and, also, that the vitality of the cultures was not modified.

"Report of the Committee on Electric Light for Diagnosis and Therapy, and the Roentgen X-Rays," by Dr. F. Schavoir, Stamford, Conn. With the static machine the rays produced were far more penetrating and steady, and the radiographs could be taken with a much shorter exposure than by other means ; many and great improvements had been made in vacuum tubes, and that a marked increase in transparency had been secured in the fluoroscope by the substitution of barium platino-cyanide for the tungstate of calcium.

The President read his address which briefly reviewed the history of the Association, and suggested several changes which would increase the value and usefulness of the Association, and lessen the work of the executive. On motion of Dr. Charles R. Dickson, it was resolved, that the Executive Council be directed to consider the suggestions contained in the President's address, and also the mat-

ter of the revision of the constitution and by-laws ; that their report be mailed to the members at least one month prior to the next meeting, and that notice of such amendments is now given.

On motion of Dr. R. J. Nunn it was decided to hold the eighth annual meeting in the city of Buffalo, N.Y., and the second Tuesday in September and two following days were chosen as the date.

The following officers were elected for the ensuing year :

PRESIDENT.—Dr. Charles R. Dickson, of Toronto, Canada.

FIRST VICE-PRESIDENT.—Dr. F. Schavoir, of Stamford, Conn.

SECOND VICE-PRESIDENT.—Dr. Caleb Brown, of Sac City, Iowa.

SECRETARY.—Dr. John Gerin, of Auburn, N.Y.

TREASURER.—Dr. R. J. Nunn, of Savannah, Ga.

EXECUTIVE COUNCIL.

Dr. Robert Newman, of New York, N.Y.

Dr. W. J. Morton, of New York, N.Y.

Dr. W. J. Herdman, of Ann Arbor, Mich.

Dr. W. T. Bishop, of Harrisburg, Pa.

Dr. G. Betton Massey, of Philadelphia, Pa.

The customary votes of thanks were passed, after which the retiring President appointed Drs. Newman and Nunn a committee to conduct the newly elected President to the chair. Dr. Dickson, on receiving the gavel, addressed the meeting in a particularly happy vein, and requested the hearty co-operation of each member to make the meeting in Buffalo an unqualified success. He would announce his appointments of the committees on the investigation of scientific questions without unnecessary delay ; he declared the meeting adjourned, to re-convene at the call of the Executive Council.

Book Reviews.

SIMON'S CLINICAL DIAGNOSIS. New (2nd) edition, revised and enlarged. A manual of clinical diagnosis by microscopical and chemical methods. For students, hospital physicians, and practitioners. By Charles E. Simon, M.D., late Assistant Resident Physician, Johns Hopkins Hospital, Baltimore. In one very handsome octavo volume of 530 pages, with 135 engravings and 14 full-page colored plates. Cloth, \$3.50. Lea Brothers, Philadelphia and New York.

That the first edition of this work is exhausted, and a second demanded within a year, is of sufficient import to stamp it as one of great value. Simon, in this second edition, has brought the material right up to date, and we are acquainted with no single work that is its equal. The style is free, the material presented in a concise, yet not too brief, manner. The examination of the secretions of the body are too often neglected. The chapter on examination of the urine is the most complete and advanced that we know of in the English language, and each of the departments is handled in the same thorough and scientific manner. The several chapters deal with the examination of the blood, secretions of the mouth, gastric juices, fæces, nasal secretions, sputum, urine, etc. As an aid to clinical diagnosis we believe this volume indispensable to the progressive physician. The illustrations are well reproduced, while the typography is splendid.

TEXT-BOOK OF MEDICAL AND SURGICAL GYNÆCOLOGY. By R. W. Garrett, M.A., M.D., Professor of Obstetrics and Gynæcology in the Medical Faculty, Queen's University, Kingston; Gynæcologist to the Kingston General Hospital. J. A. Carveth & Co., medical publishers, Toronto. 400 pages.

The author in his preface sets out with the idea of placing his extended notes of lectures in the form of a text-book of such proportions as would not be cumbersome to the student and easily carried to and from class. He has carried this idea a little farther, and now presents to students and practitioners a new volume of 400 pages, with over 100 illustrations, and indexed very much better than many of the larger and more pretentious works.

He has followed Garrigue's method of arrangement, believing that a regional classification is preferable to a pathological one, and divided the work into four parts. The *first* part is devoted to the principles of gynæcology and occupies one hundred pages. Under the heading gynæ-

colological therapeutics he gives the following wholesome advice, which might well be taken to heart by every student and general practitioner, and last, but not least, by the gynæcologist: "Thus the circulation and the digestive and other important systems may influence or be influenced by the pelvic organs, and when deciding upon a line of treatment, the general condition of the patient must never be lost sight of." Pelvic massage is discussed and described, and half a dozen pages devoted to post-operative treatment, a subject on which the average student is usually sadly deficient.

Part *two* deals with functional diseases, particularly the disorders of menstruation. We have never been an admirer of set prescriptions, and scarcely think it is in the best interest of the student that he be asked to fill his head with long formulæ rather than exercise his faculties and formulate his own prescriptions, giving to himself a reason for every ingredient which enters into the composition of them.

Part *three* treats of the special regions—the pelvic floor, vagina, urethra, bladder, uterus, ovaries, tubes, etc., all of which are illustrated so as to be understood by the average student. In future editions it would be well to look closely after the lettering of the illustrations. Some of them are confusing, not to say misleading.

Part *four* takes up diseases of the breast, and in a concise manner gives the latest recognized hints on the various subjects considered.

To the student the book will be of decided use.

A PRACTICAL TREATISE ON SEXUAL DISORDERS OF THE MALE AND FEMALE. By Robert W. Taylor, M.D., Clinical Professor of Venereal Diseases in the College of Physicians and Surgeons, New York. In one handsome octavo volume of 448 pages, with 73 illustrations and eight plates in color and monochrome. Cloth, \$3, net. Lea Brothers & Co., New York and Philadelphia.

This is a very opportune time for the appearance of this valuable work. Dr. Taylor is recognized as an authority as well as a conscientious worker. The subject matter brings us face to face with a class of disorders that is of frequent occurrence and of which very little is known by the general practitioner. The symptoms are vague, often remote, and in a large percentage of cases, are attributed to that wonderful *neurasthenia* which strongly resembles Pandora's box. It has been the scapegoat for ignorance long enough. This work will do a great deal to remove this ignorance and enlighten us on a very important train of symptoms.

We do not intend to review chapter by chapter, and while we admire the work and the author, we believe there are omissions that should not be overlooked in the next edition. The male has altogether too much attention paid him. The ills spoken of are, we believe, far more common in the female than this work admits. That small, though very important part of the female genitals, the clitoris, is ignored. This organ is a very fruitful source of irritation that results in serious nervous and

sexual disorders. It has a prepuce, smegma accumulates beneath it, and nervous and sexual disorders follow. This little organ should be more carefully studied as a result. This is the particular work that should refer to it. Then the chapters on "*New Growths and Hypertrophie of the Vulva*," "*Vegetation of the Vulva*," "*Hypertrophie of the Vulva due to Syphilis and Tuberculous Ulcers of the Vulva*," etc., are not sexual disorders, but pathological changes, due to conditions that are not purely sexual. These chapters are very interesting and instructive, but are more pertinent to a traité on venereal disease than the present work.

We speak freely of the work because we recognize its immense value, also the need of the profession for such a volume. In no sense do we find fault with the contents, it is with the omissions. If space permitted we would say more good things. We strongly advise every practitioner to place the volume in his library and make a careful study of its contents. The illustrations are mostly new and original, while the typography, press work, and binding, are excellent.

GENITO-URINARY SURGERY AND VENEREAL DISEASES. By J. William White, M.D., Professor of Clinical Surgery, University of Pennsylvania, and Edward Martin, M.D., Clinical Professor of Genito-Urinary Diseases, University of Pennsylvania. 1065 pages. Illustrated with 243 engravings and 7 colored plates. Philadelphia: J. B. Lippincott Company. Dominion agent, Charles Roberts, 593a Cadieux street, Montreal.

It is a great pleasure to read this work. Its teachings are good. There are omissions which the authors provide for in the preface. "We have exercised the authors' right of choice in estimating the comparative value of various methods of treatment, etc." This, of course, deters from the value of the work as one of reference, but it is eminently practical, and the omissions can be filled from the larger systems. Great care has been exercised in drawing attention to diagnosis and treatment, and these are the two great essentials. The patient has more interest in the successful treatment of his malady than in any pathological change. Yet the knowledge of the latter is imperative on good treatment. In discussing treatment of stricture of the urethra, however, certain methods are dismissed rather too abruptly. Electrolysis should hardly be dismissed in three lines, even if the authors do not approve of the procedure. Other good authorities do.

The chapters on the care of urethral instruments is a very timely one. The urethral instruments in the physician's office, especially the country practitioner, are usually thrown, rather than placed, in a drawer, and taken out and used when required. Catheters and sounds are rarely thoroughly cleansed. Soft instruments are rough. By carefully following the instructions in this chapter, the physician will save expense and the patient will run no risk of infection from imperfectly prepared instruments. It may seem a peculiar chapter to pick out and lay particular stress upon, but due knowledge of the carelessness in this particular line amongst otherwise careful surgeons is enough to show the great need of the teaching.

The treatment of syphilis is very thorough. The excision of the chancre is advocated not as heartily as some of us may wish, but in a much freer manner than was done a few years ago.

That secondary symptoms should be manifest before systematic treatment is begun we believe is the correct stand to take. The systemic abortive treatment when adopted as soon as a sore is seen, is wrong in principle, because many a sore, apparently specific, proves to be innocent. This would never be known if treatment had been adopted before the diagnosis was complete.

A typographical error on page 526 in the McDade formulæ may cause confusion. "Kappæ minoris" should read "lappæ minoris." The work is, on the whole, one that should be on the shelves of the general practitioner, and the student should make time to read from its pages. The diseases described are amongst those most commonly met with, notwithstanding which students are, as a rule, poorly informed on their diagnosis and treatment.

Books received :

SENN'S GENITO-URINARY TUBERCULOSIS. *Tuberculosis of the Genito-Urinary Apparatus, Male and Female.* By Nicholas Senn, M.D., Ph.D., LL.D., Professor of the Practice of Surgery and of Clinical Surgery, Rush Medical College, Chicago.

ANDERS' THEORY AND PRACTICE OF MEDICINE. *A Text-Book of the Theory and Practice of Medicine.* By James M. Anders, M.D., Ph.D., LL.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia.

MALLORY AND WRIGHT'S PATHOLOGICAL TECHNIQUE. *Pathological Technique.* By Frank B. Mallory, A.M., M.D., Assistant Professor of Pathology, Harvard Medical School; Assistant Pathologist to the Boston City Hospital; and James H. Wright, A.M., M.D., Instructor in Pathology, Harvard Medical School; Pathologist to the Massachusetts General Hospital.

DISEASES OF WOMEN. By Henry J. Garrigues, A.M., M.D., Professor of Gynæcology and Obstetrics in the New York School of Clinical Medicine; Gynæcologist to St. Mark's Hospital and to the German Dispensary, New York City. One octavo volume of 728 pages, illustrated by 335 wood-cuts and colored plates. Second edition, thoroughly revised and enlarged. Prices: Cloth, \$4 net; half Morocco, \$5 net. Philadelphia: W. B. Saunders. Toronto: J. A. Carveth & Co.

A TEXT-BOOK ON PRACTICAL THERAPEUTICS, with especial reference to the application of Remedial Measures to Disease and their Employment upon a Rational Basis. By Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia, etc. With special chapters by Drs. George E. de Schweinitz, Edward Martin and Barton C. Hirst. Sixth edition, thoroughly revised and largely rewritten. In one octavo volume of 756 pages. Cloth, \$3.75; leather, \$4.75. Lea Brothers & Co., Publishers, Philadelphia and New York, 1897.

Medical Items.

THE Alvarenga Prize for 1897 has been awarded to Dr. Joseph Collins, of New York, for his essay entitled "Aphasia."

THE FATAL SPOT.—He—"You have broken my heart." She—"What of that? If I had struck your solar plexus you might have had something to complain of."—*Truth.*

CHOOSING AN EPITAPH.—Bereaved Widow—"I want something short and simple for my husband's tombstone." Dealer—"How do you like 'Resurgam?'" Bereaved Widow—"What does that mean?" Dealer—"I shall rise again." Bereaved Widow—"No; make it 'Rest in Peace.'"—*Truth.*

THE AMERICAN PEDIATRIC SOCIETY is making a Collective Investigation of Infantile Scurvy as occurring in North America, and earnestly requests the co-operation of physicians, through their sending of reports of cases, whether these have already been published or not. No case will be used in such a way as to interfere with its subsequent publication by the observer. Blanks containing questions to be filled out will be furnished on application to any of the committee. A final printed report of the investigation will be sent to those furnishing cases.

[Signed]

J. P. CROZER GRIFFITH, M.D., Chairman, 123 E. 18th St. Phila.

WILLIAM D. BOOKER, M.D., 853 Park Ave., Baltimore.

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Committee.

OBITUARY.

ALEXANDER MILTON ROSS, M.A., M.D.—Dr. A. M. Ross died at the residence of his son, Dr. Norman G. Ross, Detroit, October 27th, aged 65. He was born at Belleville, and when a boy went to New York, where, after many reverses, he became a compositor on the *Evening Post*. He commenced to study medicine in 1851, and graduated in 1855. He was distinguished as a naturalist, and received honors from many countries. He only practised his profession to a limited extent, and was well known in Canada as a pronounced opponent to

vaccination. He lived in Toronto many years, but went to Detroit in 1896. Apoplexy is said to have been the cause of death.

HENRY JOSEPH MURPHY, M.D.—Dr. Murphy, of Chatham, died after a prolonged illness, November 3rd. He was educated in Buffalo, where he received the degree of M.D., in 1865, and Kingston, where he became Licentiate of the Royal College of Physicians and Surgeons in 1867. He had practised for a number of years in Chatham.

REV. WILLIAM CLARKE, LICENTIATE MEDICAL BOARD, UPPER CANADA.—The Rev. Dr. Clarke, of Bracebridge, Ontario, died at his late residence, November 11, 1897, aged 70. He was born in Chatham, N.S., and was educated in Halifax and Glasgow, Scotland. He taught English and classics in the old Grammar School, Toronto, and afterwards studied medicine in the Toronto School of Medicine, and received a license to practise from the Medical Board of Upper Canada in 1860. He was engaged in practice in Toronto for two years, and afterwards in Paris, Ontario, for twenty-two years. In 1885 he entered the ministry of the Presbyterian Church, and received a call to Bracebridge, where he had remained in active work until a short time before his death.

JOHN H. GARDINER, M.B.—We have to announce with deep regret the death of Dr. J. H. Gardiner, of London, which, we understand, was caused by septicæmia. He received his medical education in the Toronto School of Medicine, and the degree of M.B. from the University of Toronto in 1878. After graduating, he commenced practice in London, and continued in active work up to the time of his last illness. As a practitioner he was successful, and took an active interest in all things pertaining to his profession, being a good working member of many medical societies. He was present at the recent meetings of the Canadian and the British Medical Association, and attended faithfully many of the sections of the British meeting. He was also an ardent municipal politician, taking a special interest in public, educational and health questions. His death, which occurred November 1st, 1897, was deeply deplored by all classes of people in London and its vicinity.