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EXPERT MEDICAL TESTIMONY.

By His Honor the late Jos. E. McDougall, Senior Judge Co., Court Co. of York.

YOUR worthy President, about ten days ago, had the temerity to enter the Court House, without a subpoena, came to my room and made a request to me that I would be good enough to say a few words to the Association when it assembled, upon the subject of medical testimony, or, perhaps, more particularly, on an important branch of it—expert testimony. I pointed out to your President that my time was very much taken up at this particular period of the year, and that I feared very much I would not be able to consent, but like very many other persistent men he would not take “No” for an answer, and later in the week he saw me again and persuaded me to make the effort.

I was tempted, also, to refuse upon another ground, and that was, that I have some fairly strong views on the subject of medical testimony, and I did not know but that some of the matters I might care to discuss here would possibly not be as palatable to my audience as they might be to the laity, or to lawyers. (Hear, hear). But on reflection, as one of those concerned in the administration of justice, and as one who has much interest in improving all our methods, it struck me it would be a golden opportunity to frankly and candidly use the scalpel a little, if advisable, in dealing with this important subject.

Now, of course, there are one or two elementary questions which it is necessary, perhaps, to briefly glance at to place ourselves, as it were in apposition with our subject.

In the first place, there are two kinds of evidence, that is, the evidence as to facts, which come under the observation of the witness, under the observation of a doctor just as much as under the observation of the layman; but evidence as to facts is not expert testimony. Then, there is evidence relating to the interpretation of facts founded on the knowledge possessed by the witness of the special subject, matter of interpretation, of inference, of conclusions based upon special knowledge, this is commonly called opinion evidence, or, in other words expert testimony.

* An address delivered at Toronto, on 4th June, 1902, before the Ontario Medical Association. *Canadian Law Review*.

A medical man, as an ordinary witness, may be asked as to the condition he found matters in, when called as a witness, that would be the common question, but when he is asked, describing this condition: "Doctor, is that condition dangerous to life?" then he is called upon to express an opinion.

Now, evidence must be relevant, and there I quarrel occasionally with the doctors, because they sometimes travel out of the regular track,—they go abroad. It must relate to the facts in controversy; it must tend to prove, or disapprove, or explain them, and it must meet the requirements of the law both as to its form and as to its authenticity.

As to its form, there are several forms in which such evidence may be given. It may be given in the shape of an opinion, or it may be given in the shape of a statement, setting forth the taking of a dying declaration. The latter, however, has to follow the forms of law and, of course, to be sanctioned by an oath.

The question of the admissibility of testimony is for the Judge, the question of the weight to be attached to the evidence is for the jury.

There is another sub-division of evidence, somewhat cognate. Evidence is either direct or indirect. Direct or positive evidence is not aided by any presumption or inference, while indirect evidence may be proof of collateral facts believed to have a connection with the principal fact to be proved. Or again, it may come into the region of expert testimony, that is an inference reasoned out from the knowledge and experience of the witness who details it—cause and effect—to show that the ultimate fact which is sought, either exists or does not exist.

Now, wise as non-professional people may be, they are not qualified in a great many cases to draw or make inferences, and that is why, on the ground rather of necessity than on any other legal ground, so-called opinion evidence is tolerated as part of the process of arriving at a conclusion. The ordinary conclusions have usually to be arrived at from definite facts, but owing to the variety and multiple forms of our civilization, the importance of the arts and sciences, the mysteries which are investigated by the medical profession, and in some of the arts and sciences such knowledge being limited to a small class, it has become necessary, in many investigations, in order to get at the root of the matter, to permit or allow, not evidence of the facts, but skilled persons to tell us what the proper inferences should be from the given facts, and in that way has grown up this system of calling experts in many cases to assist the court in arriving at a proper and just conclusion.

A very familiar instance will illustrate: Take a case (I think it is cited in one of your text books on jurisprudence); suppose that a child

is badly burnt, and in order to soothe its pain, soothe its agony, ten or twelve drops of laudanum are administered (I am not measuring the dose, as I don't know much about it), and the child dies. A common jury could not tell whether it died from the burns or from the drug. A doctor probably could. He could describe the nature and extent of the burns. They might be so superficial as to displace the idea that death had resulted from that cause, or they might be so serious that he could at once say, "Although it was a heavy dose of laudanum, the child received sufficient injury from the burns to cause death." But a common jury or a common judge could not find out that fact with equal certainty or perhaps arrive at a just conclusion, and that is where the medical man is called in to help the court and the jury.

Now, expert testimony, (and here is one of the difficulties of the position, one of the causes of a great deal of harsh criticism), can only be met by expert testimony, or other opinions supporting or confuting the theory set up by the first line of experts, and then we have the melancholy spectacle, sometimes, of three or four men, of reputation, of good professional standing, and presumed acquirements, going into the box before twelve very common men, and a judge and scoffing lawyers, and combating each others opinions, (under oath bear in mind), before the jury. This is lamentable, because both views cannot be correct. If they are matters of opinion, there may be a difference of opinion, but in the great majority of cases there is a tendency to exaggerate on both sides to such an extent that it is palpable even to those who do not know much about it; hence a great deal of the criticism and harsh remarks about medical experts.

A physician, if he is called as an expert and his opinion is going to be worth anything in assisting any court in arriving at proper conclusions upon the facts testified to, should certainly hear the witnesses who detail those facts, in order that he can express a safe opinion. Facts which would escape the lawyer, which would escape the layman, are necessary to be brought out to give the medical man proper data to arrive at a just and proper conclusion, and therefore I say that no physician, except under very extraordinary circumstances, in my judgment should go into the witness-box and express an opinion upon facts which have transpired in a case without having heard the witnesses give their evidence of those facts. I have known physicians who had heard nothing of the case, perhaps, until it was half tried, and the plaintiff and the defendant had been cross-examined; the statements of the witnesses taken in short-hand the only material placed before the physician being this transcript of testimony put in his hand a few hours only before he

was called to give expert testimony in such action. Such data are not reliable. The witnesses should be seen and heard. The higher courts, when reviewing the findings of a trial judge, even with the transcript before them, will generally decline to interfere with the trial judge's findings of fact alleging that the latter saw the witnesses, observed their demeanor in the witness box, and was, therefore, in better position to determine the questions of fact, and though the finding is at variance with the apparent facts disclosed by the transcript, the court will generally refuse to disturb the verdict. It is extremely difficult to get a higher court to upset a verdict, based upon a finding of fact, unless the finding is manifestly wrong or clearly irreconcilable with the sworn testimony.

Now, doctors sometimes have a hard time in the box and why? In the first place, if one side is going to call a doctor, the opposite side must have a doctor, too. Then the lawyers, who do not possess any too much knowledge on the questions that are to be debated, have got to be coached. You can understand that a man is very superficially prepared who merely scans a few medical books furnished by the doctor, and yet he is coached quite enough to bother a witness, and he puts, as a consequence, many questions which are very defective in their clearness and difficult, if not impossible, to answer, and we find the medical witness becoming interested in the case to outwit counsel. This attitude shows advocacy, or a partizan spirit, whereas the proper aim of all testimony should be to deal with the facts in a fair, candid and impartial manner, and without any suggestion of an interested motive on the part of the witness.

Take a very common case, the case of an ordinary witness going into the box to meet evidence as to occurrence of certain facts; if from the moment he is put in the box he shows a strong desire to put the facts most favorably for the side that calls him, such an attitude at once destroys his credit with the jury. His adjectives, his little exaggerations, his eagerness to anticipate the question, all indicate a bias and a desire to serve the interests of the man on whose behalf he is called. Juries quickly notice such indications, and a common witness who shows any desire to give his evidence with a view to helping the man who calls him as a witness, is at once discredited by the jury. A witness may be honest in his intention, but his eagerness to tell favourable facts, and to conceal little matters which might modify them or affect their importance, shows a bias. If the jury observe this, they say, "That man is a biased witness. His statements must be viewed with suspicion."

Now, doctors sometimes manifest the same spirit. They show too deep an interest in the side that calls them, in giving their testimony.

We have all seen such cases. There are cases on record in the books in which judges have been compelled to tell the jury, "Well, gentlemen, you have heard the expert testimony given by learned gentlemen on both sides of this case. Their opinions appear to be irreconcilable, they differ so widely that I cannot assist you in saying which you should accept. You are not bound to give any weight to opinion evidence at all, unless it commends itself to your judgment. You had better discard it and use your common sense and try and dispose of the case on the facts." It is an unfortunate position for a learned profession to merit sometimes such a direction.

Then we have those wondrous hypothetical questions, the unfortunate doctor is addressed: "Now, listen to me, doctor," (a long array of facts are narrated), ending with, "If this statement is correct, what would be the result?" The opposite counsel objects—discussion follows—and ends frequently with the weak suggestion, "Well, we will have the doctors opinion any way to see what it is worth." The poor man is tossed from pillar to post, he tries sometimes to hedge a little, and then the answer which comes aids no one and only further mystifies the jury.

Then we have the doctors who are perhaps a little eager in usurping the functions of the jury. They will blurt out an answer which is no part of their function or duty. Take a will case, where the issue to be determined is that of testamentary capacity. The question whether a man possesses testamentary capacity or not is for the jury, not for the witness; the witness can properly describe actions and peculiarities, and can express his opinion whether such an action indicated an unbalanced mind, or mental disturbance, but he cannot properly express in the witness box the opinion that the person of whom the facts are stated lacked testamentary capacity. That, of course, as I said, is a question for the jury. Doctors may be asked whether pregnancy exists, the duration or stage at which the condition was. He may be asked the nature of disease, he may be questioned as to whether it was a chronic condition or the reverse, he may be asked the cause of death, and when death probably occurred, whether specified things would produce the injury, the nature and effect of medicines, mode of treatment, probability of recovery, whether the injuries are permanent or temporary. These are all matters for his judgment and opinion, and such opinions honestly and fairly expressed are of great assistance to the court and jury.

He is there, also, to explain medical terms, the use of surgical instruments.

Now, experts, as it has been said, are not in very great credit with jurymen or even lawyers. I suppose specialists breed theories, and theories breed dogmas, and sometimes, when a specialist is called he will en-

deavor to air his peculiar views if there is the slightest opening afforded him in the case.

Lord Campbell says hardly any weight is to be placed on the testimony of what are called "scientific witnesses." Such witnesses come with a bias in their minds to support the cause they are embarked on.

Different doctors, of course, with apparently equal confidence, and equal dogmatism, express contrary opinions, upon the same condition of things. When such contradictions occur, is it a wonder that judges are sometimes constrained to make a few strong remarks on the subject, and is it surprising that they should tell the jury, "Gentlemen, I cannot help you out in this. I cannot determine which of these men is the more reputable or the more reliable. The confusion and conflict in their testimony and opinions is so great, perhaps, you had better pay no attention to either?"

Is there any explanation of this condition of affairs apart from the fallibility of human nature, any root cause, if I may so express it? I think there is. I think it is largely due to the method in which expert witnesses are secured.

In the first place, the party calling the expert makes sure that his expert's views are favourable to his contention before he calls him (Applause.) I am almost tempted to tell a little story here. On one occasion in London England, a solicitor was consulted with reference to a case of an alleged infringement of a patent. The solicitor like the layman in medical matters, did not know much about mechanics (it was a mechanical patent), and he heard the man's story and said: "That is a question for skilled or expert witnesses to determine, and you had better go about London, interview mechanical engineers and others, and see as to what their opinion is, and if you can get intelligent men to adopt your view, and agree with you that this invention is a novelty and therefore, not an infringement on the other man's patent, you will probably win your suit." Well the trial came off. Seven or eight experts were called by the plaintiff, reputable, skilled men, and they all declared that the question was not worth discussing, any tyro in mechanics would see that the machine in dispute was a mere copy of the other, and was, therefore, clearly an infringement. The defence was called upon; four or five experts went into the box and stood a pretty good examination, but gave their reasons for concluding that the machine complained of was a novelty and could be properly differentiated from the machine alleged to have been infringed upon. The weight of the testimony, however, was in favor of the plaintiff, so there was a judgment for the plaintiff. When the defendant and his lawyer went out, the defendant commenced to scold the solicitor, and said: "I thought you told me you could win this

case." "Yes," the solicitor answered, "but you didn't furnish me with the testimony." The client replied: "Why, I was all over London and saw about sixty experts, but these we called were the only fellows I could get who would say my machine was not an infringement."

So you see, gentlemen, the difficulty is in the system. The man who calls the expert, first finds out in advance what the expert's opinion is, and if it is in his favor he will put him in the box. He pays him usually a liberal fee. If it is unfavorable he passes on to interview another doctor with more enlightened views.

Now, what is the mental attitude of a medical man, a stranger to the quarrel between the litigants, called upon by a man who apparently has a good cause? The visitor reports that he has found other medical witnesses who will support his contentions in the cause. Is there not a natural tendency or bias on the part of such a witness employed in such a way to hope that the man who employs him (I was going to say hires him), may win his case?

If that be the case, what is the tendency of such a system? In the first place, I maintain (in agreement with several writers whom I have consulted), that such a method of employing your witness tends to corrupt the witness. Bear in mind, I do not mean by that, in a strict sense, that a deliberate intent is formed in the mind of the witness to be dishonest, but he is employed by the litigant to do the best he can for him and this knowledge has its weight with the witness so retained. If the medical witness starts his investigation into facts, it is very curious, but it is sad, he begins with the lively hope that the facts may support favorable inferences. Is it any wonder that he should seize with a good deal of eagerness upon facts which have such tendency, and look rather coldly and with a critical eye upon any facts which point the other way. In thinking it out he is apt to be much impressed with facts which tell in favor of the view of his client, and very critical as to the facts which point the other way. It is difficult to imagine that he should finally reach a conclusion in harmony with the spirit that has controlled the investigation, and, as another writer puts it, in consonance with his client's desire?

Now this sort of influence, I do not mean to say is open and palpable. It is an insidious influence. Can we suggest no method of getting rid of it?

That question is not a new one. It has been discussed in books by lawyers and eminent doctors, many of the latter being oppressed with the contumely which has been cast upon them as expert witnesses, and they have frequently expressed the opinion that a man has got to be

mentally very honest who can resist the working out of a result induced by the method under which the evidence is obtained.

One class of cases I may point out to you where these results are perhaps more apparent than in some others. Take the case of the ordinary railway surgeon. We will say he is paid a good salary. Now, what are his interests? His interest, in the first place, excites the feeling, "I don't want to see my railway company saddled with a heavy bill of damages." He will have a sort of pardonable pride along this line. "I will have to go into this case pretty carefully, because I want to justify the railway company in selecting me as their medical adviser." Then his long experience may justify him in saying: "A large number of these claims are dishonest; the chances are this is one of the same kind. Perhaps there are a few honest claims, but when they are honest generally the claim for damages is excessive," and so the process goes on and he begins his examination into the facts; he works along the line thus indicated; he wishes to justify his retainer; he is impressed with the idea that the claim is exaggerated, if it is genuine; there are a good many claims which are fraudulent, and the question is how far, consciously or not, his mental attitude may influence his conclusions. He may be honest in his conclusions. The retainer, however, is too often paid and received in the literal sense of the term, as a sum paid to retain the knowledge, skill and reputation of the so-called expert witness in the sole interest of the party who pays the fee. It would hardly be natural to expect such a witness to lead the jury to correct and impartial conclusions between the contested issues. Would not his position rather tend to cause him to develop, fortify, defend and prove a theory, which, if accepted, would enable his employers to escape liability?

Gentlemen, I find my time is getting short. Take the ordinary course of a trial. An expert is called and gives an opinion and his reason. The counsel, superficially prepared, as I said before, by some smart lawyer or doctor, puts the witness through a cross examination. Is it to learn the truth? Far from it. It is to demonstrate that the opinions expressed are wrong, and the reasons unsound; or that the witness is ignorant or dishonest, and his opinions or conclusions, to use a mild term, ridiculous.

Then the expert on the other side is called. He expresses quite as strong contrary opinion, gives grave reasons for his opinion, and the opposing counsel gets up to question him, to endeavor to show that this witness is as dishonest as the other one. We will assume both the doctors are honest in expressing opposing views, but is it a dignified exhibition in the witness box? Is evidence given under such conditions a help either to the court or jury to a conclusion?

Now, what is the remedy? According to my view, the expert's true position should be that of an assistant or adviser to the court. (Applause.) We have an illustration in another branch of law. If you ever attended any of the trials in the Admiralty Courts in England, you would notice that in technical nautical matters the Court is assisted by two skilled nautical assessors, or advisors. The Court is not bound to adopt their opinion. When a question of seamanship comes up, whether the right manoeuvre was made, the Court leans over to the stout old captain on his right (who is supposed to be one of the salt of the earth), and says: "Captain was that a right move to make under those conditions?" "No, my Lord, that was injudicious." Then he turns to the old salt at his left, "What do you say?" "I think it was injudicious; I think it led to the disaster." The judge thus learns from skilled men the force and effect of the particular manoeuvre, and naturally is aided to a proper conclusion. Of course, we cannot put a doctor relatively in the same position. I am afraid the court would suffer if they had a doctor sitting on each side (laughter), but we can perhaps devise an approximate condition, or establish a modified method for obtaining skilled advice and assistance from your profession.

My idea is this: I think the Court itself, the judge or possibly the State (though with the latter politics might interfere), should select the medical experts, if a dispute arose which called for the opinions of medical experts. A fund should be provided in some form. A fee could be allowed and taxed in the cause, against the unsuccessful parties, and out of this fund the court could direct that a liberal fee be paid the doctors whose opinions were sought. The expert selected in such a manner could not be said to have any interest in the issue of the case, nor would his reward depend upon the nature and character of the evidence given by him.

So much has the Local Legislature been impressed in connection with the subject of expert testimony and its abuses, that a recent amendment of the Evidence Act has been made with the object of restricting the number of experts to be called, and three experts only are now allowed to be called by either party to a cause, except with the leave of the Court. If a party desirous of calling experts thinks that three will not be sufficient, he has to apply to the Court for leave to call, say, five instead of three, but such application must be made before the other side tenders any evidence. He has to apply to the Court in advance and before the trial to be permitted to call more than three experts.

A learned gentleman, I think he was a little more free-spoken than I am, was asked whether there was as much perjury in the witness box

as people believed was constantly occurring in courts of justice. He said: "My opinion of witnesses is that a large proportion of them should be divided into three classes—liars, d—d liars and experts." (Laughter.)

I want to say one word on the matter of giving testimony, and I am done. Do try, gentlemen, in giving your evidence in courts of justice, to use plain language. If there is one thing more discouraging to the mentality of the jury or judge than another it is what I call "medical jargon." Don't exaggerate; if you are called by a plaintiff who is perhaps claiming damages for an injury, don't speak of his wound as being a "frightful" one; don't speaking of bleeding as an "enormous" hemorrhage. Say the wound was two inches long; he lost five or six ounces of blood; it is much more satisfactory to everybody. Avoid these alarming adjectives. The best sample of a witness that ever comes to my court is a child, twelve or fourteen years of age. They are simple, childish, not expecting traps, and you cannot shake them in their account of the main facts of the case, and usually carry conviction as to the truthfulness of their testimony.

Do not use mysterious terms and high-sounding language. There may arise a suspicion in the mind of the court that you are trying to cover up some weak spot in your own equipment, or if not that, you are afraid, if you would express your thoughts in popular language you might disturb some theory you are endeavoring to build up. Sacrifice elegance and even some consistency in the desire to be intelligible.

I wish you to consider this deliverance a mere talk. I have a few brief notes only. I came in the earnest hope that any few remarks I might make would explain to you how some of the impressions have arisen, which are so frequently ventilated when discussing the subject of expert testimony. It has been open to a great deal of criticism, some of it just and some of it unjust, but I think the root cause is largely a faulty method or system, and to devise a remedy I would like to see the medical profession join to procure legislation on the subject, so that a noble profession should not continue to be exposed to the rude gibes of the bar and public when called upon to give their testimony in our courts of justice. (Applause.)

A hearty vote of thanks to Judge McDougall for his address was moved by Dr. I. H. Cameron and seconded by Dr. Harrison, and carried unanimously.

SOME FURTHER RESULTS IN THE TREATMENT OF PULMONARY TUBERCULOSIS.*

J. H. ELLIOTT, M.D., Physician-in-Charge, Muskoka Cottage Sanatorium.

AT the meeting of this Association in Toronto three years ago I presented the results of two years work in the sanatorium treatment of pulmonary tuberculosis. Since that time the appreciation of the merits of sanatorium treatment of this disease has rapidly increased, so that a presentation of the results of the past three years in the Muskoka Cottage Sanatorium may be of some interest to the profession.

I want to assure the members of this association of the great value of this method of treatment, and to show that not only a return to health is to be expected in a large proportion of the early cases, but that by hygienic living after returning home the gain made is permanent where the patient has remained under treatment a sufficient length of time.

The term sanatorium treatment includes broadly those measures now adopted by all sanatoria devoted to the treatment of pulmonary tuberculosis; (1) constant life in the open air, (2) general hygienic measures, (3) an abundance of nutritious food, with rest or exercise dependent entirely upon the condition of the patient. Success will vary with the ability of the physician to plan a proper daily programme for each patient, and the co-operation of the patient in following his instructions, and this will be the basis of success rather than climatic considerations or the equipment of the institution, though these play no unimportant part in the work. Each case must be a study in itself, and in absence of any specific medication for the disease the therapeutic measures must be largely symptomatic, the one object being to so improve the nutrition of the patient, that he is able to resist and overcome the effects of the invasion of the tubercle bacillus and its toxins both in the diseased area and the organism in general.

A very important factor is a cheerful mind. Everything about the patient must be planned to bring this about, and he must himself be impressed with the necessity of cultivating it. I have often heard it said by a patient when advised to go to a sanatorium, "why can I not be treated at home, I do not want to go where there are so many sick people," and very often the physician will give way to the patient, fearing himself the ill effect of such surroundings. Those of you who have visited a sanatorium need not be told how erroneous is this view, and how little depression is present amongst the merry, happy people who jocularly refer to themselves as "lungers;" you know what brightness and cheer there is about the place. Though it is impossible, however much one may try, to limit the admissions to purely incipient cases,

*Read before the Canadian Medical Association, Montreal, 17th September, 1902.

patients in the very advanced stages are not admitted, and any admissions of advanced diseases are limited to those where the constitution still shows some resisting power, and the disease not advancing rapidly. When the patient does reach the sanatorium he is surprised to find so many healthy looking people, and soon realizes that he is at once recognized as a new patient by his pale face which has not yet been bronzed by life in the open air. Any depression which may appear in a patient is not from seeing other patients about him, but is always traceable to other influences, such as worries about affairs at home, the father or mother troubling about the family left behind, or the consideration of the financial burden of six months to a year away from home with no earning capacity.

On the other hand everything about the sanatorium itself is cleanly, bright and cheerful, and what can be more encouraging to anyone afflicted with tuberculosis, which he has been taught to look upon through his life as inevitably fatal, than to see 20 per cent. or 25 per cent. of all those about him returning home apparently cured, 25 per cent. to 35 per cent. more in perfect general health, though perhaps not quite free from cough, and another 25 per cent. markedly improved—i. e. of all cases treated, and many leaving before they should do so he has a picture of 75 per cent. with marked improvement, another 15 per cent. stationary, and in only 10 any progress of the disease. When he sees this for himself he cannot but be encouraged. There is with many at first a feeling of strangeness and perhaps homesickness, but this is soon replaced by an intense interest in the new surroundings and new method of life, and immediate improvement satisfies him that he has made a wise decision in leaving home.

It is unfortunate that for the proper classification of cases there has been no uniform standard of terms adopted by those working in this department of medicine. At the meeting of the American Climatological Association in 1901 a committee was appointed to arrange a satisfactory classification, and a definition of terms employed. They were, I believe, hopelessly divided amongst themselves, and we must go on with our own arbitrary divisions until the matter is settled. In my own work I have followed Dr. Trudeau's definitions, classifying patients as incipient, advanced, and far advanced, and after treatment, apparently cured, disease arrested, much improved, stationary or failed.

DEFINITIONS OF TERMS EMPLOYED.

Incipient.—Cases in which both the physical and rational signs point to but slight local and constitutional involvement.

Advanced.—Cases in which the localized disease-process is either extensive or in an advanced stage, or where with a comparatively slight amount of pulmonary involvement the rational signs point to grave constitutional impairment, or to some complication.

Far Advanced.—Cases in which both the rational and physical signs warrant the term.

Apparently Cured.—Cases in which the rational signs of phthisis and bacilli in the expectoration have been absent for at least three months, or who have no expectoration at all; any abnormal physical signs remaining being interpreted as indicative of a healed lesion.

Disease Arrested.—Cases in which cough, expectoration and bacilli are still present, but in which all constitutional disturbance has disappeared for some time, the physical signs being interpreted as indicative of a retrogressive or arrested process.

Improved.—Cases in which there has been some marked gain in the condition of the lungs, or in which there has been marked amelioration of the constitutional disturbances. Cases with simply a slight gain in weight are not placed under this term.

The classification is, I must admit, open to criticism but at present I see nothing more satisfactory. The use of the term apparently cured in cases where tubercle bacilli have been absent three months only, or where there is no sputum, is open to question. It cannot certainly be used as equivalent to the term absolute cure used by some phthisiologists. For this to be used there should be a probationary period of at least two years, possibly longer. Using the term in this way we would naturally expect some relapses or recurrences in the course of a few years, while in the case of those discharged with disease arrested the maintenance of the gain made will be entirely dependent upon the mode of life adopted after the return home.

Instead of presenting to you three years statistics separately I shall avoid confusion and save time by grouping together the results of five years work. You will notice that many advanced cases have been admitted. Though our Sanatorium is for the treatment of the earlier cases, we have from time to time admitted the more advanced cases rather than have our beds vacant—not in hopes of cure of these cases, but knowing there is no provision for such patients elsewhere, we have worked on the principle of the greatest good to the greatest number, but we can never admit them to the exclusion of those early cases in whom a return to health is reasonably to be expected.

For the past three years we have been endeavoring to establish in or near Toronto an institution for the more advanced cases, but have so

far been constantly blocked by the property owners in the vicinity of each suitable site. As soon as the site can be arranged we are prepared to erect the Home at once, and have already the promise of two cottages and \$25,000.00 for the erection of a suitable building. Being in or near Toronto it will be built with the expectation of using it for clinical teaching.

Up to August 31st. 1902 there have been admitted.....606 patients
 On this date there are still under treatment..... 52 “

This number having been discharged.....554 “
 During these 5 years there remained under treatment less
 than one month..... 80 “
 and these are obviously not to be reported on

Leaving to be reported on.....474 “

These have been classified as follows;—

Condition on admission.	Appar- ently cured.	Disease arrested.	Much improv- ed.	Station- ery.	Failed.	Died.
134 incipient cases	78	38	16	2
200 advanced cases	17	100	48	23	10	2
140 far advanced cases	1	22	45	39	27	6
474 Total	96	160	109	64	37	8

These results show out of 474 cases, a large proportion of which are far advanced, 96 or over 20 per cent. apparently cured, and 54 per cent. of apparent cures and arrested cases; of the incipient cases 78 out of 134, or 58 per cent., apparently cured, and 87 per cent of apparent cures and arrested cases. These are the actual results with patients remaining under treatment in the majority of cases an insufficient length of time. But every patient, whether apparently quite well, or with the disease quiescent leaves the Sanatorium knowing how to live properly, and is in a position to carry on his new method of life wherever he may go. He is taught that he may reasonably expect to retain all he has gained, but that continued progress will depend entirely upon the care he takes of himself, that, if careless, reinfection or an extension of his disease may at any time occur.

Knowing what is necessary to keep in good health, the patient feels his own responsibility, and in the majority of cases the after results are very encouraging.

PRESENT CONDITION OF 256 PATIENTS DISCHARGED FROM AUGUST, 1897,
TO AUGUST, 1902, WITH DISEASE ARRESTED OR APPARENTLY CURED.

Realizing that the value of any plan of treatment depends not only on the immediate result, but also on its permanency, and that the after history of discharged patients is of great importance, it has been my endeavor to keep in correspondence with all the patients who have gone out from the Sanatorium. I have sent letters of inquiry with question blanks to those who have left either apparently cured, or with the disease arrested, their present condition I give in the following table:--

96 CASES APPARENTLY CURED. (Of these 62 had bacilli in the sputum on admission.)

In good health, August 1st, 1902.	79
Not perfectly well, but in fair health	3
Dead	5
Not heard from	9
	— 96

160 CASES WITH DISEASE ARRESTED. (Of these 142 had bacilli in the sputum on admission.)

Apparently in perfect health, with no cough or sputum	26
As well as on discharge.	88
Not as well as on discharge	2
Dead	24
Not heard from	20
	— 160

That so many remain in excellent health after the elapse of from one to five years is most encouraging, and by following the rules of life learned at the Sanatorium, a fair proportion of the cases classed as arrested have progressed to apparent cure.

The five deaths occurring amongst the apparently cured cases call for a note of explanation. The first was a youth of nineteen, who, on discharge, appeared quite well. He was, however, growing very rapidly, and was not putting on weight in proportion to his height. He was advised to go to Calgary, or if he remained in Ontario to live on a farm. Contrary to all advice, he remained about his home in a large town, doing nothing, and spending the greater part of his time indoors. The result which followed could scarcely be unexpected. A second case died of Tubercular Meningitis a year after discharge, having been in the meantime at work on the farm, and having at no time any return of his pulmonary symptoms. The other three cases were women, all of whom returned to their household cares and worries without allowing themselves sufficient relaxation and hours out of doors.

These cases have only served to teach me, and impress me with the fact that the after history is almost altogether dependent upon the patient himself, and that the exercise of strict care is all that is necessary to keep well.

A few patients have been sent to the West to live, but almost all have again taken up life in their former homes. They comprise tradesmen, clerks, book-keepers, stenographers, physicians, dentists, barristers farmers, engineers, tinsmiths, and men and women from many other walks of life. They are living in all parts of Ontario, and in the lower Provinces. If a patient is cured in his home climate there seems to be no reason why he should not remain well in it.

There is no need of sending every patient to the West or South as soon as a diagnosis of tuberculosis is made; fully as good results can be obtained at home. It is not the climate that cures; it is the careful supervision of the patient by his physician which is of most importance, climate being entirely secondary. Rather than have your patient go away from home amongst strangers where he will not have proper attention, treat him at home, if you can devote the necessary time to thoroughly ground him in the essentials of cold sponging, life out of doors, care of the sputum, the use of the clinical thermometer, regularity at his meals, in the hours of sleep, rest and exercise, and see him at frequent intervals that his daily programme may be changed according to indications. I want the profession to fully realize the curability of tuberculosis, and of the necessity of an early diagnosis to secure the best results. For those who cannot leave home for treatment the physician must make it his duty to give them the necessary time and attention, and see that his instructions are faithfully carried out. If the physician would do this conscientiously, and not treat his patient as a chronic with little hopes of cure, there would be more cures, and the public would be less apt to take so readily to the proprietary nostrums.

I hope that the success that has attended our efforts in this work, and the unvarying success of Sanatorium treatment in the United States and in Europe will be a stimulus to the profession and the public to urge on our Governments and our philanthropists the necessity for the provision of Sanatoria throughout Canada. The National Sanatorium Association has established two at Gravenhurst, one with sixty beds for paying patients at \$12.00 to \$15.00 per week, and a second with at present seventy-five beds for the indigent and those who cannot pay the full rates. Both are for the earlier cases.

More Sanatoria are required, each province should have one or more. The earlier we can have them established, and use them as centers of hygienic education for our people, the sooner may we hope to control the ravages of this dread disease which is accountable for the yearly loss of so many of our fellow citizens.

Gravenhurst, Ont.

VOMITING OF PREGNANCY.*

JOHN HUNTER, M. D.

Physician to the Toronto Western Hospital.

THIS brief description of a recent case in practice not only supplies a suitable text for the discussion of our subject, but also enhances our interest in the practical character of the paper. Patient—age 20; healthy, good family history, married and in fourth or fifth week of second pregnancy. In the earlier months of first pregnancy, vomiting was quite frequent, but never alarming. She complained of some nausea when nursing, and weaned the child at sixth month. Nausea and vomiting began about the tenth or twelfth day of second pregnancy. Very little food was retained. Rest, restricted diet, and laxatives with oxalate of cerium, bismuth, cocaine, bromides, morphine and counter irritants, were the means used to control the gastric irritability. The patient did not complain of any pain in the pelvis, nor did an examination of the uterus and appendages reveal any cause for the vomiting, apart from the pregnancy.

During third week, vomiting persisted day and night. All foods, drinks, or medicines were instantly expelled from the stomach. Dr. Hay saw the case with me on Friday night, and her condition was so alarming that we almost despaired of being able to save her. For two or three days the patient had been sustained by rectal injections of peptonized milk and eggs with stimulants, also by hypodermics of strychnia and nitro-glycerine. I remained in attendance all Friday night, and early on Saturday morning had her removed to the Toronto Western Hospital. Her condition then—as it practically had been for twelve hours before—was a state of collapse. Restlessness and delirium, subnormal temperature, weak, rapid pulse, icy cold extremities, and persistent vomiting of a coffee-ground mixture were present. I gave an anæsthetic, and Dr. Hay, finding the cervix soft and patulous, was enabled to empty the uterus quickly with a curette. It was packed with iodoform gauze. Vomiting began again as soon as she came out from under the anæsthetic, and persisted all day. The packing was removed in the morning. An enema containing a large dose of bromides, with some chloral and stimulants was given at bedtime. Hypodermics of morphia, strychnia and nitro-glycerine were used during the night. She obtained some rest, and slight relief of the vomiting. The slightly improved condition remained until about 1 p.m.

*Read at the Toronto Medical Society, Jan. 8th, 1903.

Sunday, when the vomiting of coffee-ground material returned as virulently as ever, and the patient again passed into a state of collapse. Heat was applied, the foot of bed raised, hypodermics of strychnia, nitro-glycerine and stimulants were given, and a high injection of a large quantity of hot, normal saline solution. The patient began to rally about 4 p. m., and no further alarming symptoms occurred. The vomiting gradually ceased, and was followed on Monday by a spasmodic cough that was very persistent for a week and as uncontrollable as the vomiting. The muscles of the lower limbs became so wasted and flaccid that she had to be carried round for about a week. She quickly regained normal health and strength. When the vomiting was most virulent, there was an unsatiable craving for ice-cold water. Dr. Carveth thought that this might be, at least, partially gratified. Glasses of it were given, at short intervals, with the result of aggravating the symptoms. Sipping hot water gave most relief.

We have seen in this case a young woman of fine physical and mental development, enjoying good health, become pregnant, and, as far as it is possible to discover, without any predisposing or exciting cause—excepting the pregnancy—suddenly seized with reflex gastric disturbance of such a pernicious character as would soon destroy life, unless the gravid uterus be emptied. Now, in regard to this morbid condition, physicians are placed in a somewhat anomalous position. In the case of any other disease, one of our first duties is, if possible, to remove the cause. However, if we attempt to carry out this rule as related, to the vomiting of pregnancy, viz., to remove the cause, we find ourselves not only in direct antagonism to a natural law, but also to a divine mandate. The command, "To be fruitful and multiply," has never been annulled. Under such circumstances, we are certainly not warranted in interfering with healthy married people in their efforts to propagate the race, and especially in our own country with its vast uninhabited territory. Holding then that we are not justified in trying to remove the one most potent exciting cause in innumerable cases of this disturbance, we are obliged to search out every other possible source from which the "vomiting of pregnancy" might arise.

In all these cases our attention is primarily directed to the reproductive organs. No physician would be justified in allowing one of these cases to proceed to any marked degree of severity without a careful examination of all the pelvic structures: the position of the uterus and ovaries, the presence of acute or chronic inflammation in any of their tissues, the possibility of venereal infection, or the

existence of any growth, benign or malignant. The condition of bladder and rectum call for special investigation. Previous pregnancies, if any and the course of menstruation from puberty, have to be considered also the frequency and effect of coition.

Leaving the pelvic viscera, we come to the examination of the gastro-intestinal tract. Any pathological conditions in the digestive system are apt to be aggravated by the advent of pregnancy, as there must be a great increase in functional activity in order to supply nourishment for the development of the embryo. In all cases of pregnancy, complicated by excessive vomiting, the physician must carefully examine all the viscera involved in the digestive process. Acute or chronic inflammatory processes, displacements, obstruction from tumors, as well as all forms of functional disturbance, have to be considered. The question of a suitable diet, in these cases, severely taxes the physician's intelligence, as well as the skill of the nurse.

The third great process to be considered is the eliminative one. However, as the purport of this paper is rather to introduce than to fully discuss the subject, I will group under this head, the respiratory renal, glandular and cutaneous systems. The increase in waste products, such as carbonic acid or urea, thrown into the vascular system of the mother, very greatly augments the functional activity of the eliminative organs. Under normal conditions this increased activity is provided for by some hypertrophy of the heart. We can easily understand how any impairment of cardiac force could produce conditions of the stomach that would be attended by marked irritability. Any interference with renal secretion is very quickly reflected by the stomach. The respiratory system is fully taxed in providing more oxygen for the foetal blood, and in disposing of the excess of carbonic acid. The skin has to deal with an excess of other waste products. Any organic changes, or functional disturbances, in one or more of these systems, may be predisposing or exciting causes in the vomiting of pregnancy.

Closely associated with, and in a very large measure controlling the functional activity of all the systems already mentioned, is the nervous system with its psychical functions. We have only to study the transformation of the artless child into the modest maiden at puberty, to see how profoundly the generic system affects the complex nervous system. The advent of pregnancy with its hopes and fears, its joy or remorse, is quickly felt throughout the whole body, and, like important news in the social, commercial or political world, stimulates or paralyzes. Mental conditions, as seen in the protean forms

of hysteria and mania, as well as structural changes in the nerve cells or fibres, may all be influences in exciting or maintaining gastric irritability.

I shall only mention one more cause of the vomiting of pregnancy, viz., criminal abortion. The disgrace associated with illegitimacy and the dread of the suffering and danger of childbirth, or the wanton desire to be free from the obligations of motherhood, are some of the strongest influences impelling women to resort to criminal means for procuring an abortion. The fact that the services of some medical men can be obtained to accomplish this purpose, constitutes one of the darkest blots on the fair escutcheon of our noble profession. The doctor, who for the sake of a fee—small or large—becomes the guilty accomplice of these women, reflects the moral degradation which avarice and the loss of every vestige of honor beget, and I do not know any terms sufficiently strong to fully express the odiousness of such conduct, but I do think that some steps should be taken whereby as a profession, we could express our detestation of such a crime, and our willingness to help in exposing and driving from out our ranks, all who attempt to commit such a diabolical deed. In these cases, whether the act be done by the patient herself or by a medical man, the gastric disturbance is due, either to irritant action of the drugs used, or to the septic poisoning from unclean and imperfect operative methods: for this murder, like all others, must be committed quickly and secretly.

In conclusion I do not think it necessary to go very fully into the question of treatment. A correct diagnosis of the cause or causes practically settles the course of treatment. If medical, a scientific or empirical use may be made of such drugs alone, or in some combination, as oxalate of cerium, calomel, bismuth, hydro-cyanic acid, ingluvin, menthol, cocaine, the use of counter irritation, rest, restricted diet, rectal alimentation, and insisting on the avoidance of sexual intercourse or mental excitement. If surgical, the correction of any form of displacement, by tampons or pessary, and the treatment of any inflammatory conditions present in either the cervix, tubes, or ovaries, or dilatation of the cervix.

The most difficult problem comes in the question of when to interfere with the course of pregnancy. The date in pregnancy is a very important factor. Treatment in the latter months would hold out the hope of saving the child as well as the mother, but pernicious or uncontrollable vomiting in the early months makes the risks to the mother's life of paramount importance to that of the preservation of the foetus.

The case with which I opened this paper pretty clearly defines the boundary line between conservative and radical methods of treatment.

The persistency of the vomiting day and night, the early period in pregnancy, the coffee-ground character of the vomited matter, showing a profound degeneration of the blood itself. When such conditions as restlessness, delirium, small, feeble, rapid pulse, subnormal temperature, icy cold extremities, supervene, or an approximation to them, and no sufficient cause, apart from the gravid uterus, can be found for them, the call for the termination of the pregnancy is absolute. Two courses of procedure present themselves, and are to be carried out with the strictest antiseptic precautions. 1st. The use of the sound and tampon. 2nd. Dilatation of the cervix and the use of the curette, with or without packing of the empty uterine cavity. As a rule the emptying of the uterus, when not too long delayed, brings prompt and most welcome relief to patient, physician and friends. The after treatment consists in rest, cleanliness and restricted diet. Whether such a patient should be allowed to become pregnant again is a question that requires very careful consideration.

THE ACTION OF X-RAYS ON DISEASED STRUCTURES.

By A. GROVES, M. D.,

Medical Superintendent Royal Alexandria Hospital, Fergus, Ont.

IT is an undoubted and undeniable fact that the x-ray has a curative effect on many forms of abnormal growth and tissue change and the suggestion naturally arises as to how it acts. It is claimed by some that it inhibits, if it does not destroy germ life, and by this action its good effects are explained; but to make this theory tenable it must be shown that the x-ray is destructive to germs and, even if this were proven, it will not explain its curative power over diseases which do not come from germs. To my mind its effects are a result of its distinctive action on the cells of the body. If the healthy skin is exposed for a sufficient length of time to the action of the x-rays a so-called burn results, which in reality is not a burn at all, but simply death of the cells of which the skin is composed. It would appear that the x-ray has the power to kill almost if not all cells in the body if there is sufficient exposure, but of course those which have the least resisting power die soonest. Now, the cells of which any new growth is composed are not tenacious of life, but have powers of rapid multiplication. Take cancer as an example. It may be dead and sloughing at the centre, whilst rapidly extending at the periphery. A growth such as cancer is one in which the cells have

varied from the type and become monstrosities, and monstrosities, although they may have powers of rapid multiplication, are not tenacious of life. If then the Roentgen ray will destroy the normal healthy cells of the body, how much more is it likely that diseased cells will not be able to resist? To produce a curative effect on diseased structures by means of the x-ray, it is necessary in many cases to push the exposure almost, if not entirely, to the point where normal tissues are attached. A case may be treated day after day with little apparent benefit, except perhaps the relief of pain, until the skin shows signs of irritation, when improvement will begin almost immediately. The x-ray then must be used with sufficient strength and for sufficient time to destroy the abnormal tissue, and this must be done in such a way that normal tissues are not injured if this be possible. The dosage if it may be so called must be carefully studied in order to so graduate it that healthy tissue is not injured along with the unhealthy. As operators become more expert, injury will gradually become less and curative effects will be more certain. Many questions are yet to be settled in the therapeutic application of this agent, not the least of which is as to the proper duration of each application. I am inclined to favour longer sittings than those advised by some writers, for, provided no injury is done, the more prolonged the sitting the greater will be the effect on the diseased cells. In this hospital, the time of exposure hitherto has been fifteen minutes, and results, not only in epitheliomata and cancerous growths, but also in chronic eczema and goitre, have been very good. A case of eczema of more than thirty years standing, and which had resisted every means of treatment adopted by many physicians, was entirely cured in three weeks by the Roentgen ray. Like every other means of treatment, it is well to have the patient under proper conditions and the case carefully watched from day to day.

MENSTRUATION IN A MALE.

Léri reports this unique case as one of pseudohermaphroditism. The subject was 75 years of age, was married, and gave the history, corroborated by a sister, of having menstruated regularly for 37 years, beginning at the age of 18. The breasts were those of a male, the external genitals being partly male and partly female in type. The voice was that of a eunuch. Autopsy showed the presence of undescended testicles. Neither uterus nor prostate was found. No explanation of the apparent menstruation was furnished by the autopsy—*American Medicine*.

A RESUME OF THE RECENT PATHOLOGY OF INSANITY.*

By F. E. LAWLOR, M. D.
Assistant Physician, Nova Scotia Hospital.

FOR pathological purposes we may divide mental disorders into two classes: the first, from which recovery is the rule, belonging to the so called functional maladies; the second, in which restoration to normal mental health cannot be looked for, namely, that of organic degenerative type. Nevertheless a sharp line of demarcation cannot be defined between the two forms, because we find that cases which, from all appearances, begin as a primary form may, by continuance or repeated attacks, pass over to the degenerative type. Even in this second class it is unusual that, with our present methods of investigating, a definite pathology is found to exist, as compared with that accompanying the clinical symptoms which are found in the kidney in nephritis. Nevertheless in mental disorders we at times find quite as exact symptoms as those known to exist in physical maladies, and one might be led to suppose that these clinical pictures would have for their base certain positive changes in the nerve cells. However such a corresponding condition is found to be the exception. During life, in different persons, we may have quite inconsistent and opposite clinical pictures, even though in both cases the pathological conditions are the same. For instance it has been observed that a tumour pressing upon the cortex may in one individual produce a condition of profound depression, in another, a marked state of excitement.

Turning to the simple insanities, mania, for instance, of the cell lesions in this condition little is known, therefore let us consider the circulatory disturbances as found in this condition. It is a well known fact that during life, the brain is subject to temporary venous congestions, vascular hyperaemias, and subsequent oedema cerebri, or the opposite, a condition of arterial spasm. Now with such a disturbance in the circulation we have increased pressure and consequent impairment in the outward flow of the lymph from the intrinsic cerebral tissues, and, as is known, lymph is loaded with the products of tissue waste, we must expect naught but serious interference with the normal function of the nerve cell, when we consider that it is being brought constantly into contact with these toxic properties. But, on the other hand, hyperaemias and oedemas are often seen accompanying fevers without any mental disturbances whatever.

*Read at the Halifax Branch of the British Medical Association, 10th December, 1902.

Another etiological factor worthy of consideration is the storage of toxic products from the alimentary canal, due to defective elimination, and disordered products of the secretory glands, or the reverse, a diminution in the secretions. These conditions are also frequently found unaccompanied by any marked mental disturbance. Our only conclusion therefore must be that there is a predisposing factor lying dormant, and when an abnormal change takes place in the life history of the psychical cells, they are rendered more liable to disturbance in their functions through the toxæmias or habits of life. This predisposing tendency may be acquired, but on investigation it has been found that in the vast majority of those mentally afflicted, a direct inherited predisposition to insanity exists.

On making clinical and chemical examinations of the blood and excretions in case of acute mental disorders, the presence of poisonous substances is found to exist, the products of defective elimination of intestinal putrefactions, which being absorbed and reaching the cell through the circulation, bring about a marked disturbance in its vital properties, with the result that there is at first a stage of excitement followed by stupor. Possibly in these cases we have to deal with a rapid degeneration of the elements of the vascular wall, accompanying which we have fragmentation and necrosis of the cell, followed by death or recovery according as the infection is mild or severe.

As to the microscopic appearance of the cell accompanying the toxæmic infection. The cells are swollen, cloudy, and, within the protoplasm, both fine and coarse granules are to be made out, the nucleus is not readily stained, is frequently displaced, shrunken and of an irregular shape in the vascular spaces, sometimes in such quantities as to block the channel and interfere with the outward flow of the lymph, are found broken down leucocytes, and large quantities of debris.

Taking up the organic degenerative insanities, the most important actual lesion of the cerebral structures predisposing to this type is the change in the vascular structures which may be classed as periarterial, endarterial, and atheromatous; nevertheless, the most diverse mental disturbance may be produced by these lesions. Monte has demonstrated the fact that the nerve cells practically die within a few hours after their blood supply has been cut off by artificially inducing minute embolisms of the cerebral arteries. And Berkley states that it is no less true that, with an inadequate supply of nourishment, an equally certain though slower process toward cell death must be induced. The nerve cell gradually loses its activity; changes beginning in the more distal portion of the cell proceed toward the centre until finally the nucleus becomes impli-

cated, and many put down this insufficient nutrient supply as the chief cause of the pathological changes found in the frequent cases of dementia beginning after middle life. Berkley also states that he justly believes that the majority of various types of organic degenerative forms of mental disorders have their pathology in these slowly progressive vascular changes, the first alteration being accompanied by gradual change from perfect insanity to slight mental disturbance, such as instability without cause, forgetfulness, etc. Later, when the nutrient plasma becomes altered owing to the progressive vascular changes, the nerve, unaccustomed to this lack of food, shows evidence of rebelling by a stage of acute excitement, and when the supply of nutriment has fallen below that point at which the cell can be maintained, and certain changes have taken place in the normal chemical and histological condition, there results a final stage of dementia. Notwithstanding these vascular conditions, not all demented show signs of any pronounced vascular lesions.

Before concluding I would like to say a few words on the pathology of general paralysis of the insane. Various are the opinions advanced to explain the true nature of the morbid process in general paralysis, but I will not mention more than two which are considered to be most important.

1. That it is primarily a degeneration of the nervous elements of the cerebral cortex.

2. That it is the result of a general toxic condition, which affects especially but not exclusively the cerebral tissues.

The first theory was advanced by Tuczek, and it has received many strong supporters, among whom Mott takes a prominent place. In opposition to this we have the theory advanced by Angiolella. He put this disease down as the result of a general toxic condition, which first leads to morbid changes in the small cortical arterioles and capillaries, although toxic agents may at the same time affect the nerve cell; but he states that the alterations in the nerve cells are, for the most parts the consequence of the vascular alterations. Nevertheless, he found in some cases that the circulating toxins, by direct action on the nerve cell, produced degeneration.

Ford Robertson thinks this to be only minor part of the pathogenesis of general paralysis, for his extensive histological study of the brain during all stages of the disease has led him to believe that the capillary lesion is the one essential alteration.

The theory that general paralysis depends upon a general toxic condition, which specially implicates the small vessels of the nervous system, is summarised by Angiolella as follows:—It appears

that the products of syphilitic infection circulating in the blood are the cause of the anatomico-pathological process of general paralysis. He points out that the anatomical process appears to begin in the vascular system, the interstitial and parenchymal alterations are the consequence of vascular lesions.

It should be borne in mind that the structure of the capillaries of the central nervous system differ from the structure of the other organs in that they possess an adventitial coat, the fibres of which consist of an elastic tissue differing from that found in other tissues. Ford Robertson puts this down as a strong evidence that in various different toxic conditions the capillaries of the central nervous system are prone to undergo degenerative changes, while those of other organs escape: and he maintains that this is due to a remarkable selective action on the part of a higher structural differentiation.

Mr. Chairman and gentlemen, my purpose was simply to endeavour to place before you this evening what seem to be at this present early stage of investigation a few important facts and probabilities with regard to the pathology of mental disease.

SOME INDICATIONS FOR TREATMENT IN THE MENTALLY DISEASED.*

BY J. A. MACKENZIE, M. D.,

Assistant Medical Superintendent, Nova Scotia Hospital; Demonstrator of Anatomy, Halifax Medical College.

IN the consideration of this subject it is not my intention to encumber you with some of the numerous new theories regarding the treatment of mental diseases. They like all other new unproven ideas are to say the least debatable. Neither is it the intention to surcharge you with the countless drugs of both ancient and modern discovery which from time to time have been vaunted as specifics in some one or other of the various forms of mental disease, but to place before you, as briefly as possible, some known indications, leaving for your intelligent consideration the proper treatment to pursue.

With reference to the present day medical treatment of the insane, we come to a region of exceptional and confounding activity. This activity can be observed as extending in three directions, viz, in the extension of the long list of hypnotics, in the development of new opium derivatives, and in the production of new bromine compounds. Of the

*Read before the Halifax Branch of the British Medical Association, 10th December, 1902.

hypnotics we have *dormiol*, *tribromo-salol* and *hyoscin hydrobromide*. Of the opium derivatives there are *dionin*, *heroin* and *peronin*. In the new bromine preparations there are *bromalin* and *bromidin*. Individual observers differ as to the action of these drugs and the inference is that much is yet to be learned about their conduct in disease.

In mental disease, as in bodily, no one drug or combination of drugs can be said to produce a certain requisite result till faithfully tried and the action observed in each individual case.

That drugs act differently on different individuals is nowhere better illustrated than in the treatment of the mentally affected. In some cases of great excitement it is surprising what enormous doses of certain sedatives or hypnotics can be given a patient, yet having no appreciable effect, while the administration of a single ordinary dose of another sedative or hypnotic may produce all that is desired. To occupy your time, therefore, in detailing some of the experiences in the use of certain drugs and their erratic actions in the treatment of the mentally affected would be using time unprofitably and, to say the least, tedious and unsatisfactory.

A brief consideration of some of the indications for treatment in those cases might however be practical.

That the treatment of any diseased condition may be properly applied, it is necessary first of all to determine the cause, and having so determined endeavour to remove it. In the vast majority of cases of mental disease we find some bodily disease or ailment accompanying the mental disturbance, which, if treated and recovered from before destructive brain changes have become too pronounced, is invariably accompanied by mental recovery as well. It has long been recognized that a sympathetic connection exists between the body and the mind. Such influences are familiar in the irritability of temper from the sluggish action of the liver, or the hopeful view phthisical patients have of their ultimate recovery.

Among bodily conditions most directly conducive to mental disturbances are diseases of the vascular system. That disease of this system may cause the unbalancing of the mental equilibrium can be easily understood from the fact that the brain—the organ of mind—enclosed as it is in a rigid cavity, is unable to adjust itself, even to slight alterations in the blood pressure. When we consider the delicate structure of the brain, and the grave changes which follow even such slight alterations in its cells as to be scarcely perceptible under the microscope, we can easily see how a slight alteration in the blood pressure is of far greater importance to it than any other organ of the body.

Changes in the circulatory system are usually produced by disease of the vessel walls, by diseases of the thoracic or abdominal and pelvic organs. Of diseases of the thoracic organs the one, acting through the circulatory system, and probably most productive of direct mental changes is found in cardiac disease. That the supply of blood to the brain is mainly regulated by the vigorous action of the heart, the general arterial pressure and the turgescence or emptiness of the venous system may be observed from the loss of consciousness consequent upon the sudden failure of the heart's action, as in syncope, a condition due to cerebral anæmia; so that a variation in the blood pressure of the brain will undoubtedly be manifested by a corresponding change in the psychical energy.

In the absence of a neurotic predisposition, heart disease may do nothing more than produce a permanent irritability of temper, thus completely altering the character and conduct of the individual; the condition probably never terminating in technical insanity. As old age advances, however, there is a tendency to intermittent delirium, great mental feebleness and obstinate insomnia, with a suspicious attitude of mind. Some observers even maintain that a similiarity exists in the mental symptoms of the insane suffering from like cardiac lesions.

It cannot be justly assumed that because the heart's compensation is apparently complete by the absence of serous effusion, albuminuria or œdema, that the delicate nerve cells of the brain may not be suffering from the impaired condition of the circulation.

With reference to the statistics on the subject I find in a table compiled by Dr. Greenlees that of 672 mental cases in which the condition of the heart and circulation was obtained on admission, 13 per cent. of the total had definite organic cardiac disease, while 44 per cent. had some functional circulatory disorder of one kind or another. He also found the functional disorders were more common in recent or acute cases. Esquirol found heart disease in nearly 7 per cent. of his melancholiacs, Calmeil and Thore in as many as 30 per cent. while Sutherland, in an analysis of 42 post mortem examinations, found the heart diseased in 34. That heart disease is a most grave complication of insanity is an observed fact. Dr. Wilkie Burman says that 32 per. cent of the cases dying from this cause, lived only three months or less in the asylum.

Of the other thoracic organs which may be diseased, their action on the circulation would be secondary by diminishing probably the oxygenation of the blood, thereby affecting the nutrition of the nerve cells, resulting in an imperfect performance of their functions.

The anxiety, depression and irritability of the sufferer from chronic bronchitis resembles much those of mitral disease, which to some extent is dependent on the same cause.

Of diseases of the abdominal and pelvic viscera producing anæmia or malnutrition, mention may be made of diseases of the digestive system. In the majority of melancholic cases coming under treatment there is found di-ordered digestion of one kind or another, producing changes in the nerve cells, which changes are all accounted for by the pathologist.

All are familiar with the risk of mental disease following parturition, probably due to the sudden change in the pressure of the circulatory system. The brain nerve cells being unable to adjust themselves to the new order of things are liable to take on abnormal functions. Likewise it may be said that any pelvic organ whose diseased condition is productive of malnutrition is also a fruitful source of mental disease in the unfortunate individual so pre-disposed.

In general if the brain nerve cells are to perform their functions properly it is necessary that not only must the quantity but the quality of the blood be equivalent to the demand upon them, which can only be supplied by each and all organs of the body performing their various functions properly.

Mention may here be made of the frequency with which bodily disease is found among the insane. Dr. Conford, of the Coppice Hospital for Insane, Nottingham, says of 175 cases treated at that institution, in ten instances there were organic diseases of the heart, and in twenty some functional disorder of the circulation. In seventeen there was emaciation or weakness from malnutrition, in seventeen, constipation, in eight, dyspepsia, in seven, bronchitis, in five, phthisis, in two, asthma, in two, emphysema, and in one, malignant disease of the lungs.

Chronic renal disease was present in six cases, glycosuria in four, hemiplegia in four, old infantile paralysis in three, neuralgia in three. Uterine complaints such as menorrhagia, etc., were found in eleven cases, and puerperal complications in three.

From the pathologist we learn how and what changes are produced in the nerve cells, their function being influenced by the sudden or gradual alterations in the circulatory system resultant on diseased bodily conditions.

It is a well known fact that slight illnesses among the sane produce depressing influences, but how much more depressing must the effects be in persons whose will power and judgment are inherently weak.

Treatment must therefore be directed in view of these conditions. Care is particularly necessary in the beginning of mental illness and before pronounced symptoms of insanity have declared themselves.

In late years not only have drugs been of great value in counteracting some of the physical evils which undermine the general health, but also has modern surgery aided very materially in the relief and prevention of mental disease in suffering humanity.

Dr. Monton, of the Eastern Michigan Asylum, has reported many cases restored to sanity by gynæcological operations. The late Dr. Rohe, of the Maryland Hospital, and Dr. Hobbs, of the London, Ont., Asylum, have each also recorded many cures as a result of gynæcological operations in the insane. Many other surgeons claim equally good results from surgical interference where indicated.

From the foregoing, it is evident that the possibilities of mental recovery in any case depend much on the rapidity with which the various diseased or disordered bodily functions can be restored to their normal condition. If changes more or less grave have already taken place in the brain nerve cells, the possibility of normal mentality following the physical restoration is very doubtful. It remains therefore for the attending physician to determine the bodily cause underlying the mental disorder, and by any means at his disposal, be it medical or surgical, to remove it as rapidly as possible.

In conclusion, though the subject is one of such magnitude, presenting as it does so many aspects and deserving of a more thorough consideration, yet I found it impossible to develop it at all satisfactorily within reasonable limits, and hope I shall be pardoned for making such a superficial effort at its presentation.

LIGATION OF THE INFERIOR VENA CAVA.

In a woman of 36, Henzel performed a nephrotomy on account of pyonephrosis, and later a nephrectomy. On account of numerous adhesions to all neighboring structures, operation was difficult and attended by tearing of the inferior vena cava. By means of two circular catgut ligatures the vessel was ligated above and below the wound. Recovery was interrupted, except for a slight edema of the lower extremities. Since then the patient has enjoyed perfect health.—*American Medicine.*

CURRENT MEDICAL LITERATURE.

Conducted by A. J. MACRESZIR, B.A., M.B.

BLOODLESS OPERATIONS.

IN *The Journal of the American Medical Association*, Jan. 10th, the address by Dr. Lorenz, at the Northwestern University, on "Bloodless Operations" is reported.

The bloodless method affords a speedy and safe method of correcting deformities which can only be improved, never removed by resections or alterations of the bony skeleton. The bones are put into position so that function will determine their development in a normal manner. Clubfoot, congenital hip-dislocation and wry-neck are the deformities most frequently treated, but Dr. Lorenz believes that the method is applicable to angular deformities of joints and may be to spinal deflections.

GROWTH OF BACTERIA IN THE INTESTINE.

IN the *British Medical Journal*, Dec. 27th, Smith and Tennant, of Queen's College, Belfast, present the results of work performed on this subject in connection with the scientific grants committee of the British Medical Association. In their experiments, rabbits and dogs were made use of, and the object sought was the determination of the relative number of bacteria in various parts of the small intestine, and the way in which this relation was modified by various diseases. In each case the method followed was to transfer immediately after death, a cupful of the intestinal contents to melted agar at 40° C, and this was poured into a Petri's box. This method is applicable to the species of *B. coli* and *B. proteus*, and the variations in growth of bacteria which can be cultivated can be taken as an index of bacterial growth as a whole in the intestinal contents.

The chief conclusions arrived at were as follows: The growth of bacteria in the small intestine is very limited in comparison with the amount of nutrient material present—in the larger intestine the number is very much greater. The relative number of bacteria increases regularly and rapidly the greater the distance from the small intestine, suggesting an inhibitive power situated in the intestinal glands. Injury, or the presence of disease or of parasites at any point in the intestine, is associated with a great increase in the number of bacteria. The relative

rarity of bacteria in the stomach is generally traced to the acidity of the contents; but the contents of the great intestine is generally also acid, but there is there a profuse proliferation of micro-organisms. Too much stress has been laid on the activity of the bile as a germicidal agent, though this is undoubted—the addition of 50 per cent. bile to the culture medium inhibits growth of *B. coli*. The region of the ileo-caecal valve is one of the first places where a disturbance of the regulation of bacterial growth takes place, and this region is very subject to attacks of inflammation of various kinds. The appearance of pathogenic forms of bacteria, and the disturbance consequent thereon, is always accompanied by an increase in the number and in the virulency of the forms usually present, and apparently in a decline in the normal inhibitive power.

LIGATURE OF THE LEFT COMMON ILIAC ARTERY FOR TRAUMATIC ANEURISM—RECOVERY.

AMONG the "Hospital Reports," *British Medical Journal*, Jan. 10th, is one of marked interest from No. 15 General Hospital, Howick, Natal by Arthur A. Martin, Civil Surgeon of the South African Field Force, which adds one more to the meagre list of successful cases of ligature of the common iliac artery.

The patient, T. S., of the Victorian Mounted Rifles, Aet 31, while in action against the Boers at Vryhead, received a bullet wound in the left groin accompanied by pain and faintness. During four weeks in bed a hard lump appeared there, when an accident in which another person fell on him with his knee upon the site of the injury, markedly increased the symptoms. On Nov. 18th, when brought to the hospital, patient was thin, pale and wasted, healed wound of entrance two inches above Ponpart's ligament and internal to the course of the external iliac artery, of exit below the crest of the ilium on the same side. A marked bulging was apparent above Ponpart's ligament, with a heaving pulsation synchronous with systole, the whole area was boggy to the touch, and other signs were present to give reasonable certainty to the diagnosis of aneurism of the external iliac artery.

An expectant treatment was adopted for a time, elevation of the limb, pressure, &c., but the condition became rapidly worse, the aneurism extended to a finger-breadth below the umbilicus, pain very severe, temperature 100-102, and patient rapidly losing strength. Operation was determined upon, an extensive incision was made and the sac exposed which looked very thin and soft. It was impossible to reach the ex-

ternal iliac above the sac, therefore the common iliac was tied and divided between a double ligature, pulsation immediately ceasing below. The wound was at once closed. During the first week there was anaesthesia and coldness of the limb, oedema with some formation of blebs, but by Dec. 22nd the circulation was well established and sensation normal, while a month later the patient could go about with crutches, move the leg freely, was quite free from pain, and the mass was hard and about the size of a goose egg. The collateral circulation consisted probably of the anastomosing lumbar, circumflex and lower intercostals, with some assistance from the pudics, inferior hæmorrhoidals, and sacral arteries. Any resort to a treatment by prolonged compression of the aorta, or extension of the operation by employing the sac, was forbidden by the precarious state of the patient.

NOTE ON THE NEWLY RECOGNIZED SUGAR CONTROLLING FUNCTIONS OF THE SUPRARENAL GLANDS.

DR. C. A. HERTER, of New York, has published in the *Medical News* a preliminary paper on the relation between the suprarenal glands and the production of sugar in the body. Previous records which are referred to at the beginning of the article, go to show that extracts of the suprarenal gland, injected within the peritoneal cavity of dogs, give rise very regularly to the presence of considerable amounts of glucose in the urine. Also that solutions containing the substance known as adrenalin act especially, and, probably exclusively, upon the pancreas by imparting to its cells a stimulus which in some way brings about an increased conversion of hepatic glucose into sugar. Experiments by the author strongly suggest that this disturbance in metabolism is dependent upon interference with the oxidative activities of the cells of the pancreatic gland, rather than being comparable to an excision of the organ. Consequently we have some grounds for believing that the organism possesses a hitherto undiscovered mechanism by which sugar metabolism is largely controlled under physiological conditions. It seems natural to suppose that if relatively large applications of adrenalin to the pancreas call forth temporary glycosuria, slighter influences of the same sort may serve as a continuous but variable physiological stimulus to the pancreas, to call forth the sugar that is constantly required by all the cells in which metabolism is active. This hypothesis has been put to the experimental test, and results have been obtained which establish the sugar-controlling influence

of the suprarenal gland. For example, massage of one or both suprarenal glands is followed by glycosuria, while the removal of the suprarenal glands, or ligature of their vessels, is followed by a rapid decline in the sugar of the blood. These experiments, full details of which have yet to be published, do not by any means imply that with the removal of the suprarenal gland the organism wholly loses its ability to make sugar, for this has frequently been disproved by excision of the glands in dogs. In regard to the excretion of sugar, after total extirpation of the pancreas preceded by exclusion of the suprarenal glands, experiments seem to indicate that the organism excretes less sugar after elimination of the combined pancreatic and suprarenal functions, than after the elimination of the pancreatic functions alone.

The question as to whether codeine represses human glycosuria by acting upon the suprarenal gland or not, is also briefly discussed, but at present the author declines to draw any conclusions in regard to this matter, but expects to publish more definite results shortly.

THE USES OF RUBBER TISSUE IN THE OPERATION FOR TIC DOLOREUX.

IN *The Annals of Surgery* for January, Abbe of New York outlines a method of operation for tic doloreux, which in his opinion, while obviating the necessity for the removal of the gasserion ganglion secures a satisfactory result. Operation for the removal of less than the ganglion have hereto been followed by a recurrence of the symptoms within a varying time, due to a regeneration of the nerve tracts in which recent investigation shows the growth to take place from the distal as well as from the proximat divided end. The Hartley operation is efficient as a preventive of recurrence, but is attended by such dangers and difficulties as render it only a last resort. Turk gives a resumé of 201 cases of which 83 per cent. survived the operation and 77.6 per cent. could be regarded as permanently cured, while a number of the fatal cases showed death to be due to injury attendant on the manipulation of the brain substance.

Abbe suggests the interposition of a piece of sterile rubber tissue under the ganglion over the foramina of exit of the second and third nerves after these have been divided and by rotation evulsed from the ganglion with removal of one-half inch of the nerves. The method of exposing the nerves is similar to that of the Hartley intercranial opera-

tion. He believes from microscopical evidence that the seat of the pathological changes is chiefly in the nerves themselves, and has found that the rubber tissue remains in position, and maintaining its integrity serves as an effectual barrier to the re-establishment of the nerve tract and a satisfactory non-conducting medium. The clinical evidence offered is five cases of which one dates over six years, one five years, one two and one-half years, one one and three-quarter years and one six months without recurrence of the symptoms.

THE NEW RELIGIO MEDICI.

WITH the above as a text, Sir Frederick Treves preached an admirable sermon in his address delivered at the opening of University College, Liverpool. In his comparison of the Religio Medici of Sir Thomas Browne, with the modern Religio Medici, he states, that in the former there is much which is personal to the man who wrote it, there is a little which would be unacceptable to the modern physician ; but there remains a not inconsiderable part which rests upon unchangeable foundations and which is beyond criticism. The elements of that creed would appear to concern themselves with two great issues, with the general attitude of the medical man towards disease, and with his particular attitude towards the sick whom he will profess to treat.

In the days of Sir Thomas Browne, a conception of disease was current which still influences the minds of many, namely, that disease was the outcome of an influence which was outside the body and quite distinct from it, there being nothing natural in any of its processes and nothing beneficent in any of its manifestations. The physician of to-day cannot include this conception among the articles of his faith. The time has come when it would rather appear that many of the so-called symptoms of disease are expressions of a natural effort towards cure, that they are not malign in their intent but that they have for their end the ridding of the body of the very troubles which they are supposed to represent. It would seem therefore that the creed of the physician should render his attitude towards disease the opposite to that which was current when Sir Thomas Browne wrote his thesis

The second great element in the Religio Medici concerns the relation of the physician to his patient, and here there is probably but little divergence between the old faith and the new, the principles which should guide a medical man in his conduct towards his patients being

few and simple. In the first place he who adopts the profession of medicine should be strong. Not with the strength of crude force, but with that excellent power which depends upon a fine and cultivated sense, a quick perception, a ready judgment, and a delicate susceptibility.

The second need in the equipment of the medical man is absolute fidelity. All those who profess to attend upon the sick undertake a solemn trust which needs to be observed with punctilious care. In accepting this trust, every physician takes upon himself a grave responsibility, and he who is the most exact in the right observance of this confidence has the greatest claim to be worthy of his calling.

The third article in such part of the *Religio Medici* as bears upon the qualifications of the physician is this—he must be kind. In the mere treatment of the sick a simple kindness of the heart is an essential factor and it can never be replaced by an assumption of manner however elaborate, or however precisely mimicked.

In concluding, the lecturer recommended those about to enter upon the arduous career of medicine to keep this motto before their eyes; *fortiter, fideliter, feliciter.*

FOR NASAL CATARRH (Externally).

℞ Betul-ol (Methyl-Oleo-Salicylate Co.)	- - -	Min. 10
Acid. Oleici	- - - - -	ʒi
Oī Amydal. Dulc.	- - - - -	ʒii
Salol	- - - - -	gr, 10

Sig. To be used as spray.

FOR NASAL CATARRH (Internally).

℞ Quinine Glycero-phosph. pur	- - - - -	gr. 1/2
Eucalyptoli Benzoatis	- - - - -	min. 1
Creosoti Benzoatis	- - - - -	min. 1

Misce fiat sec. artem. (dispense in capsule).

This prescription is sold under the registered name "Kugloids," Benzoate of Creosote is tasteless and does not irritate the stomach, besides being free from all the untoward effects of other creosote preparations.

These capsules are a specific in influenza when administered in the first stage, before the buccal cavity and bronchial tubes become infected.

ELECTRIC LIGHT IN DISEASES OF THE RESPIRATORY
ORGANS.

FREUDENTHAL had been using, for some time, electric light in the treatment of both laryngeal and pulmonary tuberculosis. In the *Laryngoscope*, in an abstract of a paper on this topic, Freudenthal says "though he has never cured an advanced case by this means, the treatment was of value just as is the use of morphine, heroin, or hydrotherapy: indeed, the electric light treatment stood on the same level as hydrotherapy, but was superior to the latter, because it relieved pain and facilitated expectation."

ETIOLOGY OF TUBERCULOSIS

Dr. Arthur Latham, in the November number of the Edinburgh Medical Journal, makes the following statement in his article:—

Hereditary tuberculosis is so rare as to be a negligible factor. It is not proved that tuberculous patients hand down to their children tissues which are especially receptive to tuberculosis. Tuberculosis always results from a pre-existing case of the disease, and the bacilli are conveyed by the mouth-spray, by the expectoration, or other discharge, and by means of food-stuffs, more especially milk. It is improbable that infection often takes place from air respired through the nasal passages. The tubercle bacilli, whether the infection is through the air or the food, enter the new host by the mouth in the majority of cases. The bacilli may then be destroyed by the natural defensive actions of the body in the respiratory and alimentary tracts, or they may pass into the various parts of the body.

FOR CANCER RESEARCH.

Mr. T. Sutton Timmis, of Liverpool, has given a donation of about \$50,000 for the purpose of instituting systematic investigations into the origin and cure of cancer. The investigations will be carried on at the Liverpool Royal Infirmary and the new laboratories of experimental medicine in the University College in Liverpool.—*American Medicine*.

DISEASES OF THE EYE, EAR, NOSE, AND THROAT.

Conducted by PERRY G. GOLDSMITH, M.D., Belleville,
Fellow of the British Laryngological Rhinological, and Otolological Society.

HYDROTHERAPY IN DISEASES OF THE EYE.

THE employment of hydrotherapeutic measures in the treatment of diseases of the eye is briefly considered by W. O. Nance, in the *Med. Standard* and abstracted in the *Journal A.M.A.*

(1) Heat and cold are best applied to the eyes by means of moist pads, which are more efficacious when employed in this manner than by means of the coil, or bladder, in that their action is more penetrating, and their effect is more germicidal.

(2) The application of *heat* is indicated in degenerative corneal processes—intestinal and phycetenular keratitis, corneal ulcers, pannus, infected corneal wounds, suppurative panophthalmitis, in iritis and cyclitis, in muscular spasm, and in contusion and ecchymosis of the lids (black eye) to hasten the absorption of extravasated blood.

(3) The application should be of the highest temperature the patient can endure (110-135) for a period of fifteen minutes, and repeated at intervals of two or three hours for several hours.

(4) *Cold* is indicated in hyperemia and inflammation of the conjunctiva. In purulent conjunctivitis it is the remedy par excellence. In traumatism, especially those of the iris and lens, and in the early treatment of contusions of the lids its employment is of value.

(5) In purulent conjunctivitis iced applications may be continuously used for many hours—as long as the cornea remains unimpaired, in which instance they are positively contraindicated.

(6) Hot applications greatly assist the rapid absorption of the various medicaments employed in ophthalmic practice, and when used for this purpose should immediately precede the instillations of such solutions.

FOREIGN BODIES IN THE MAXILLARY ANTRUM.

DR. JOHN MACINTYRE, F. R. C. S., at the March meeting of the British Laryngological Society (*Jour. Laryngology*), showed an X-ray photograph of a tube in the left maxillary antrum and also the tube which had been taken out by the operation through the canine fossa. The tube had a soldered flange to prevent its slipping up, but

the flange became loosened, which Macintyre considered good reason for insisting on the use of gold tubes with the lower end beaten out so as to form a rim. The reviewer recently treated a suppurating maxillary antrum by alveolar route, and, though the patient has cured her other antrum by this means, she accidentally forced the tube a short way upwards, and her husband, in trying to pull it down, shoved it into the antrum, necessitating extraction by the canine fossa.

INTRA-NASAL SURGICAL PROCEEDURES IN CHRONIC NONSUPPURATING MIDDLE EAR DISEASE.

AT the last meeting of the British Medical Association, P. McBride F. R. C. P., introduced the discussion on this question. (*Jour Laryngology*). He says: (1) Adenoids should be treated in all cases of catarrhal middle ear disease. The same is true of naso-pharyngeal catarrh. (2) In affections of the anterior nares and pharynx, *operative treatment should only be employed, if it is indicated on rhinological and laryngological grounds apart from the aural condition.*

McBride thinks, and quite rightly too, that there is altogether too much operating in the nose for aural troubles. In sclerotic middle ear trouble, where the membranæ tympani is not in drain and is usually normal, in appearance. Since anything which disturbs the general tone, loss of blood, fatigue, shock, etc., increases the deafness, he insists that no operative measures on the nose or naso-pharynx should be attempted. Mr. McBride argues with Sir Felix Semon that *marked nasal obstruction very rarely causes deafness.* Therefore, while justifying nasal operations in patients with middle ear catarrh, he insists the obstruction in the nose must be of sufficient importance to give the patient *discomfort* referred to the nose. He challenges any one to adduce cases, *which have been closely observed*, proving that nasal operations as distinguished from naso-pharyngeal, *per se*, produced benefit. He does not refer to acute middle ear catarrh, but to chronic deafness, due either to advanced catarrh or to sclerosis.

REFUSAL TO CHARTER AN "OPTICAL COLLEGE."

THE refusal of the authorities in Philadelphia to grant a charter to a proposed "optical college" with a curriculum of two months is, it strikes us, not only a step in the right direction, but a gigantic stride forwards. At all events it shows in this case that the angels do not always fear to tread even on the toes of the by no means fools who are

naturally anxious to rush in, and it will also serve as a protection to one of the specialities that is much in need of it. For years ophthalmology has been the favorite and profitable field for the charlatan and empiric, and to such a degree has it been worked by unscrupulous and advertising quacks that the simple and easily-understood appellation of "oculist" has grown into a term of reproach, and has become an indication of such ethical irregularity that its use by members of the National Society has been forbidden by its constitution.—*Medical News*.

OCCURRENCE OF SYMPTOMS IN TABES.

BYROM BRAMWELL, *Brain*, Spring 1902, abstracted in *Medical Review of Reviews*, in an analysis of 155 cases of tabes, found the first symptoms noted were lightning pains in 52%; diplopia and ataxia, each 8%; loss of vision, 5%; loss of knee jerks, 81%; paralysis, other than ocular, 10%; inequality of pupils, 38%; Argyle Robinson pupil in 69%; optic atrophy in 21%.

OCULAR DEFECTS AND WRY NECK.

AMBROSE Ranney, in the *New York Medical Journal*, for October 25, 1902, draws attention to the relationship between wry neck and ocular defects. Two very interesting cases are cited where recoveries, from apparently helpless conditions, followed the correction of the refractive errors. The deductions he draws are as follows:

- (1) That "eye strain" can cause, and its relief can cure wry neck.
- (2) That no case is scientifically investigated until both the eyes and the eye muscles are properly examined by modern instruments of precision and modern methods.
- (3) That graduated tenotomies upon the eye muscles are a positive step for the relief of reflex symptoms, produced by maladjustment of those muscles. These operations are painless, require no surgical dressings, entail no confinement to bed, and produce immediate results.
- (4) That the condition of wry neck should be regarded as a *pure neurosis* in most instances; hence the determination of its existing cause is vitally important.
- (5) That all mechanical treatments of wry neck are but palliative; and apparatuses designed to aid in maintaining the normal head posture are neither ornamental nor curative.

ACETOZONE IN SUPPURATIVE CORNEAL LESIONS.

KLINEDNIST, in *Journal of Eye, Ear and Throat Diseases*, writes very favorably of acetozone in suppurative corneal lesions. A solution of one grain in two fluid ounces of distilled water is used. A sharp, burning pain follows for a few seconds.

TREATMENT OF HÆMORRHAGE IN OPERATIONS ON THE TONSILS.

ESCAT (*Reprint La Presse Medicale*, August, 1902), has been successful in arresting hæmorrhage after removal of the tonsil, both primary and secondary, by suturing the anterior and posterior pillars together with a curved needle. Should this prove insufficient, he introduces a wad of cotton, the shape and size of the little finger, working it beneath the two stitches in the pillars. The cotton can be impregnated with suprarenal extract, hydrogen dioxide, or a 10 per cent. solution of antipyrin, or a two per cent solution of ferropyrin. If adrenalin hydrochlorate is used, the 1 in 5,000 solution is strong enough. The tampon should be removed at the end of 24 hours; the sutures may be left longer. If severe hæmorrhage continues, he advises tamponment of the pharynx before resorting to ligation of the carotid. This consists in intubation of the larynx and œsophagus, and packing the pharynx, *en masse*, with gauze around the tubes.—*Jour. Eye, Ear and Throat Diseases*.

THE CAUSE, SYMPTOMS AND TREATMENT OF MASTOIDITIS.

DR. PHILIP HAMMOND, in *American Medicine* (April 12, 1902), says of mastoiditis:—

(1) Mastoiditis is always subsequent to purulent inflammation of the middle ear.

(2) Tenderness of the bone is an important symptom when present; but the mastoid may be full of pus, with absolutely no tenderness.

(3) Bulging of the posterior superior wall of the canal is a most important symptom. When the bulging is next the drumhead, it is pathognomonic.

(4) Absence of temperature is no guide whatever.

(5) Improvement in hearing is usually indicative of subsiding inflammation in the middle ear.

(6) The operative treatment is comparatively safe, while delay is dangerous.

PROVINCE OF QUEBEC NEWS.

Conducted by MALCOLM MACKAY, B.A., M.D., Montreal.

At the annual meeting of the Protestant Hospital for the Insane, Verdun, a very important discussion was carried on concerning the necessity for greater care of the tubercular patients at the asylum. In presenting his report, Dr. Burgess, the superintendent, stated that the admissions to the hospital consisted of 64 private and 75 public patients. Of these 53 per cent. were classified as incurable from the outset. Eighty-three patients were discharged during the year, 53 of them being registered as recovered, 20 as improved, and 10 as unimproved, making a discharge rate of 59.71 per cent. and a recovery rate of 38.18 per cent. Of the thirty-eight fatal cases recorded for the year, nine were due to pulmonary tuberculosis. He noticed, as the hospital grew older, that more and more cases of tuberculosis developed, and no less than 23.68 per cent. of the deaths last year were due to this cause. It therefore became a grave question as to what should be done to isolate cases of this character, since isolation and the open-air treatment seemed to be the only successful means of combatting the disease. The proper solution of the problem was undoubtedly to be found in the provision of a separate isolated building for tubercular patients only, one portion of the structure being set apart for suspected cases, another for those in whom the presence of the malady in an active state has been positively established. Pending the erection of a proper hospital it was his intention during the coming summer to test the merits of the tent system for the isolation of cases of tuberculosis. A review of the work done at the Royal Victoria Hospital was presented at the annual meeting of the governors held towards the end of January. The superintendent's report showed that the number of patients admitted during the year was 2,814, an increase of 235 over the previous year. Of these 1,544 were free patients, 807 public ward patients paying fifty cents per day, and 463 private ward patients; 2,074 were residents of Montreal and 740 came from districts outside the city, while the average number of days' stay in the hospital per patient was 26.13. The death rate for the year was 4.62 per cent., or if those dying within forty-eight hours after admission be deducted, 3.62 per cent.

In the out-door department the total number of visits aggregated 21,950, of these 9,381 were medical: 4,514 surgical: 3,393 eye and ear; 3,370 nose and throat; 1,292 diseases of women.

During the year the pavilion for the isolation of infectious cases breaking out in the wards has been completed, also a medical electrical department has been added to the hospital, fully equipped with the most approved appliances for the taking of skiagraphs and the treatment of patients, and has already proved of great assistance in the work of the hospital. The changes and additions in connection with the heating and electric lighting of the buildings have been completed and the hospital now possesses a power plant of great efficiency and economy with ample provision for possible contingencies. An extension at the rear of the present operating theatre is in course of erection. It will contain a gynæcological theatre and a small operating room for special cases, with preparation and recovery rooms, and when these are completed the present operating theatre will be remodelled, as it is not considered satisfactory in its present condition. The extra accommodation is much needed, the present operating facilities being inadequate for the surgical requirements, for last year there were 1,310 operations in the large theatre and 811 in the laryngological and ophthalmological operating room.

The following appointments were made to the Externe Medical Staff for the year ending December 31st, 1903: Director of the clinical laboratory, Dr. A. A. Bruere; clinical assistants in medicine, Drs. F. M. Fry and H. B. Cushing; clinical assistants in surgery, Drs. E. W. Archibald and C. B. Keenan; clinical assistants in neurology, Drs. A. Shirres and A. A. Robertson; clinical assistant in ophthalmology, Dr. F. W. Harvey; clinical assistant in laryngology, Dr. W. H. Jamieson; assistant in bacteriology, Dr. A. B. Yates; assistant in clinical laboratory, Dr. F. B. Jones; medical registrar, Dr. H. B. Cushing.

The annual banquet of the Société Médicale was held on January 26th at the Place Viger Hotel, the attendance being even larger than last year. Dr. Duhe, the president, opened the toast list by proposing "The King." Dr. Lachapelle proposed "Our Guests" in an eloquent speech which was first replied to by the Minister of Marine and Fisheries. Mr. Prefontaine, who was loudly cheered, referred to the medical profession as promoters of charity, of science, and of patriotism, and also dwelt on the fact that in the past young doctors had to go to the United States in order to make a name for themselves and to earn a living. He believed that this time had now past and that our rapidly growing country offered every inducement for her sons to remain at home rather than to cast in their lot with a foreign nation.

Hon. Mr. Gouin was also well received and delivered a speech of more than ordinary interest. He asked the medical profession to instruct the legislators as to the wisdom of allowing the children of this province to enter factories at twelve years of age. He said that this was not allowed in England, Germany, or France, and he thought it was a matter in which the medical fraternity should play an important part.

Hon. Dr. Guerin also made a stirring and humorous speech. He was followed by Dr. T. W. Campbell, Dr. Starkey, Dr. Broehn, Dr. Lachapelle and others, concluding a most successful function which was characterized throughout by bright, witty, yet thoughtful, speeches.

Dr. T. A. Starkey, the recently appointed professor of hygiene, delivered the annual lecture of McGill University on January 22nd, the subject being "Public Health." Principal Peterson was in the chair, and in introducing the lecturer, he spoke of the great loss the University had sustained in the death of Dr. Wyatt Johnson, but believed that in Dr. Starkey the Medical Faculty had found a worthy successor.

After a lengthy and eloquent testimony to the character and originality of Dr. Johnson, Professor Starkey went on to show the very great importance of the study of hygiene, viewed both from the position of the general public and of the medical practitioner. Examples illustrating his points were drawn chiefly from a varied experience among the natives of India.

The greater part of the address, which was essentially of a popular nature as suited to an audience drawn from all the faculties of the University, treated of the gradual spread of hygienic doctrines and practice among the general public, with the consequent amelioration of suffering and suppression of disease.

The following cases were among those reported at the Montreal Medico Chirurgical Society during the past month.

Drs. H. S. Shaw and W. F. Hamilton presented a pathological specimen showing congenital heart disease. The child from whom the heart was obtained had reached the age of twelve years when death occurred. At birth it appeared to be quite normal, but when one week old while being tossed in the air by its father, it suddenly became slightly cyanosed and remained in this condition for two years and a half, when, after a severe attack of whooping cough, the cyanosis became suddenly and markedly increased. She remained in this condition until the day of her death, never being capable of anything more than the slightest exertion without marked dyspnoea and prostration.

The final illness was rather sudden, with some signs of meningitis—pain in the neck, high temperature, stupor, loss of vision, Kernig's sign, etc.

final sudden loss of consciousness. An autopsy was permitted only on the thorax, consequently the diagnosis of meningitis could not be confirmed. The heart was hypertrophied with a large aorta, and both ventricles extended into the apex, which was round rather than pointed, also the right ventricle was much hypertrophied and the right auricle dilated, the interventricular septum being deficient and the foramen ovale patent. There was a marked stenosis of the pulmonary artery, with signs of a chronic endocarditis, while only two cusps of the valve could be made out, and a small probe completely filled the lumen of the vessel. Dr. Hamilton suggested that a poorly developed septum had been present until the onset of the whooping cough, and that great exertion and strain during the fits of coughing had ruptured the delicate membrane, with the subsequent cyanosis and dyspnoea on slight exertion.

Dr. Lockhart showed a calcified foetus, removed from a woman, who had been treated for ectopic gestation some seventeen years before by killing the foetus with electricity. The "electrocution" had been successfully accomplished, but about nine years after the operation the patient began to complain of pain in the region of McBurney's point, which gradually became so severe that she consented to operation, with the result that a perfectly calcified foetus apparently of the fifth or sixth month was removed with consequent relief of all the symptoms.

Dr. Bazin read the report of a case of duodenal ulcer following a severe burn. The patient, who was about three years old, had received a severe scald involving the thorax and upper extremities, and under ordinary local treatment the case did well until the third day, when vomiting followed by diarrhoea set in. This was checked and by the eighth day the patient was feeling well but appeared to be restless, however, in a few days this passed off, and on the thirteenth day the child was so bright that there was some idea of sending it at once to the hospital for skin-grafting. On the fourteenth day the child suddenly had a chill and began to vomit large quantities of bright red blood and before a doctor could be called expired. The autopsy revealed a large punched-out duodenal ulcer from which the haemorrhage had arisen. Dr. Bazin found on examining the records of the Montreal Hospitals that there were only two cases reported which were at all similar, and after an extensive search in the literature on the subject, discovered that although the fact of the occurrence of such lesions had been passed on from one book to another, yet very few definite examples of the condition had been reported.

UNIVERSITIES AND COLLEGES.

MANITOBA MEDICAL COLLEGE, WINNIPEG.

THIS college was founded in 1883. It is in affiliation with the University of Manitoba ; and has a staff of twenty professors, or lecturers. There are about 100 students in attendance on lectures.

The Hospital fees are in the Winnipeg General Hospital, \$10 per session, and the payment of a further sum of \$10 at the beginning of the next session will entitle the student to a perpetual ticket. The Maternity Hospital ticket is \$6.

The College fees are \$5 for registration, and a total of \$400 for the four years, payable annually \$100. Arts' Graduates, taking their course in three years, are required to pay \$130 each year.

The University fees are for supplemental examinations each subject, \$5 ; Matriculation, \$5 ; Ad Eundem Statum, \$5 ; each regular examination, \$4 ; degree of M.D., \$10 ; degree of C.M., \$15.

The following College regulations are enforced : Students who wish to take a course of lectures over again may do so on payment of \$10. On entering college students must deposit \$5, to pay for any damage to the building or contents ; but, if not required, this is returned.

No student can register or attend lectures until he has passed the matriculation examination. First year students must pay one-quarter of sessional fee at time of registration, and all fees must be paid by 1st December. No student can register after 15th November.

Clinical teaching is given in the Winnipeg General Hospital, which has now 215 beds. Every opportunity is also afforded the students to avail themselves of the clinical material in St. Boniface, which has 200 beds.

Scholarships are awarded by the University as follows : First year, two of \$80 and \$50 respectively ; Second year, \$80, and \$50, and third year, \$80 and \$50. A silver medal is awarded the student taking the highest standing in the M.D. examination, and a bronze medal to the student taking the second places. Dr. John H. O'Donnell offers a medal to the student taking the highest standing in Sanitary Science.

The requirements for the degree of M.D. are that the person is a bachelor or doctor of medicine of some University in His Majesty's Dom-

inions when he may be admitted *ad eundem gradum* ; or passes the matriculation examination, and thereafter complies with the regulations of study and passes the four annual examinations laid down in the professional course. The University accepts in lieu of the Medical Matriculation, the matriculation examinations of the Medical Councils of Quebec and Ontario; the certificate of the Medical Council of Great Britain, the 2nd Class Teachers's Certificate of Manitoba, Ontario or the N. W. T.; the Ontario Intermediate or Junior Leaving, with Latin and Natural Sciences, bachelors of Arts of any University in His Majesty's Dominions ; or the Arts Matriculation or first year's examination of Manitoba University.

The subjects for the Medical Matriculation are: Latin, Henderson and Fletcher, pages 1-191, together with *Viri Romani*, Ginn & Co., translation of prescribed authors, and sight translation; Arithmetic, Algebra, simple rules, factoring, H.C.M., L.C.M., square root, fractions, equations of one, two, and three unknown quantities, indices, surds, quadratic equations of one and two unknown quantities: Euclid, books I, II, III.; English Rhetoric and Composition, and Poetical Literature as per prescribed authors, Scott, Coleridge, Wordsworth; History, Green's English and Clement's Canadian; Sciences, the High School Botany and Physics.

The professional Course consists of four years, with the annual Examination. Graduates in Arts can complete their Course in three sessions. Each session is of eight months' duration

The first year's course consists of at least 75 lectures in Anatomy, Practical Anatomy, Physiology, 60 on Inorganic Chemistry, and 25 of two hours each on Histology. He shall satisfy the Examiners on the Anatomy of the bones, muscles, and ligaments, Practical Anatomy to the same extent, the Physiology of digestion, circulation and respiration, the full course of Inorganic Chemistry and of Histology.

The second year's Course shall consist of not less than 75 lectures on Anatomy, Practical Anatomy, Physiology, *materia medica* and therapeutics, 40 lectures on Practical Chemistry, mainly medical, 40 lectures on Organic Chemistry. Two full dissections of the body are required. He shall pass an Examination on all of the above subjects except Therapeutics.

The third year's Course shall cover 75 lectures on *Materia Medica* and Therapeutics, 40 lectures on Surgical Anatomy, Medical Jurisprudence, 25 lectures on Pathology, of two hours each, and 50 lectures on Sanitary Science. He shall satisfy the Examiners on each of these subjects.

The fourth year's Course is made up of 75 lectures on Medicine, Surgery, Obstetrics and Diseases of Children, two Courses of 100 each on

Clinical Medicine and Clinical Surgery, and two Courses of 50 lectures each on Gynæcology. He shall pass an Examination on each of the above.

For the degree of C.M. the candidate is required to pass in Operative Surgery, and write a thesis in presence of the examiners. 75 per cent. is required.

A student may enter *ad eundem statum*, but no student shall be admitted to the fourth year examination from another University until he attends a full eight months' course in some College in Manitoba, affiliated with the University of Manitoba, taking out all the fourth year tickets.

Fifty per cent. of the marks in each subject shall be required to satisfy the examiners.

DALHOUSIE UNIVERSITY MEDICAL FACULTY.

THE Medical Faculty of Dalhousie University, Halifax, consists of twenty-five professors, lecturers, and examiners. The University provides instruction on Chemistry, Botany, Zoology, and Medical Physics. There are at present about 100 students in attendance.

The following fees are imposed: For Matriculation, \$10; a supplemental in any medical subject, \$5; a special examination, \$5; for one of the affiliated courses, \$5; for registration, \$2; Junior Chemistry and laboratory, \$10; Senior Chemistry and laboratory, \$12; Botany and Zoology, \$12; Physics, \$6; Graduation, \$30; Gymnasium, \$1.50. If \$30 have been, or part paid, in examinations, to this extent the graduation fee is reduced.

The clinical instruction is given at the Victoria General Hospital, or some other hospital recognized by the Senate. Students must obtain eighteen months hospital experience, or twelve months in a hospital and six months in a dispensary or out-patient department, before going up for the final part of the M.D., C.M. examination.

A medal is awarded by the Faculty to the student who stands first at the final M.D., C.M. examination.

A prize of books is offered by Dr. Lindsay to the student who stands first at the second part of the Primary Examination.

The Simson prize of \$25 is awarded to the student who stands first, at the end of the third year, on Chemistry, Practical Chemistry, *Materia Medica* and Therapeutics.

The University of Dalhousie grants the degrees of M.D., C.M.; but neither degree is conferred on any person who does not at the same time obtain the other. The academic course consists of a matriculation exam-

ination; a Primary Examination, divided into two parts; and a final examination also divided into two parts. The profession course covers four winter sessions of eight months duration each.

The student before entering upon his professional studies, must pass the University Junior Matriculation with latin, or the Preliminary Examination of the Provincial Medical Board, or some examination recognized by the Board as sufficient. He must be sixteen years of age before passing this Preliminary Examination, and thereafter spend at least four years in the study of the professional course. At all examinations a minimum of 50 per cent will be required on each subject for a pass, and 75 per cent to pass with distinction.

The first part of the Primary Examination includes Anatomy, Chemistry, Botany, Zoology, and Medical Physics; and is written and practical as required by the subjects. The candidate must be a matriculant and have attended at Dalhousie College, or some recognized college, during a session of eight months, at least 75 lectures and demonstrations on anatomy with 10 hours laboratory work per week for six months; 75 lectures on Chemistry with a laboratory course of not less than three hours per week for six months; 100 hours of lectures and laboratory work on Botany and Zoology; and 50 lectures on Medical Physics.

The second part of the Primary Examination includes Anatomy, Physiology and Histology, and Chemistry as follows: A written and oral examination on descriptive, regional, surgical, and medical anatomy; a written and oral examination on Physiology and Histology with microscopic preparations; a written examination on Chemistry, a practical examination in the laboratory, and an oral examination on the entire course of junior and senior work. Students must furnish proof of having complied with the preliminary requirements two academic years previously; of having passed the first part of the Primary Examination; and of having attended at least 75 lectures and demonstrations on Senior Anatomy with 10 hours laboratory work per week for six months; 75 lectures with not less than 3 hours per week in the laboratory for six months on Senior Organic and Medical Chemistry; 75 lectures on Physiology; and 75 lectures with laboratory work on Histology.

By special permission the first and second parts may be completed at one time.

The Final M.D., C.M. examination is also divided into two parts.

The first part, or examination includes *Materia Medica*, Pharmacy, and Therapeutics; Pathology and Bacteriology; Medical Jurisprudence and Insanity, and Hygiene. These examinations are written and oral. The student must have passed the preliminary, or its equivalent, at least

three academic years previously; of having passed the two parts of the primary examination, at Dalhousie College, at some recognized university or college; of having, after passing the primary examination, attended at some recognized college, at least one session of eight months, the following courses: *Materia Medica*, 75 lectures; *Therapeutics*, 25 lectures; *Medical Jurisprudence and Insanity*, 50 lectures and demonstrations; *Hygiene*, 25 lectures and demonstrations; *Pathology and Bacteriology*, 150 hours of lectures, demonstrations and laboratory work; and *Practical Dispensing*, 30 lessons, or three months with a druggist or dispensing physician.

The second part of the final examination includes *Surgery, Clinical Surgery, Medicine, Clinical Medicine, Obstetrics and Diseases of Women and Children*. The examinations on these subjects are partly written, oral, and practical as indicated, and cover urinary examinations, making clinical records, diagnosing diseases, the use of surgical appliances, the anatomy, physiology, pathology, and hygiene of pregnancy, etc. Candidates must show that they are 21 years of age, that they have passed all the former examinations, that they passed the primary examination either at Dalhousie University or at some accepted college, that they have attended two courses of 75 lectures on *Surgery, Medicine, Obstetrics and Diseases of Women and Children, Clinical Surgery, Clinical Medicine*, one course of 25 lectures on *Diseases of the Eye, Ear and Throat*, a course of operative surgery and performed operations on the cadaver, served for six months as surgical and six months as clerk in the medical wards, and reported at least 10 surgical and 10 medical cases, attend 4 cases of midwifery, and practical instructions in the making of post mortem examinations, and the performance of vaccination.

LONDON MEDICAL COLLEGE.

At last it looks as if the trouble between the Medical School and the Victoria Hospital, is in a fair way to be settled, or at least disposed of. The School has practically completed arrangements whereby there will be from twenty to thirty free beds up at St. Joseph's and an amphitheatre erected for the holding of lectures. This, with what they now have from the Board of Hospital Trustees at Victoria, will give the students ample clinical material to keep them going. It would be a great mistake on the part of the hospital authorities to place any obstacles in the way of clinical teaching.

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EDITORIAL.

COMPULSORY VACCINATION.

The Provincial Board of Health has under consideration some amendments to the present law that would make vaccination compulsory. Vaccination should be made absolutely compulsory during the first year of the child's life, and re-vaccination just as compulsory at the age of say 14 or 15 years. Not one moment nor one word should be wasted upon antivaccinationists. They are hopelessly in error, and no argument will change their darkness to light. They are wedded to their idols. Evidence of the most convincing character has already been laid before them, but without avail. They prefer the darkness to the light; but it will never do to allow their erroneous views to become a menace to the public health. Children are taken from the custody of an insane parent. In like manner, the children of an antivaccinationist should be vaccinated under the compulsion of the law, because such a parent is not in a proper frame of mind to judge what is best for them, and consequently the State must take care of them in this vital matter. There should be absolutely no yielding in this matter.

Prior to the days of vaccination, smallpox was a regular visitor in epidemic form every few years. The children would be attacked by this scourge. In those days it was a children's disease. Between each epidemic a large number of children were born. These furnished material for a fresh outbreak of the disease. This is what those antivaccinationists would have us return to. At Berkeley, in Gloucester-shire, on 17th May, 1749, was born into this world Edward Jenner, one of its great immortals. On the 26th January, 1823, he laid down his life, leaving vaccination behind him as his everlasting monument. Shall we keep that monument in a state of perfect repair, or shall we allow the antivaccinationist cranks and vandals of public health to deface or destroy it? In the name of Jenner, in the name of past epidemics, and the name of present and future generations, such must not be allowed to happen.

The proofs of the value of vaccination lie all around us; and are so evident that it might be thought one could read them while he ran.

but there are none so blind as those who do not wish to see. In Germany, where there is a strict vaccination and revaccination law, small-pox is unknown. In 1870, during the Franco-Prussian War, the German army lost from its ranks only a few hundred through smallpox; whereas the French army lost 23,000. In the former, vaccination was strictly enforced; in the latter, not. In cities in Britain where the antivaccination sentiment is strong, the disease is far more prevalent and fatal than it is in cities where vaccination is the rule. It has been proven beyond the shadow of a doubt that all the protection nurses, doctors, or other attendants require is efficient vaccination. The records of the Italian army for 20 years is an absolute answer to the antivaccinationist, and give all his arguments the lie.

Much has been said about the dangers of vaccination. They are as nothing compared with its advantages; and can be almost wholly avoided with care. A favorite argument with the antivaccinationist is the interference with one's freedom, and one's personal liberty. But this is like all the rest of their arguments, entirely wrong, and founded upon a wrong conception of liberty. The State is constantly interfering with personal liberty. The thief is committed to the jail, the insane to the asylum, the murderer is sent to the gallows, the plague-stricken to the pest-house, the drunkard to the cell, the deserting soldier to the lash. The whole social fabric is constructed upon the assumption that each one's liberty is restrained within certain bounds in order that all others may have certain rights assured them. We mutually agree to compel each other to pay taxes, to keep the peace, to defend ourselves against an enemy, to maintain the common health and safety of all. Here comes in the common right to interfere with the so-called personal liberty, and compel all to submit to vaccination in the common welfare of the State. Modern civilization and society could not exist for a single hour were it not for regulations, restrictions and compulsions. These are the sacrifices the individual must make for the State.

While we thus strongly approve of compulsory vaccination, we desire to express the opinion that the proposed Act should not direct affairs in such a way as to interfere with the fees of any qualified practitioner. Free vaccination should be furnished only for the destitute or pauper class. In no case should those who are able to pay find it possible to secure free vaccination. It should be made compulsory to obtain a certificate of successful vaccination. This would compel the vaccinated person to return to the vaccinator for inspection. It would be a great mistake on the part of the legislators and a gross injustice to the medical profession of Ontario to enact such legislation as would make free

vaccination general or possible for those who can pay, or who wish to select their own physician. There is always some opposition to compulsory vaccination, and it would remove much of this if the wishes of very many were respected in the matter of the choice of their physician, when such choice is desired by many. We would therefore insist that there be no interference with the fees of the profession, that free vaccination be refused those who are able to pay, and that those who so desire may choose their physicians. All this can be accomplished and maintain the efficiency of compulsory vaccination. We would urge on the members of the profession to see that their rights are protected.

AID FOR SCIENTIFIC MEDICAL TEACHING.

There are several subjects on the medical curriculum of every college that are essentially of a scientific character. Anatomy, physiology, pathology, bacteriology, and chemistry are such. To meet the requirements of the present state of knowledge, and the high standard of teaching exacted by the various examining bodies, it is no longer possible for the incumbents of these chairs to be engaged in active practice. They must give much time to the study of their subject, and to the experimental, laboratory, and dissecting room work, over and above the lectures in these departments, that they have but little time for anything else.

To expect, therefore, that the instructors in these branches shall do good work, and also follow the practice of their profession is to expect the impossible. These departments should be endowed, or placed on a salary basis of such amount as will enable the heads of these departments to live without worrying about patients and their fees. To do this requires money. This should be no serious obstacle. It will not do to fall back upon the State in all these instances; nor will it always be possible to secure the necessary aid from the general funds of the university with which the medical college may be affiliated. But there are other sources from which the assistance may be obtained.

There are many persons throughout the country of undoubted wealth. It ought to be possible to interest these in the work of scientific medical education. Such has been the experience elsewhere. There are many ways of using one's means for the purpose of perpetuating his name and good deeds, such as bequests to charities. It would be impossible to think of any way more useful, or praiseworthy than the endowment of a chair in physiology, pathology, anatomy, or bacteriology.

Here are the opportunities; and it is hoped the day is not far distant when there will be found those who will be willing to avail themselves of these opportunities of doing for their country, or locality, a truly noble work.

There is another source from which much assistance might come to our colleges. The graduates are now a numerous and influential body. One would think that it could be no great task for them to undertake to raise funds for the above purposes among themselves and their many friends. Could they be engaged in anything better? The college spirit should not die out of a man when he obtains his degree, and goes forth into the world of affairs. While he firmly sets his face to the future, he should ever recall the past. For the great duties of the future, many of his best inspirations will always come from his college days. A loved alma mater and a loving alumnus should ever go hand in hand. This work requires but a beginning. Disease is not the only thing that is contagious. To aid colleges by giving is one of the good things that can be made truly infectious. Giving requires a beginning, and others will follow in line. Let us hope that a commencement will be made soon.

For such purposes there is plenty of money. The question is bringing the claims of the scientific work of our medical colleges properly under the notice of those who can afford to give. This can be done. It has been done in many places and on many occasions. A few persons, as an informal committee, can collect money for a monument to Burns; a few others, in many cities, can erect monuments to Sir John A. Macdonald; others can take in hand the work of erecting memorials to our volunteers; several of the churches can raise million dollar funds. If the alumni of the various colleges would only bestir themselves, the money would begin to come for the endowment of scientific chairs in the medical colleges. Suppose the graduates of any college set themselves to endow the chair in pathology, we do not hesitate to state that within one year the task could be accomplished. The very fact that the graduates of any college undertook such a task would attract the attention of the wealthy, and induce them to give. This country is now old enough, has wealth enough, and colleges of worthy repute, to justify the turning of some thought to the creation of funds for the support of certain chairs, lectureships, and research scholarships. The high-class instruction given by the incumbents of these endowed chairs, who could devote their whole time to their special subjects, would be a great impetus to study throughout the entire profession. The profession and the public would alike gain.

THE TREATMENT OF PNEUMONIA.

A short time ago, Sir Dyce Duckworth delivered a lecture on the above subject at St. Bartholomews' Hospital. This lecture was published in the *British Medical Journal* for 15th November last. In his lecture attention was drawn to the change in treatment about 40 years ago, from the heroic to the more rational methods of rest and proper diet. Skoda and Dietl, in Vienna, Balfour and Bennett, in Edinburgh, and Todd, in London, were mainly instrumental in bringing about the change, with the effect that the death rate fell from 1 in 3 cases to 1 in 26, by adopting a supporting line of treatment. The type of the disease may vary from time to time, but the lecturer is of the opinion that the disease, on the whole is more severe now than it was when he began the study of medicine under Hughes Bennett. Pneumonia is an acute disease it is an inflammation of the lung, but it is something more. The disease is due to the influence of the toxin, generated by two or three specific microbes. He takes ill, but for a day or two there may be nothing noteworthy the matter with the lungs; but a flushed face, rapid breathing, a quick pulse, a high temperature, should make one think of pneumonia. The presence of consolidation, rusty sputum, and short cough make the diagnosis practically certain.

A warm bed and good nursing are essentials in the treatment of pneumonia. As there is a loss of appetite, these patients do on a fever diet consisting mainly of milk and beef tea. When the temperature does not rise above 103°, it is best left alone, as this amount of fever seems to be one way out of the disease. When the fever rises to 104°, 105°, or 106°, it must be reduced; and the best way to do this is sponging with iced-water and placing a cradle under the bed coverings. If these means fail, employ rubber tubing, circulating the ice-water round the head, and bags of ice in the axillae and beside the legs. Quinine may be given in doses of 5 grains every two, or three, or four hours till the fever gives way; but do not give antipyrin, antifibrin, or phenacetin. The use of the cold bath is condemned as a severe and exhausting process.

Among the internal medicines a saline mixture of potassium citrate and ammonium acetate is very useful by way of promoting the action of the skin and kidneys and quieting the circulation. Quinine in 2 or 3 grain doses is also a valuable remedy, and may be given in conjunction with the saline mixture. About the time of the crisis, on the sixth or seventh day, there may be profuse sweating and diarrhoea which should not be interfered with.

Sometimes the disease follows an arborative form and ends on the second, third, or fourth day by crisis. In other cases, the temperature

keeps high after the seventh day. This may be due to the very low condition of the patient, or to the existence of pleural effusion, most likely an empyaema.

In some cases of pneumonia, especially in those who have been drunkards, they become very delirious at night. In some other cases, insomnia is a prominent feature of the attacks. If the kidneys are sound, 15 minims of liquor morphinae, with 1 drachm of compound spirits of ether, is an excellent soporific. It may be repeated. These drugs sustain the heart while they procure sleep. Insomina at the period of crisis is particularly serious.

The care of the heart is of much importance, as the lungs become consolidated the strain on the heart increases. If both lungs are extensively involved, this may be so great that the heart becomes exhausted in the struggle. The blood cannot flow through the consolidated lung tissue, and is thrown back in the right side of the heart and the venous system. There may be extreme cyanosis and even jaundice, an unfavorable state of affairs. This condition may be relieved by a bleeding of 8 or 12 oz. If the heart begins to falter, oxygen is of value. This should not be delayed too long. The oxygen may be inhaled for ten minutes at intervals. Great relief to the failing heart may be given by the subcutaneous injection of liquor strychninae, 4 to 8 minims. This is of more value than digitalis. Another remedy of decided utility in the failing heart is musk. The doses usually given are too small. When it is required it should be given freely and is well worth the money. The old physicians used to give 9 to 12 grains in syrup and mucilage. With regard to alcohol, the following may be laid down as about the rule. In many cases stimulants are not required. The young do better in most cases without them. If the right side of the heart is engorged, the temperature high, the pulse rapid, and the first sound barely audible at the aortic area, some stimulants should be given, 2 to 4 oz. being usually enough, but 8 to 12 oz. may be required. It is always a matter of importance to give the patient as much water as he can drink.

To sum up. The treatment may be commenced by a mercurial purge. Then follow with a simple saline mixture with cinchona or quinine. The diet consists mainly of milk and beef-tea, and, above all, good nursing. Avoid a steam laden atmosphere. In the winter, poultices to the affected side, and, in summer, cotton wool sprinkled with spirits of camphor, do good. Relieve insomnia by morphia and Hoffmann's anodyne. Guard against heart failure with oxygen, strychnia, musk, and at times with stimulants, and a small venesection.

SIR JAMES GRANT'S JUBILEE.

Sir, James Grant, M. D., of Ottawa, celebrated, February 4th, his Jubilee in the medical profession. He entertained his medical friends with a smoker in St. Andrew's Hall. With few exceptions, almost the entire profession of Ottawa was present. The hall was beautifully decorated and the function was a very brilliant affair. Among the interesting events of the evening was a fine violin solo by Sir Frederick Borden, M. D. Sir James Grant related many interesting anecdotes of his fifty years in the medical profession. Sir Frederick Borden spoke in high terms of Sir James Grant, and what he had done for the medical profession. The other numbers were: Piano duet, Drs. Prevost and Webster; song, James Dickinson; instrumental trio, Dr. Hanna and the Drs. Klotz; song, Dr. Robinson; piano solo, Dr. Gibson; instrumental solo, Dr. McKinnon; song, Dr. Chabot; song, Dr. Powell. Shortly before midnight all adjourned to the main hall, where dinner was served and the speech-making began.

Sir James Grant was born in the county of Inverness, Scotland seventy-one years ago, but while very young was brought to Canada by his father, also a physician, and settled in Glengarry county. His early education was received at Queen's University and at McGill College Montreal. When twenty-one years of age he graduated first in arts at Queen's and then in medicine at McGill in 1853. After graduating he came to Ottawa where he began practicing and where he has remained ever since. Twelve years ago he was knighted by the Queen in recognition of his services to the profession. In 1885 he was made vice-president of the International Medical Congress, which met at Washington. For the past twenty-five years he has been medical councillor for the province, and a number of years ago was made a fellow of the Royal Society of Physicians and Surgeons of Edinburgh and London. After half a century of labor he is yet hale and hearty and takes as keen an interest as ever in medical work.

ADDRESS OF THE COUNCIL OF THE COLLEGE OF PHYSICIANS
AND SURGEONS OF ONTARIO.

Sir. Frederick W. Borden, M.D., K.C.M.G.,—

We, the Council of the College of Physicians and Surgeons of Ontario, yesterday were pleased to enroll you as an honorary member of the College, the first and only one. Today we are further gratified on learning that our beloved King has been pleased to confer on you the

distinguished honor of Knight Commander of the Order of St. Michael and St. George, and we take the earliest occasion to send you, Lady Borden and family our warmest congratulations.

Every Canadian feels that you are entitled to this recognition, for if Canada, by her splendid services to the Empire at a critical period in the late war secured the deep and lasting gratitude of the Motherland, the admiration of civilization and inestimable advantages for herself, you stood foremost in the production of these great results as the Minister of Militia.

As Canadian citizens, we feel indebted to the energy, tact and vigilance that enabled you at a perilous and trying time to place at the disposal of the Empire an army of Canadians whose achievements in the field will ever be a pride and glory to Canada.

As representatives of the medical profession, we take particular pride in the fact that one of its members has so well directed the military affairs of this Dominion as to permit the organizing and placing on a permanent footing an army medical corps up to the highest standard, and endorsed by the war office, as is shown by its adopting your methods and apparatus. In this, every Canadian surgeon takes special pride.

Finally as our youngest member, we wish you God speed. Henceforth we will take more interest in your career, if that were possible, and we pray that you, Lady Borden and family, may enjoy for many years, honors so well deserved.

W. J. HUNTER EMORY,
President.

R. A. PAYNE,
Registrar.

TORONTO, ONT., June 28th, 1902.

Sir Frederick, in a few well chosen remarks, thanked the Medical Council for their kindness, and said that no honor had ever been conferred upon him that he appreciated more. After which Lady Borden very handsomely entertained the representatives of the Medical Council.

The Honorary License and the above address were presented to Sir Frederick Borden, M. D., in his library, at Ottawa, on 24th January, by Sir James Grant, M. D., of Ottawa, and Dr. Moore, of Brockville, in very felicitous language

THE CANADIAN MEDICAL PROTECTIVE ASSOCIATION

The officers of the above association have sent out an appeal to the members of the medical profession to become members of the association. We can endorse the action of the officers. They deserve both praise and

encouragement for the work they are doing. The association was formed at the Winnipeg meeting of the Canadian Medical Association, 1901. The work of organization was continued at the Montreal meeting last September. We urge upon our readers to join the Protective Association. It can only be truly useful by being strong; and it can only be strong to the extent of its membership. So do not put this matter off. remit your subscription to Dr. F. W. McKinnon, 70 Elgin st. Ottawa. In the short time the Protective Association has been in existence it has rendered excellent service to the profession. The best way to protect one's self is by assisting in the protection of others. Let us be one in this matter.

DR. J. H. RICHARDSON TESTIMONIAL

The former students of Dr. J. H. Richardson have undertaken to give him a banquet, and to present the University of Toronto with his portrait. Dr. Richardson merits this distinction, as he labored faithfully in the cause of medical education for half a century, and no better anatomist ever addressed a class. We bespeak for the committee carrying out the arrangements every possible success. There will no doubt be a large and ready response from Dr. Richardson's old students. The subscription has been fixed at \$5.00, including admission to the dinner, or \$3.00 without the dinner ticket. The dinner and presentation are to take place in the week following Easter Sunday. The committee desires to hear from those intending to take part in the above function at least two weeks before it takes place. Communications should be addressed to Dr. John A. Amyot, Toronto.

THE CANADIAN MEDICAL ASSOCIATION.

We understand that arrangements are now actively under way for the next meeting of the Canadian Medical Association. Our London friends are busy at work forming committees, and laying out their plans. It is likely the meeting will be held about the end of August. We wish the executive much success.

PERSONAL.

Dr. and Mrs. Thompson, of Hamilton have returned from Clifton Springs.

Dr. Roberts, of New Germany, has sold his residence and removed to Galt.

Dr. W. H. Drummond was in Fredericton, N. B., in the early part of February.

Dr. Grey, of St. Thomas, who was ill, has recovered and resumed his practice.

Dr. Standish, a long resident of Wallaceburg, has sold his practice to Dr. A. Turner.

Dr. Lorne Gardiner has recovered from the effects of an operation for appendicitis.

Dr. Sylvester Snedden and Miss Jessie Rattray, of Pembroke, were married, 15th January.

Dr. W. J. Bell, of Toronto has taken the position of Surgeon to the R. M. S. Empress of Japan.

Dr. J. E. Lundy, Portage La Prairie, who was suffering with typhoid for some weeks, has recovered.

Dr. W. H. Carleton, of Arthur, has purchased the property and practice of Dr. Dame, of Thornhill.

Wm. Sinclair, M.D. has settled in Manitou. The doctor is an Honor Graduate of Manitoba University.

Dr. J. H. Wilson, of St. Thomas, is being frequently mentioned in connection with a vacant Senatorship

Dr. Oldright and his son, Dr. H. H. Oldright, returned in the latter part of January, from a trip to the West Indies.

The marriage of Miss Minnie Mersereau and Dr. Angus J. Murray took place at Fredericton Junction, on January 14th.

Dr. Seery, Fredericton, N. B., has been very ill for some time. His condition is still one of considerable anxiety.

Dr. Newbold Jones, a member of the Royal Victoria Hospital staff, was ill in the institution. He was suffering from typhoid fever.

Dr. Stephenson, of Iroquois, has resigned his position as surgeon to the G. T. R., a position which he had held for about fifteen years.

Dr. J. D. Thorburn was over at St. Catharines recently for a couple of days' rest after an attack of grip. He has resumed his practice.

The many friends of Dr. Gilbert Gordon, of Toronto, who has been very ill with an attack of peritonitis, will wish him a speedy recovery.

Dr. Macdonald, of Qu'Appelle, who has just finished a course at Philadelphia, returned to the city from the south in the latter part of January.

Dr. McGibbon, a recent graduate of McGill Medical College, Montreal, who has been visiting in Toronto during the past month, left a short time ago for Edmonton.

Dr. A. A. Robertson, son of Dr. Robertson, of Lennoxville, has been appointed one of the clinical assistants in neurology on the staff of the Royal Victoria Hospital.

Dr. G. R. McDonagh, of Toronto, has been spending a vacation out of town. He went to New York for a short time and thence to Jamaica. He will return about 15th March.

Dr. J. C. Stinson, son of Mr. Cope Stinson of Brantford, has been elected a member of the San Francisco Board of Health. The position is a most important one in that city.

Dr. and Mrs. Fraleigh of 596 College street left on the 4th of February for New York, where they took the steamship Kaiserin for a trip to the Mediterranean and the Orient.

Dr. W. W. Andrews, of Mount Allison University, Sackville, has invented a microscope for dissecting purposes. It is said to be a very practical apparatus for this delicate work.

Dr. O. Totten, of Forest, has been appointed by the Dominion Government, physician to the Indians at Kettle Point and Stoney Point. He has also been appointed coroner for Lambton. In both positions he succeeds the late Dr. Scott.

Dr. J. D. Reid, M.P. for South Grenville, was confined to his home for a short time suffering from a nervous reaction, due to his awful experience at the Wanstead railway tragedy. It appears that for three hours the doctor, who was one of those who escaped, supported the head of a dying man, who was pinned under the car, without changing his position.

OBITUARY.

ARTHUR VALLEE, M.D.

DR. A. VALLEE, of Quebec, died on 23rd January. Dr. Vallee was one time medical superintendent of the Beauport Asylum. He was about 50 years of age. He was regarded as a high authority on insanity, and was one of Quebec's finest citizens.

E. J. HODGKINSON, M.D.

DR. E. J. HODGKINSON died at 238 Farley Avenue, Toronto, 29th January, at the age of 78. Deceased had retired from practice for some years. He was formerly a well-known practitioner in the east end of the city, having his office on King Street near Sackville Street. He leaves a grown-up family.

ALEX. SCOTT, M.D.

DR. ALEX. SCOTT, one of the most prominent citizens of Forest, died suddenly in his office January 20th. He was 62 years of age, and had practiced in Forest for over thirty years. He took an active interest in educational matters. He leaves a widow and three grown-up sons.

GEORGE BATES MOTT, M.D.

DR. GEORGE BATES MOTT, at one time a leading physician of Petrolea, died at Wallaceburg, on Saturday Jan. 17th. For a number of years the doctor had been ailing, but not seriously enough to confine him to the house. Some few months ago he left for Wallaceburg, to live his remaining days with relatives there. His last illness only lasted one week, old age and cystitis being given as the cause of his death.

GEORGE D. FITZGERALD, M.D.

DR. GERALD DELACEY FITZGERALD, a popular young practitioner of Amherst, N. S., died very suddenly January 9th, of heart disease. He was 32 years of age and was born at Peterboro, Ont. He graduated from Queen's University in 1893.

W. S. MCKAY, M.D.

DR. W. S. MCKAY, physician in charge of the hospital at the Superior Lumber Co.'s camp, was found dead in bed at the camp on St. Ignace Island, on 7th January. The body was brought to Port Arthur and forwarded to Ingersoll, Ont., where his wife and brother live. Dr. McKay had been in this section a year, devoting his services to lumber camp hospitals.

W. H. D. YOUNG, M.D.

DR. W. H. D. YOUNG, who had been suffering from congestion of the brain, died at his residence, No. 1135 Saguenet Street, on 6th February. He was fifty-three years of age, having been born June 14, 1849. He graduated at McGill University, and has for many years past been well known in Montreal. He leaves a widow and four children.

D. MUNROE, M.D.

DR. D. MUNROE, of Perth, died suddenly 8th February, at his home of heart failure. He was born in the Township of Lanark and was a son of the late Dr. D. Munroe. Deceased was 61 years of age, and leaves behind him a widow and two daughters.

GEORGE STEWART, M.D.

DR. GEORGE STEWART, of Port Rowan died at his residence on Wolven Street, 28th January, from Paralysis. Three days before, he went on his daily round of visits to patients in the country and did not return until about nine o'clock at night. He was very cold when he reached home and went to bed almost immediately. Dr. Stewart was born in the township of Hamilton, in the county of Northumberland, about four miles from Cobourg, on the 21st of March, 1841, and was in his sixty-second year. He graduated in the year 1869, and went to a small village in Huron county to begin practice. After a year's trial in that place he came to Port Rowan, at the call of a number of the citizens who had advertised for a medical practitioner. Ever since he has remained here attending to the sick in the village and surrounding country. He took a keen interest in educational affairs, and was for many years chairman of the Board of Education. He was reeve of the township of Walsingham before the division. In 1894 he was appointed Collector of Customs for Port Rowan, to succeed the late Col. Mabee, and he has held the office ever since. He also took a keen interest in military affairs and was surgeon of the 39th Regiment for a number of years. He married Miss Ida Stearns who, with four children, survives him.

HENRY W. DAY, M.D.

DR. HENRY WRIGHT DAY, Registrar of the County of Hastings died at an early hour on Sunday morning, Jan. 11th, at his home in Belleville. Although Dr. Day has been failing in health for some months the fatal illness did not develop until Friday the 9th.

Deceased was born in the township of Kingston, on the 6th of September, 1831, being a son of the late Mr. Calvin Day. His ancestors

were United Empire Loyalists, his great grandfather, Mr. Barnabas Day, having once lived on the present site of New York City. Near the close of the American Revolution the family came to Canada and settled near Kingston. Deceased received his medical education at Queen's University, where he graduated in 1859, and shortly after removed to the town of Trenton where he practiced until appointed Registrar of the County in 1858. He was in 1869 elected a member of the Council of Physicians and Surgeons of Ontario for the Quinte and Cataraqui District, and was at the same time elected President of the Council of the College of Physicians and Surgeons of Ontario. The Doctor was at one time a surgeon of a battalion of militia, and in 1866, during the Fenian Raid, organized a battalion and was made Captain of a Company. He kept up his relations with the militia until 1872, when he retired. Dr. Day took considerable interest in municipal and educational matters, and for 15 years was a member of the School Board of Trenton. In 1881, when Trenton was incorporated as a town, he was elected its first mayor and held that position for two years. He was President of the Provincial Board of Directors of the Central Ontario Railway. He was married on Dec. 31st, 1857, to Miss Annie Purdy, of Ernesttown, who survives him. The Doctor was a man full of public spirit and enterprise; was a skilful, successful and popular practitioner, and in the social circle had many well-wishers.

SURGEON LT.-COL. MACLEAN, M. D.

By the death on 16th February, of Surgeon Lieut.-Col. Caird Ryerson Maclean, Meaford lost one of its most esteemed citizens. About a year ago Dr. Maclean was stricken with apoplexy, but recovered. A few months ago a second attack occurred and paralysis set in, which continued until his death. Dr. Maclean was in his 66th year at the time of his death. He graduated at Queen's University about 1860, and on the outbreak of the American civil war he joined the union army as surgeon. When the war was over he settled in Meaford, where he practiced medicine and surgery until his final illness. In 1879 he visited the old country, and while there he obtained the degree of M.R.C.S. He was mayor of Meaford in 1878. Since the organization of the 31st Battalion up to last year, when his health compelled him to resign, he was its surgeon, and was the principal medical officer of Niagara Camp, District No. 2. He leaves a widow, two daughters and a son—Mrs. H. M. Northey of Mysore, India, Miss Maude Maclean, Meaford, and Dr. J. Douglass Maclean, Sault Ste. Marie, Ont.

BOOK REVIEWS.

THE JOURNAL OF TUBERCULOSIS.

THIS Journal is so well known to the medical profession as to require no words of introduction. It is now issued in a much improved form. We congratulate the Editors, Drs. Ruck, and the publisher, A. H. McQuilkin, on the success of the Journal. It is published monthly in Ashville, N. C., \$3.00 a year.

WORK ON THE DUCTLESS GLANDS.

DR. C. E. DE M. SAJOUS has well under way a two volume work on the above very important subject. The first volume shall appear shortly, the F. A. Davis Company of Philadelphia are the publishers. The profession will no doubt welcome this work, as it deals with a section of medicine and surgery that has been heretofore much neglected.

INTERNATIONAL TEXT-BOOK OF SURGERY.

SECOND EDITION, THOROUGHLY REVISED AND ENLARGED.

In two volumes. By American and British Authors. Edited by J. Collins Warren, M.D. LL.D., F.R.C.S. (Hon.) Professor of Surgery, Harvard Medical School, and A. Pearce Gould, M.S., F.R.C.S., of London, England. Second Edition, Thoroughly Revised and Enlarged. Vol. I. General and Operative Surgery. Royal octavo of 965 pages, with 461 illustrations and 9 full-paged colored lithographic plates. Vol. II. Special or Regional Surgery. Royal octavo of 1122 pages, with 499 illustrations, and 8 full-paged colored lithographic plates. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, \$5.00 net; Sheep or Half Morocco, \$6.00 net. Toronto: J. A. Carveth & Co.

In planing this work the editors and co-workers have kept constantly in mind the needs of both student and practitioner. The result is a masterly exposition of the art and science of surgery, untrammled by antiquated traditions. In its realization they have given to medical literature an invaluable text-book, embodying a clear but succinct statement of our present knowledge of surgical pathology, symptomatology, and diagnosis, and such a detailed account of treatment as to form a reliable guide to modern practice. In this new edition the entire book has been carefully revised, and special effort has been made to bring the work down to the present day. The chapters on Military and Naval Surgery have been very scrupulously revised and extensively re-written in the light of the knowledge gained during the recent wars. The articles on the effect upon the human body of the various kinds of bullets, and the results of

surgery in the field are based on the latest reports of the surgeons in the field.

The chapter on diseases of the Lymphatic System has been completely re-written and brought up-to-date; and of special interest is the chapter on the Spleen.

The already numerous and beautiful illustrations have been greatly increased, constituting a valuable feature, especially so the seventeen colored lithographic plates. The work is excellent; we know of none to surpass it. It is clear, and concise, and up-to-date.

It is quite impossible to review so excellent and complete a work as "The International Text-Book of Surgery." The subjects covered are so numerous, and their treatment so thorough that it is only possible to speak in general terms of these two volumes. No one requiring a work on surgery will ever regret purchasing a Warren and Gould.

APPLIED SURGICAL ANATOMY.

Regionally presented for the use of students and practitioners of medicine. By George Woolsey, M. B., M. D., Professor of Anatomy and Clinical Surgery in the Cornell University Medical College, Surgeon to Bellevue Hospital, Associate Surgeon to the Presbyterian Hospital, Fellow of the American Surgical Association and of the New York Academy of Medicine. With 125 Illustrations, mostly colored. Including 59 full page plates. Cloth, \$5.00 net; leather, \$6.00 net. Lea Brothers & Co., New York and Philadelphia, 1902.

ALL sorts of books have been written on anatomy, regional anatomy, medical anatomy, surgical anatomy, topical anatomy, etc. One is naturally tempted to ask why another work on anatomy? The author answers by intimating that he has attempted to gather the best from a vast aggregation of matter on the subject, so as to make up a book of moderate size, on the regional and topographical plan. To meet these ideas the work is at times as much like an anatomical surgery as a surgical anatomy.

First of all, let us say a word or two on the illustrations. The censure is far too often true of works on anatomy that the illustrations are of very little value, and add but little to the usefulness of these works. In the case of the volume before us, whether original, or selected, the illustrations *illustrate*. The coloring and the method of lettering are very helpful to a rapid understanding of the structures portrayed.

In the text, there is a happy combination of the general descriptive, and regional methods. Throughout the work three main features are constantly kept to the front.

1. The defects, or abnormalities, that arise from errors, or defects in developments;
2. the diseases and injuries of the different regions and

parts, and the structures involved ; and 3. the best method of operating or treating these conditions, so as to injure these structures to the least extent, or preserve them to the greatest extent. Most will admit these are sound views of the relationship of anatomy to surgery.

A feature of the work of more than usual importance, is the terseness of the descriptions. Prolixity is the evil of too many works on anatomy. But of far more importance than terseness is clearness and accuracy. When these three features are combined, as in this work, the ideal reference volume is attained.

A very complete index of 20 pp, increases the usefulness of the volume, and renders the task of looking up any subject an easy and rapid affair.

The work is got up in the very best style of the well known publishers. In the matter of price, size, and merit, it is just the sort of book that the busy practitioner requires and will constantly consult.

SURGICAL ANATOMY, A TREATISE ON HUMAN ANATOMY IN ITS APPLICATION TO THE PRACTICE OF MEDICINE AND SURGERY.

By John B. Deaver, M. D., Surgeon-in-Chief to the German Hospital, Philadelphia. In these volumes, illustrated by about 400 plates nearly all drawn for this work from original dissections. Volume 1.—Upper Extremity; Back of Neck; Shoulder; Trunk; Cranium; Scalp; Face. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. Toronto: Messrs. Chandler & Massey. Price in cloth, \$7; leather, \$8.

If Vesalius, Morgagni, Malpighi, and many others of the old time anatomists were to visit us again, and examine Dr. Deaver's work on Surgical Anatomy, we can imagine that their surprise would be great indeed. Such elaboration of the subject, enormous amount of detail, and artistic finish of the plates, were unknown to them. They would hardly recognize their own favorite subject of study.

Volume 1 contains 632 pages and 151 full page plates. The text is a veritable storehouse of information on anatomy, topographical, descriptive, medical, surgical and regional. The application of anatomical knowledge to the elucidation of medical and surgical problems is an important part of every practitioner's daily work. In such application, the work of Dr. Deaver is of unquestionable value. We have examined this volume with much care, and are bound to state that the descriptions of regions, organs and structures have afforded the utmost satisfaction throughout. It is no easy task to understand the descriptions that are given in some text books of complicated regions. They require almost as much study to understand the text as the subject. Not so here. Dr. Deaver has the very necessary

essential of being able to state clearly, and yet briefly, what he means to convey to the reader. For this, two things are requisite: a thorough knowledge of the subject, and the ability to express that knowledge in lucid language. Dr. Deaver possesses both.

The illustrations are very handsome. They are faithful representations of the original dissections. The various structures are brought out in beautiful relief by exquisitely delicate shading and lining. The plates are full page, which permits of the details being brought out with great clearness. In this volume erudite scholarship and the highest ideals of the limner meet on the common ground of anatomy for the purpose of elucidating its many intricacies and rendering its endless bearings upon the healing art useful and interesting alike to the physician and the surgeon.

THE ANATOMY OF THE HUMAN PERITONEUM AND ABDOMINAL CAVITY CONSIDERED FROM THE STANDPOINT OF DEVELOPMENT AND COMPARATIVE ANATOMY.

By George S. Huntington, M. A., M. D., Professor of Anatomy, College of Physicians and Surgeons, Columbia University, New York City. Illustrated with 300 full-page plates containing 582 figures. Many in colors. Lea Brothers & Co., Philadelphia and New York, 1903. Price, half morocco, \$10.00.

THE work before us is a magnum opus. It is an edition de luxe of superb character. The pages are 8 x 12 inches. There are 300 pages of text and 300 pages of plates. The make-up of the book is truly handsome, being printed in large clear type, on superfine paper, and bound in marbled cover and half morocco. The publishers merit their full share of praise for the form in which they have got up this large volume. It is, in the language of Keats, "A thing of beauty.

It is not an easy task to review such a work, unless the reviewer contents himself with a few words of general praise and drops the book at that. But this work deserves more attention than this. It will be well therefor to speak first of the illustrations. For the most part the illustrations are reproductions from photographs of actual preparations. By this means there is an accuracy of proportion and relationship that it is almost impossible to obtain by hand drawings. These photographs have been reproduced with great fidelity, especially in the matter of perspective, a thing so often absent in plates. When you examine these plates, you examine the actual dissections. The anatomists and the surgeons know how valuable this feature of such a work is to them. It is very disappointing to examine an anatom-

ical plate that is devoid of perspective, or a correct perspective. It should also be remarked regarding the illustrations that they are almost all original. Preparations have been photographed for this work, in order that the author could secure the sort of illustrations required to make clear the anatomy of these parts and to fit in with textual descriptions. This is making a book, so that the illustrations and text are really complementary to each other. To write the texts and then cull from various books, illustrations to embody in the text is a poor plan. Make accurate dissections first and obtain true pictures of these. With that as a foundation there is some hope of a useful descriptive text.

Turning to the text we notice that the descriptions of the various structures and organs are brief, clear and accurate. Much attention is paid to their developmental and comparative aspects. In anatomy this is as it ought to be. In the study of the peritoneum and abdominal viscera it is a hopeless task to take them as they appear without knowing something as to how they came to be so arranged and related to each other. The study of their development, with the aid of comparative anatomy, clears this up. There are abundant references throughout the text to the corresponding figures. The value of the book as a work of reference is greatly enhanced by a very complete index.

To those engaged in teaching anatomy, or in the practice of abdominal surgery, this work should prove of the greatest possible value.

DISEASES OF THE BRONCHI AND PLEURA; PNEUMONIA.

Diseases of the Bronchi. By Dr. F. A. Hoffman, of Leipsic. Diseases of the Pleura. By Dr. O. Rosenbach, of Berlin. Pneumonia. By Dr. F. Aufrecht, of Magdeburg. Edited, with additions, by John H. Musser, M. D., Professor of Clinical Medicine, University of Pennsylvania. Handsome octavo volume of 1030 pages, illustrated, including 7 full-page colored lithographic plates. Philadelphia and London: W. B. Saunders & Co.: 1902: J. A. Carveth & Co., Toronto. Cloth, \$5.00 net; Half Morocco, \$6.00 net

THIS, the fourth volume issued of Saunders' American Edition of Nothnagel's Practice, fulfils all expectations. The eminent authors of the valuable monographs which comprise the volume had, by their breadth of learning, their exhaustive research, and extensive practical experience, made their essays almost complete as originally written. Nevertheless, the author in the light of recent research, has made numerous valuable additions, so that the American edition represents the present state of our knowledge on the subjects under discussion. Among other things, these additions include new matter on the anatomy and physiology of the bronchi; on foreign bodies in the tubes; on the patho-

logy, bacteriology, and treatment of bronchitis, and the recent researches on bronchiectasis and on eosinophilia in asthma.

Much new matter has been incorporated into the section on pneumonia, including the recent work of Hutchinson and others on the blood and urine in that disease. In the Pleurisy section will be found an account of the latest bacteriologic studies, and references to the work of Morse on the leucocytes in pleurisy, to that of Williams and others on X-ray diagnosis, and to the Litten phenomenon. The work in every particular is thoroughly up-to-date, and no criticism is possible but praise.

THE ACCESSORY SINUSES OF THE NOSE, THEIR SURGICAL ANATOMY AND THE DIAGNOSIS AND TREATMENT OF THEIR INFLAMMATORY AFFECTIONS.

By A. Logan Turner, M. D., (Edin.) F. R. C. S., (E. D.) Surgeon for Diseases of the Ear and Throat, Deacons Hospital, Edinburg, with forty plates and eighty-one figures. William Green & Sons, Edinburg, publishers.

IN 1898 Mr. Logan Turner delivered a lecture before the Fellows of the Royal College of Surgeons of Edinburg, entitled "The illumination of the air sinuses of the skull with some observations upon the surgical anatomy of the frontal sinuses." The following year Mr. Turner was awarded the surgical prize for his essay upon "the racial characteristics of the frontal sinuses based upon an examination of 578 skulls." The subject matter contained in these lectures together with additional observations on those other accessory sinuses of the nose with the recognition and treatment of their various diseases forms the basis of the present volume. Few men indeed are so situated that they have at their command such a wealth of pathological material or such a variety of crania of different races from which to draw their observations.

The first chapter introduces the reader to a splendid description of the anatomy of the outer nasal wall and the maxillary antrum. The description of the *ostium maxillare* is very clear. The author has found an *ostium maxillare accessorium* four times in nine dissections indicating a larger percentage than found by Giraldes and Zukerkandl who gave 10 per cent. as the proportion. The variations in size and position of the septum of the frontal sinuses are very clearly elucidated and specimens are pictured showing how one may open the *left* sinuses alone while operating for *right* sided disease.

The author leans to the opinion that the accessory nasal sinuses serve as subsidiary resonators of the voice and thinks it extremely important that they take any part in the warming or moistening of the air

in connection with nasal respiration from the anatomical museum of the University of Edinburg. Turner examined a larger series of skulls of various nationalities—Europeans, Tasmanians, Maoris (New Zealand), Africans, Esquimaux, Asiatics and American Indians. These were measured while transilluminated in a dark room and represent an immense amount of labor. This excellent work is the first so far undertaken. The author finds transillumination of maxillary and frontal sinuses of very great value, not only in estimating the probable condition within but also in forming a fairly accurate opinion as to the progress of the case. He does not, however, consider it as being of unvariable positive value. In connection with the frontal sinuses the author says: "When there is absence of illumination we must always feel some doubt as to whether it is due to the absence of the sinuses, to a thick walled sinuses, or to a diseased condition of the cavity."

Plate xxii, from a dissection of Prof. Symington, showing the anterior and posterior ethmoidal cells and their communications with the nose, is one of the finest we have ever seen. Arrows showing the course pus makes to reach the infundibulum from the anterior ethmoidal cells add greatly to the understanding of the drainage of this region. The relation of the anterior ethmoidal, frontal, and maxillary sinuses to the orbit is beautifully pictured in plate xxiii, from another specimen of Prof. Symington. The author considers very minutely the difficulties that may be encountered in entering the front nasal duct with a probe and clearly shows how these may in many cases be overcome.

The book concludes with two chapters devoted to the diagnosis and treatment of accessory sinus disease. The author writes on these topics in an excellently clear and forcible manner. The illustrations of this classical work are superb and from an artistic standpoint are not excelled by any work we have seen. In fact few publishers could turn out such a volume.

A COMPEND OF HUMAN PHYSIOLOGY.

Especially adapted for the use of Medical Students, by Albert P. Brubaker, A.M., M.D., adjunct Professor of Physiology and Hygiene, in the Jefferson Medical College; Professor of Physiology in the Pennsylvania College of Dental Surgery; Lecturer on Anatomy and Physiology in the Drexel Institute of Art, Science, and Industry; Fellow of the College of Physicians of Philadelphia. Eleventh Edition, Revised and Enlarged, with Illustrations and a table of Physiologic Constants. Philadelphia: P. Blackston's Sons & Co., 1902. Price, 80c. net.

THIS is one of the Blackston's well known quiz-compend series. The title might lead one, not familiar with the book, to expect that it consisted in questions and answers. This is not the case. It is a very

neat and scholarly, but small work on physiology; and reads along in a continuous, and systematic manner. The book contains nearly 300 pages; and, in these, the subject of human physiology is very clearly stated. We have taken particular pains to examine the book, and can state that it is both accurate and up to date. Notwithstanding that the book is a small one, everything that is essential is given. What is absent is the irrelevant padding that goes to make books large, though not useful. The author knows what he wishes to say; and has the happy faculty of saying it in a condensed, yet clear, manner. Those who wish to make themselves familiar with present day views on human physiology cannot do better than get Dr. Brubaker's Compend.

DISEASES OF THE RECTUM AND ANUS DESIGNED FOR STUDENTS AND PRACTITIONERS OF MEDICINE.

By Samuel Goodwin Gant, M.D., LL.D., Professor of Rectal and Anal Surgery at the New York Post-Graduate Medical School and Hospital; formerly Professor of Gastro-Intestinal Surgery at the University and Women's Medical College, Kansas City, Mo.; attending Surgeon for Rectal and Anal Diseases to the New York Post-Graduate Hospital, St. Marks Hospital, &c., &c., &c. Second Edition, Re-written and Enlarged, with thirty-seven full page plates, twenty of which are in colors, and two hundred and twelve smaller engravings and half-tones. Philadelphia: F. A. Davis Company, publishers, 1902. Price: Cloth \$5.00 net; Sheep or half Russia, \$6.00 net.

To form any idea of the study the author has given to diseases of the rectum, it is only necessary to compare the present volume with the first edition. If such be done, it will at once appear how thoroughly the author has kept his work up to date.

The use of illustrations is playing an increasing part in medical and surgical books. In the present work, they are very conspicuous, both by their numbers and excellence.

The work covers the subject of diseases of the rectum very fully. There is a good account of the anatomy and physiology of the rectum, and the other parts in immediate relationship with it. Congenital malformations, constipation, faecal impaction, chronic diarrhoea, coccygeal conditions, venereal diseases of the anus and rectum, pruritus ani, proctitis, periproctitis, fistulae, faecal incontinence, fissures, non-malignant ulceration and stricture, prolapse, haemorrhoids, haemorrhages, non-malignant tumors, malignant tumors, colostomy, closure of artificial anus and faecal fistula, neuralgia, enteroliths, foreign bodies, wounds and injuries, railroading as an etiologic factor, are all fully discussed.

It would be quite impossible to attempt a full analysis of this octavo volume of 700 pages. It is so complete and trustworthy in its

account of the many diseases of the rectum and their treatment that there is little, or no room for criticism. It is, indeed, a genuine pleasure to read the work. The paper, press work, and binding are as ideal as the book making art could furnish. In form and matter, the work can be most cordially recommended. It is preëminently what the general practitioner requires.

BOOK ON THE PHYSICIAN HIMSELF AND THINGS THAT CONCERN HIS REPUTATION AND SUCCESS.

By D. W. Cathell, M.D. The Twentieth Century Edition, being the Eleventh Edition Revised and Enlarged by the author and his son, W. T. Cathell, A.M., M.D. Pages 411, Royal Octave, Extra cloth, \$2.50 net, delivered. Philadelphia, F. A. Davis Company, Publishers, 1914-16 Cherry Street

THE authors state that there are two sides to the practice of medicine, a greater, or scientific; and a lesser, or personal. It is the latter, or the physician himself that the book devoted. It is truly a book of books. The authors have read much and observed more. The advice on all sorts of things concerning the daily life and conduct of the physician is of the soundest possible character. This addition is a particularly attractive one. We can hardly understand why a physician does not possess himself of this book. We certainly know he ought to have it.

TEXT BOOK OF MEDICAL JURISPRUDENCE AND TOXICOLOGY.

By John J. Reese, M. D., Late Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania; Late President of the Medical Jurisprudence Society of Philadelphia. Sixth Edition revised by Henry Leffmann, A. M., M. D., Professor of Chemistry and Toxicology in the Woman's Medical College of Pennsylvania; Pathological Chemist to the Jefferson Medical College; Vice-President British Society of Public Analysts. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. Toronto: Chandler & Massey, 1902. Price \$3.00.

THE text book of Dr. Reese on Medical Jurisprudence is familiar to many members of the medical profession. It is an old and trusted guide to all that is essential in this branch of medical study. Dr. Leffmann has edited the present edition, and it may be safely assumed that the book would not suffer by being passed under his revision. The usual subjects of a medico-legal character, and toxicology, are handled in a thoroughly satisfactory manner. The book is got up in a good style, and consists of 660 pages. We can recommend this work, as one of the very best in the English language on the subject of Medical Jurisprudence and Toxicology.

THE MEDICAL EPITOME SERIES. GENITO-URINARY AND
 VENEREAL DISEASES, A MANUAL FOR STUDENTS
 AND PRACTITIONERS.

By Louis E. Schmidt, M. Sc., M. D., Associate Professor of Genito-Urinary Diseases, Chicago Polyclinic; Attending Genito-Urinary Surgeon and Dermatologist, Alexian Brothers' Hospital, Chicago. Series Edited V. C. Pedersen, A.M., M. D., Illustrated with twenty-one engravings. Lea Brothers & Co., New York and Philadelphia. Price \$1.00.

It was the famous Dr. Samuel Johnson who said that "after all the best books are those small ones we can pick up in your hand, and read by the fireside." A small book may be a good one, whereas a large one may be of no value. The power to condense well is a rarer gift than to write diffusely. The present volume has several features to commend it. In the first place it is a good example of the pocket size book, next it is got up well as to paper, binding, printing and illustrations, and lastly it is a model as to its subject matter. The book contains many excellent formulæ. At the end of the various chapters there are a number of questions to test the reader's memory on its contents. The book is not discursive and argumentative, it is didactic and dogmatic. All that is of importance is given in a terse, clean cut manner. This Series, when completed will be a most interesting set of books.

MISCELLANEOUS.

COUGHS AND THEIR TREATMENT.

By Drs. Alex. De Soto and C. W. Crimpton, of Wayside Mission Hospital, Seattle, Wash.

AN intractable cough! What condition so persistently tries the patience of every physician? Careful examination has been made, the diet regulated, and one of the innumerable prescriptions for that ailment selected, but still the cough continues.

Then more investigation, and more careful prescribing; but still after weeks that familiar cough re-echoes through your waiting room, and you wish Mrs. Smith would change her Doctor. No such good fortune attends you, and that cough haunts you as dismal thoughts of phthisis do your patient, until you are almost determined to advise a change of climate.

It is not the object of this paper to go into details regarding the only too well known disadvantages of most of our familiar cough mixtures. Down to that household standby, "Cod liver oil in every form," they have proven in the vast majority of instances,—discouraging failures.

The above mentioned remedy, which the patient considers proof-positive of the Doctor's having made a diagnosis of consumption, may invariably be depended upon to disarrange the digestion at least.

Cod liver oil, once begun, must frequently be continued throughout the entire winter season. Nor can it be shown that the ingestion of fats and oils into the system, to become oxydized when coming in contact with the oxygen in the lungs, ever does more than raise the local temperature, by combustion. Although this may prevent cold in comparatively healthy lung tissue, its therapeutic (?) effect on the inflamed pulmonary structure may be described as positively harmful.

Cough is a symptom—varying in intensity and character according to its cause. Nor is that cause always situated within the respiratory organs themselves. Cough is essentially a reflex act depending upon an irritation of the respiratory center. These sources of irritation may be subdivided as follows:—

Dropping of mucous from the posterior nares in chronic catarrh. polypi, enlarged uvula or tonsils, defective closure of the glottis, irritations within the larynx from whatsoever cause, malignant or otherwise. Bronchitis—pneumonia and pleurisy. Gastric when due to derangements of the stomach. Cardiac disease, irritations of auditory canal and organic diseases within the abdominal cavity.

From the foregoing causes, it may be readily estimated that to arrive at the exact nature of any given case may not always be an easy matter. Nevertheless, we must relieve the patient, without risk of disturbing either digestive or circulatory systems. Any remedy which will attain this object in a goodly number of cases is indeed a Godsend to patient and physician, and in every sense an ideal remedy. Not until our attention was called to Glyco-Heroin (Smith) did we become acquainted with a remedy which we have used with a most unvarying success in coughs of every description, and in patients of all ages and conditions, without the slightest unfavorable effect. The points which recommended Glyco-Heroin (Smith) are:—

1st. Palatability. 2nd. Economy, (3 to 4 oz. being ample for a cure of the average case). 3rd. Its immediate action, soothing the most trying cases. 4th. Its absolute freedom from unpleasant or unfavorable effects. 5th. It is not only a palliative but a curative agent. 6th. The Hyoseyanus it contains reaches those trying cases of dry cough due to other causes than simple catarrhal irritation of the respiratory tract.

We are convinced that Glyco-Heroin (Smith) has no competitors in results, its actions being almost specific. It will give satisfaction in every case where results may be reasonably expected, and in many cases its beneficial effects go beyond the most sanguine expectations.

The character of the cases coming to the Wayside Mission Hospital for treatment may be imagined when it is remembered that it is essentially a charity institution; that the vast majority of patients come to us after having tried everything else. These are worthy prospectors and miners, broken in health and pocket by exposure and misfortune.

As proof of the above we submit the following cases:

(1) Dr. McK. Laborer, 22 years. Had typhoid fever convalescence much impeded by severe coughing spells, frothy white expectoration, irritable stomach. This condition defies all treatment. There was marked dullness at apexes of both lungs to the third intercostal spaces. Morning temperature normal, respiration, 28; pulse, 104: Evening temperature 101, respiration, 36; pulse, 120: This condition has persisted for nine days, with progressive loss of strength. December 16th. Glyco-Heroin (Smith). Teaspoonful every 2 hours. A.M. temperature normal, pulse, 104: respiration, 28: P.M. temperature 101, pulse, 120; respiration, 36: December 17th. Slight relief to cough, had some sleep. P.M. temperature 100, pulse, 96; respiration, 24: December 18th. Relief marked. P.M. temperature normal, pulse, 80; respiration, 20: December 19th. Expectoration free, appetite and spirits better, rapid improvement. December 20th. Improvement continued, sat up about 2 hours. January 8th. Dullness and cough gone, spirits and appetite good, gaining flesh rapidly. January 11th. Discharge cured.

(2) Wm. M. Cook, 52 years. Has had severe cough for last three months, due to cold caught in a typhoon on the China Sea after three days' exposure to cold and wet. Has hardly any sleep, incessant dry night cough. Glyco-Heroin (Smith) teaspoonful every 2 hours. February 21st. Immediate relief has had quite a little sleep. February 22nd. Improvement continued. February 24th. Slept all night. February 26th. Has not coughed in 48 hours. February 28th. No return of cough and discharged cured. Is now in charge of the culinary department of Hospital.

(3) D. A. Coolie, laborer, 48 years. Marked dullness at base of left lung, severe pain and dyspnoea. Temperature 102, pulse, 104; respiration, 40. There was daily chilliness at 11 a.m., followed by temperature of 103 $\frac{2}{5}$ to 104. Expectoration muco purulent. Emaciated, irritable, and appetite completely lost. January 26th. Glyco Heroin (Smith) teaspoonful every 2 hours. January 27th. Some relief to cough, other conditions same. January 28th. Free expectoration, all conditions still unchanged. January 29th. No morning rise of temperature, p.m. temperature 102, pulse, 96; respiration, 32. January 30th. Seems somewhat better; had a profuse night sweat. January 31st. Temperature

101, pulse, 88: respiration, 24. Took considerable nourishment. February 1st. Temperature normal, pulse, 88; respiration, 24. Less dullness, no expectoration, cough disappearing. Spirits vastly improved. Said it was his third attack, and that in each former instance he was in bed 11 and 8 weeks, respectively. Continued to improve, and was discharged February 26th well.

(4). J. J. Laborer, 19. Pneumonia 3rd day, dullness of entire right lung. Temp. 103 2-5; pulse 120; resp. 60. Expectoration *pruin juice* very restless and thirsty. Slight delirium. Glyco-Heroin (Smith) teaspoonful every 2 hours.

18th temp. 102; pulse 102; resp. 48. Much easier. 19th temp. 100; pulse 84; resp. 36. 20th temp. nor.; pulse 80; resp. 24. Expectoration has changed, and is feeling much better. Absolutely refused to believe that he had pneumonia. Discharged cured.

(5). S. J. a diver, 34 years. Had just been discharged from another hospital where he had been treated for four months for typhoid-pneumonia. Had considerable dyspnoea; cough dry, spasmodic, at times slightly frothy expectoration. Temp. normal; pulse 100; resp. 28. Right plural cavity filled to the fourth intercostal space with pleuritic fluid which could be heard to splash on slight agitation of the chest. Appetite poor, and is much dispirited. At five sittings three and three fourths gallons of fluid were withdrawn by aspiration.

Nov. 6th Glyco-Heroin (Smith) teaspoonful every 3 hours, has much relieved the spasmodic cough; conditions in general seem to be improving. Nov. 11th. Cough has almost disappeared. Continued in this condition to Jan. 4th when two and one-half quarts of fluid were withdrawn. Feb. 3rd. Complained of pain under scapula and was given a dry hot air treatment followed by violent cough, fever 104-1-5; pulse 124; resp. 28; Glyco-Heroin (Smith) every 2 hours. Feb. 4th. Had a hemorrhage and slightly delirious: the general condition unchanged. Feb. 5th. Cough almost gone; temp. 101 2-5; pulse 82; resp. 21. Is eating some, and feels much better.

Glyco-Heroin (Smith) has always relieved his cough promptly, and I believe he would be dead but for its soothing influence. While we do not look to the remedy as a cure for Hydrothorax, we appreciate the sedative effect, in which it is superior to *morphine* and harmless.

(6). Jan. 11th. W. McD. Age 18. Measles thoroughly developed Temp. 103 2-5 violent cough; yellow expectoration; cannot find rest because of the cough. Glyco-Heroin (Smith) teaspoonful every 2 hours. Jan. 12th. Cough is much better. Jan. 13th. Has not coughed all night. 18th. Discharged without return of cough. Entire quality of Glyco-Heroin used was 4 oz.

(7). L. G. Age 10 mos. Jan. 29th operated upon for rad cure of right inguinal hernia ; on Feb. 6th although doing well in every way he was seized with violent paroxysms of coughing (probably due to dentition). The stitches threatened to tear out and the operation prove a failure. Glyco-Heroin (Smith) *XV Guttæ* every 4 hours completely controlled the cough in five doses and so saved the case. There were no visible unpleasant effects of any kind whatsoever from the medicine.

(8). J. H. Age 22, in hospital one year for tubercular disease in the lumber region, Jan. 15th was operated on and much diseased tissue removed. He developed violent cough Jan. 6th which caused him great pain and bleeding in the wound. Glyco-Heroin was given, two teaspoons every three hours, with splendid effect. Five doses remove the cough entirely.

(9). Mrs. T. Depot Matron ; had a cough that had defied the treatment of several physicians. It was a dry hacking cough, and had had no sleep in five nights. Completely cured by four oz. of Glyco-Heroin (Smith).

(10). Mrs. M. had been to several physicians ; her case had been diagnosed as phthisis ; she was taking one half bottle Emulsion of Cod Liver oil per day. She was also using morphine freely, 4 oz. of Glyco-H completely cured her, and she gained at the rate of one lb, per day.

(11). Miss E, seventeen, cough 4 months without relief, was immediately relieved by a few doses of Glyco-Heroin (Smith).

(12). Mrs. D. distressing cough and some dullness at base of right lung. Her cough completely cured by less than 1 oz. of Glyco-Heroin.

(13). McD. Aged 36. Policeman. Had been coughing 3 weeks and was getting worse. Four oz. of Glyco Heroin completely cured him.

(14). Mr. R. with all symptoms of pneumonia. Temp. 104; pulse 126 ; respiration 40. 4 oz. of Glyco-Heroin completely cured him.

“ ARE YOU IN PAIN ? ”

You will probably ask this question more frequently than any other. Nothing appeals to one more strongly. To be able to relieve pain, whether it be a slight nervous headache or the most excruciating suffering from a severe neuralgia, brings the height of pleasure to both patient and attendant. The ideal remedy must not only do its work, but it must also do it quickly. Touching this point is an article in the *Boston Medical and Surgical Reporter*, by Hugo Engel, A. M., M. D. The author says ; “ Antikamnia has become a favorite with many members

of the profession. It is very reliable in all kinds of pain, and as quickly acting as a hypodermic injection of morphia. It is used only internally. To stop pain one five-grain tablet is administered at once; ten minutes later the same dose is repeated, and if necessary, a third dose given ten minutes after the second. In 92 per cent. of all cases it immediately stops the pain."

ACUTE DYSPEPTIC DIARRHŒA OF CHILDREN AND ITS TREATMENT.

M. A. AUERBACH, Ph.G., M.D., New York City Medical Inspector, Department of Health, writes thus:—This disease is chiefly due to errors in diet, which do not necessarily consist in the substitution of unnatural foods for the mother's milk. The mother's milk may be altered in quality by emotional causes, by improper food and improper hygiene. Or it may be caused by over-frequent nursing. More often however it is caused by the ingestion of unnatural foods. There are also pre-disposing influences which facilitate the action of the exciting causes. These are especially dentition and the extreme heat of summer. The prognosis of the aforesaid disease among the better classes is commonly favorable, but among the weak, puny and half starved children of our lower east side large numbers perish, especially during the summer months. The old time treatment in these cases was a primary purge, calcined magnesia, or castor oil. After the purge bismuth sub-nitrate or prepared chalk was given. Since the introduction of Glyco-Thymoline (Kress) the above mentioned methods have been cast aside. A very good effective prescription which has given me most splendid results in these kind of cases, in conjunction with a carefully restricted diet is

℞ Bismuth Sub-nitrate ʒi.
 Tr. Opii Deoderatum m.x.
 Glyco-Thymoline ʒii.
 M Aqua Rosarum ad q. s. ʒiv.
 Sig. ʒi every three hrs.
 (For a child one year of age.)

THE THERAPUETIC VALUE OF PEPTO-MANGAN (GUDE).

DR. J. W. FRIESER, Vienna, Austria, concludes his article on anæmia and chlorosis in the following language: It is my custom to direct that Pepto-Mangan be taken in these cases to the exclusion of other treat-

ment. and only in combination with appropriate dietetic measures, for periods of several weeks. and if necessary longer, three to four months. For adults I prescribe three tablespoonfuls to three to four desertspoonfuls daily, for children three teaspoonfuls daily, in water or some white wine. During the entire time of administration I prohibit the use of raw fruit, acid or highly-spiced dishes, and order a vigorous and regulated diet. In severe cases of anæmia and chlorosis I recommend rest in bed for some time, and if possible have the patient placed in a well-ventilated sitting-room; while in the lighter cases I order, besides the medicinal treatment, a frequent sojourn in the open air, and if possible a prolonged stay in the country in a carefully selected place, and short and non-fatiguing walks.

In some instances I have observed excellent results from a rest cure in conjunction with ferruginous medication, and appropriate hygienic and dietetic treatment.

IN MEDICINE, QUALITY COMES FIRST.

ALL the preparations of Wm. R. Warner & Co. are known for excellence of quality, accuracy, and uniformity of composition. The effervescent lithia water tablets furnished by this firm offer us a ready and effective method of introducing lithia into the system for the relief of the many disorders in which that remedy is of conspicuous service. The tablets are made in two strengths, one containing 3 and the other 5 grains.

FREE VOLUME.

THE *New York Medical Critic* announces that each subscriber to that journal will receive a free copy of the Medical Index.

SAUNDERS' NEW YORK OFFICES.

MESSRS. W. B. SAUNDERS & Co., of Philadelphia, have opened a branch of their business in the Fuller Building, or the "Flatiron Building," on the triangle bounded by Broadway, Fifth Avenue, 22nd and 23rd Streets. From the offices on 17th floor can be obtained a panoramic view of New York. All physicians visiting New York are cordially invited to visit these offices, which are to be under the charge of Dr. Reed B. Granger.
