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Original Articles.

RELATION OF THE MEDICAL PROFESSION TO THE PUBLIC.*

By John W. S. McCullough, M.D., Alliston, Ont.

Mr. President, Ladies and Gentlemen,—To me has fallen the honor of addressing you upon a branch of the relation of our profession to the public, under the general heading of Public Health Aspects—embracing: (1) The need of county officers of health. (2) Remuneration for registration of births, deaths, and infectious diseases, and for attendance upon the poor. (3) Compulsory vaccination. (4) Protective organization.

This is an extensive list of subjects, and feeling my utter inability, even if the time allotted to me were much greater, to deal adequately with them, I have merely outlined the various matters, leaving it for you to supply in your discussion the very great deal which may be said regarding these important subjects.

Taking the first topic, that of the need in this province of County Officers of Health. You all know very well that under the present system, there being a health officer in each municipality, or, at least, that the law provides for such, the regulations regarding health matters are often very poorly carried out.

The reason is not far to seek. A physician is appointed to this office. He receives either no salary or, if any, a mere

*Read at a meeting of the Ontario Medical Association.

trifle. He may be zealous to carry out his duties, but receives no encouragement or support from the board of health or the authorities of the municipality, consequently he soon becomes tired of flying in the face of the public, whose good opinion is necessary to his success or existence. As a result, he floats with the stream and the health regulations become a dead letter.

The Provincial Board of Health has had in the past five or six years a great deal of trouble with some infectious diseases, notably mild epidemics of smallpox here and there. It has been found that in many, perhaps the majority of municipalities, very little attention was paid to the necessary quarantine, and that both the province and the municipality concerned have been put to an unnecessary expense and trouble because the epidemics of infectious disease were not stifled in their infancy by a careful supervision of the early cases.

To overcome this difficulty the plan of having a county or district officer of health has been under consideration and has received a good deal of thought, both by the present Board and their predecessors. It was thought that if a county or group of counties had such an officer, whose salary would be such that he would be independent of public opinion, there might be an improvement, in so far as the question of public health was concerned. In the State of Pennsylvania there is some such a system. The State, whose population is about seven millions, and with an area of forty-five thousand square miles, has a commissioner of health (salary, $10,000), appointed for six years by the Governor of the State. Under and responsible to the commissioner are ten district health officers, who are also practitioners in active work, who receive $2,500 per year, and who are each assigned to one of the ten districts into which the State is divided. They are responsible for the oversight of health matters within their districts, and in addition are required to do bacteriological work in the matter of specimens sent to them similar to the work done in the provincial laboratories in Toronto and Kingston, with which you are familiar. This would seem to be a good plan and it is said to work well.

But the conditions in the province are much different. We have an area of 222,000 square miles, with a small population of about 2,192,000. Much of our territory is unorganized and sparsely or not at all settled, except for timber men at certain seasons of the year. To divide this into districts and apportion them to various medical officers would mean a great cost, for which our citizens, who are by no means educated to the neces-

sity of such a system, might not sanction the neccssary expenditure. A medical man competent for such an office could hardly be obtained for less than $2,000 per annum, so you can figure out what the cost would be.

As an alternative for the present, at least, it is my opinion that the Health Act should be so amended that the various medical health officers would receive a decent salary and be held strictly responsible to the Provincial Board of Health for the enforcement of its regulations. What this salary should be, might be based on population. It should be at least $500 for the first thousand of population, with, in rural municipalities, a reasonable mileage in addition, and say $100 for each additional 1,000 of population, up to $15,000 or $30,000. If such were the case a health officer would have some incentive and be under obligation to look after his duties. He would feel that if he enforced a proper observance of the laws upon his clientele he had the backing of the authorities, and a loss of patronage would be made up by a fair remuneration for his services.

As the law exists at the present time it is the old story of "No pay, no work." The public and the public purse are the sufferers.

At the last session of the Legislature there was a bill introduced by the Member for Guelph (Mr. Downey), for the establishment of County Boards of Health, to deal especially with tuberculosis. The Provincial Board had discussed the bill and approved of it, and it was sent to the Legislature so that it might be discussed thoroughly and amended if thought desirable.

Briefly, it was designed to establish County Boards of Health, to consist of the Warden, the County Clerk, who would act as Secretary, and one member sent from each Local Board of the different municipalities.

Under the provision of the bill, power is given to notify cases of tuberculosis, to isolate as may seem desirable, to have the sputum examined, a record kept, to build sanitoria, etc. The measure, as one newspaper described it, is an admirable one and would be easily workable. Unfortunately it did not receive the attention and discussion it merited, and from the remarks made by some of the members, it was evident they had either not read it or, if so, had altogether missed its meaning. The scheme is inexpensive, simple, and would seem to be a considerable advance step in the control of a terrible scourge.

Remuneration for the Registration of Births, Deaths and Infectious Diseases and for Attendance upon the Poor.

According to law, a medical practitioner is compelled, under a severe penalty, to supply the Clerk of his municipality, who is the division registrar, with the necessary information regarding vital statistics. He may be, and sometimes is, fined for neglecting to do so. There is no fault to be found with such a law. It is right and proper, but, while the division registrar receives a fee for registration we supply the facts and get nothing for it. Practising lawyers, judges of the various Courts, the Crown Attorney of your County, all receive fees for various legal papers not more important, but we, simply because we have not made our influence felt amongst our lawmakers, do all these things gratis. Do you not think it time for a change? If we fill out a certificate for an insurance company, without which the beneficiary of a deceased person is unable to receive the amount of an insurance policy, do we get anything for so doing? Not a cent! You will not find our legal brethren doing anything so foolish. They are able, under the law, to collect good fees for work of a similar character. One often hears the remark, "There are too many lawyers in Parliament." This may or may not be true, but there are certainly too many doctors both in and out of Parliament who seem to have no interest in the welfare of the greatest profession of them all.

Then in the matter of the treatment of the poor. Our profession is not mercenary. We can never be justly accused of want of charity except to ourselves. The public seem to think that the fact of one's being a doctor implies that he is rich. When I was a boy I thought something similar. The illusion has vanished.

How frequently do you see the poor family or families whom you have attended gratuitously year after year, supported by the municipality, in every necessity except the doctor's attendance and medicines? The butcher, baker and other tradesmen present their bills to the Council of your town, and are paid. If you have tried to collect yours in a similar manner, have you ever remarked the scorn with which it was thrown out?

It is sincerely to be hoped that you may be able to initiate some plan whereby the injustice from which our profession suffers in these respects may be remedied, and that we shall

be placed upon a proper equality with other citizens. We have been content in the past to receive for our services almost what the public cares to give us and at such time as it pleases them. A little more infusion of business principles in dealing with people is a great necessity amongst us.

Compulsory Vaccination.

Vaccination in the Province of Ontario is nominally compulsory. The law says:—

Every child born within the province shall, within three months after birth, be vaccinated either by a qualified medical practitioner or by the person appointed by the municipal council for that purose.

Every child over the age of three months becoming a resident in the province is required to be vaccinated.

The certificate of vaccination cannot legally be given until the eighth day after vaccination has been performed.

If in the opinion of a medical practitioner, a child is found unfit for vaccination, a certificate to that effect remains in force for only two months. In any case the child must be presented every two months to permit of renewal of certificate, otherwise the child must be vaccinated.

Re-vaccination within seven years may be required, when deemed necessary, from students in attendance at high schools, collegiate institutes, colleges and universities.

Re-vaccination within seven years may, under certain conditions, be made compulsory in any particular municipality or throughout the province generally.

Authority is given to the councils of all municipalities to enforce the foregoing provisions of the Act, and upon them necessarily rests the responsibility.

An example of how the Statute is made inoperative is in evidence in the city of Toronto where, last year, the enlightened (?) Board of Education repealed the law in respect to vaccination in the schools. One of the most influential journals in the city thus refers to the matter:

"Vaccination in the Schools.

"It is a reflection on the intelligence of Toronto that vaccination in the schools is not compulsory. There should, at least, be an attempt to repeal the reactionary resolution which the Board of Education adopted a year ago. We may admire the zeal and respect the motives of the anti-vaccinationists, but

there is too much at stake for us to submit tamely to their authority. There is danger that if we persist in the policy of non-vaccination some future epidemic will enter with such deadly effects into our schools, factories and great business establishments that our growth will be retarded, our industrial interests imperilled, and our trade connections broken for a decade."

The city of Montreal had its lesson. There in 1875 there were antivaccination riots, and as a consequence most of its younger population were left without the protection of vaccination. In 1885, smallpox was introduced from Chicago. It landed upon a fertile soil. Three thousand one hundred and sixty-four persons died of the disease; of these, 2,717 were children under ten years of age! While the fearful loss of life was by far the most serious matter, there was, in addition the ruin of the city's trade and the loss of millions of dollars. History has a trick of repeating itself, and who can say that Toronto or any other place, whose rulers are so culpably and wilfully ignorant, may not suffer in a similar manner. The value of vaccination has been so often and thoroughly tested that it seems nothing less than criminal that the existing laws are not strenuously enforced. Fortunately for our people, the epidemics of smallpox which we have had in Ontario for the last five or six years have been of a mild character, and thanks to the vigilance of our health authorities have been vigorously stamped out, but the cost has been considerable. Of the total sum of two hundred and ninety-one thousand dollars ($291,-086.48) spent by the Province for health purposes in the last twenty-five years, $49,270.71 was expended for the control of smallpox, and this but represents a small portion, because the greater portion of the cost has been borne by the various municipalities involved. For example, in my own town, five cases cost in the neighborhood of $800, not to speak of the loss of trade which existed for months. This is but the usual experience of hundreds of places throughout the province. A thorough vaccination and re-vaccination would ere long stamp out the disease if we are to be guided by the experience of other countries which have an efficient compulsory vaccination law. It is not necessary nor is it my purpose to argue the value of vaccination. No man, who has studied the question impartially and examined the evidence can have but one opinion on it. The anti-vaccinationist will neither see nor tell the truth, will neither listen to argument nor be convinced by any evidence, no matter how strong. The only way to deal with such a man

is to let him have smallpox if he wants it. Here the law should step in and prevent him giving the disease to others, including his own children, by enforcing thorough vaccination and re-vaccination. We, as medical men, as members of this important society, as members of a profession which has done something worth mentioning in the prevention and control of disease, as followers of that immortal man whose discovery has reduced the death rate of smallpox 72 per cent., should make whatever influence lies in us felt in the matter of the protection of our children and the children of the nation against a preventible scourge. The hope of the future in this respect lies in the enforcement, without regard to sentiment, and in defiance of wilful ignorance of the law regarding compulsory vaccination. Because the death rate in our country has in recent years been small from this disease, even in the presence of a considerable number of cases, we have no security that we may not sooner or later have a deadly form of the affection amongst us. This rising nation has a right to claim from us who are entrusted with their physical welfare the adoption of any and every measure calculated to ensure them, in a land teeming with a multitude of God's blessings, the greatest one, that of good health. If, therefore, lives are lost by reason of smallpox, or personal and municipal losses of a financial character result, through failure to carry out the wise provisions of the Act, the blame and loss rests with those failing to comply therewith.

Protective Organization.

The frequency with which malpractice suits are brought against members of our profession, the fact that they are often without foundation and that such claims are generally made by parties financially irresponsible, are strong arguments in favor of some form of protective organization.

In the present state of affairs any worthless individual may institute an action against one of us, and no matter how innocent we are, no matter how unjust the action, no matter if we win our case, we are saddled with an enormous bill of costs, and because of the usual worthless character, financially, of the plaintiff, we have no redress. One of the advantages of a thorough organization would be to deter such actions, another would be to bring pressure on the government to so amend the law to provide security for costs. The profession in this province has most unjustly the reputation of being so well organized that the Press calls us a "Close Corporation." In this, at

least, the Press is quite misinformed. We are the loosest kind of a corporation. The patent medicine man, the manufacturers and even the Press are pretty well organized, but, alas, for the medical men, they have no real organization at all. It is high time they had, and if they are going to stand any chance in the onslaught against them by Osteopaths, Christian Scientists, and all sorts of fakirs who desire to get into the practice of physic by some easy route, they will need to organize without much delay. At the risk of departing from my subject, I wish to refer to the practice of the Legislature, of giving entrance to the ranks of not only the medical, but to the other professions by Act of Parliament. There have been some flagrant abuses of this matter. We ought to impress the injustice of it upon members of the Legislature with whom we are acquainted, and endeavor to show them that there should be only one road to the ranks of this profession, the one we have all travelled and which is no "Royal road."

There is a feeling of security and strength in organization. It provides a sort of bond amongst us. It causes one to feel that, if attacked, he is not fighting alone, but that he has the moral as well as the financial backing of his professional brethren behind him. No one of us knows the day he may be attacked by an unjust prosecution, therefore it behooves us, one and all, to take such precautions as we deem expedient in view of the evil hour.

At the 1900 meeting of the Canadian Medical Association, the then President, Dr. R. W. Powell, of Ottawa, said in the course of an excellent address:

"It must be understood and published broadcast that our profession is too sacred a thing to allow it to be trampled upon with impunity. Actions for malpractice will surely continue, and if deserved cannot be defended; but unrighteous and unholy suits of this kind must be fought unhesitatingly and unsparingly, and when the public know that they cannot frighten a doctor into paying up hush money, but rather that he will be backed up and supported by his brethren, and their action bring down on their own heads publicity and shame and redound in the long run to the credit of him whom they are trying to disgrace, such actions will be few and far between."

It was, perhaps, a direct result of this address that the Canadian Medical Protective Association was organized at Winnipeg in 1901. It is an association of the right kind.

In 1902 it had 242 members, and last year the membership

had increased to 471. The object of this Association is to protect its members from prosecution where such action appears to the Council and Solicitor as well as the committee in charge to be unjust, harassing or frivolous.

The Association will not defend actions of malpractice if, in the opinion of the Solicitor and Committee, the member is at fault, nor will it pay damages if the verdict is against a member, but if it decides to defend a case it will fight it through all the courts if necessary until a final or correct judgment is obtained. So far the Association has been singularly fortunate. A number of actions have been defended. The majority of them have either been withdrawn or collapsed, and those cases which have gone to trial have been contested successfully in every instance.

The fee of $3 is very small, considering what an advantage it may be to have the assistance of such an Association. At the last report there remained a substantial surplus.

This Association merits the co-operation of every medical man in Canada. Instead of four hundred and seventy-one members there should be three or four thousand. In unity lies strength, therefore let us unite.

It has been suggested to me that if the various medical councils throughout Canada would charge a larger fee and then give their resident members a certificate of membership in such an Association, they would be doing a great good to the profession. It is a matter of regret that the medical council of this Province has not always been as popular as it should be with the profession, but some such action might increase their popularity and usefulness. There may be some difficulties about it, but they should not be insurmountable.

I hope, sir, that the members of the Medical Association present will freely discuss the topics briefly touched. I feel that they are all most important and, while my ideas are crude, they are not regarded by the speaker as anything more than to awaken the thoughts of the members of this Association and evolve their opinions.

Discussion.

Dr. Hall (Chatham).—I venture to say that we have all listened with great interest to the splendid paper just read by my colleague of the Provincial Board of Health, Dr. McCullough.

Any one of the four subjects dealt with would furnish a

topic sufficient to occupy the full time allotted to Dr. McCullough, and I congratulate him on having dealt with and presented the four so concisely and so fully in the time allotted him.

It is my intention to confine my remarks to the first subject presented by him, viz., the need of County Officers of Health. Is there any real need or necessity for a change in our present methods, our present Health Act and regulations? Dr. McCullough has expressed the opinion that there is, and has fortified his opinion by many strong arguments.

Scientific and connected health work is practically the growth of only half a century. The present Health Act was brought in force in 1884, the year I first received my appointment as Medical Health Officer for the city of Chatham, and I have filled the position continuously since that date. When the Act was passed health work was in its infancy. The Province of Ontario, by its passage, showed that she was not behind any other province, state, or country. It was a good Act, and was fully abreast of the times, of public opinion and scientific knowledge; but times have changed, we are living in the 20th century—scientific knowledge has greatly advanced. Tuberculosis has been added to the list of contagious diseases—consumption, the white plague, which destroys more lives in Ontario than all other contagions put together. The list of contagious diseases has been widened and is still widening. Theories about the economic treatment of sewage have been superseded by the septic tank system; diphtheric antitoxin and other serums have been introduced. We are 23 years ahead of the Act, and we have had 23 years to study out its defects, and we believe one of its defects is the appointment of Medical Officers of Health in rural municipalities. Let me state concisely some of the reasons which occur to me:

1. In many cases Medical Health Officers are not appointed at all. There are 745 organized municipalities, including the territorial districts; in 1898, only 479 of these had Medical Health Officers appointed; 568 had Local Boards of Health appointed; 30 per cent. of the Medical Health Officers received a salary, 60 per cent. were paid for specific work done, and 2 per cent. were not paid at all; 266 municipalities had no Medical Health Officer.

2. In no municipality in Ontario, except a few cities, is the salary large enough for a Medical Health Officer to devote any time or attention to the matter. It does not pay him to

prepare himself for the work; and, gentlemen, you all know he is not prepared for it in his ordinary college course.

3. The work the Medical Officer has to do necessarily brings him into conflict with many people, and if he does his duty, he is sure to antagonize and make enemies of the very people whom he wishes to be his friends and patrons, the very people in many cases on whom he has to depend for his livelihood. If this be true, in handling smallpox, diphtheria, scarlet fever, etc., how much more, I leave it to you, will it be if precautions are enforced, as I think they should be, to check the spread of consumption.

To accomplish really effective work, a Medical Health Officer should devote his whole time to it, and should have, in addition to 5 to 10 actual general practices, because it is necessary that a health officer should be an expert in diagnosing contagious diseases. He should have a special training for his special work, a training that can be acquired easily by any medical practitioner. Only a few municipalities in all can afford to pay a sufficient salary to have a man do this, and the work to be done is not sufficient to engage his time exclusively, so the area of his work must be enlarged, whether it be an electoral division, a county, or a group of counties.

The appointment and dismissal of Medical Health Officers should not be in the hands of municipalities or county councillors; they are not judges as to the kind of service rendered and, very often, opposed to carrying on the very work most required to be done. Very often they are not in sympathy with the work.

In our present requirements respecting contagious diseases, too much of the hardship and expense of protecting the public falls on the individual, the victim of the contagious disease.

A man, say from Toronto, contracts smallpox, whilst doing business, say in Aurora. He can't come home. The Medical Health Officer puts him in an isolation hospital, engages a doctor, a nurse, a cook, and heat, light, fuel, etc., keeps the man confined for six or seven weeks, with all the above mentioned expenses going on, to protect the public against him, and if the man is able, the law compels him to foot all their expenses for the public protection; he is only sick for twelve or fourteen days and, as far as he is concerned, could resume business after that time. A few visits from a physician would be quite sufficient, as far as he is concerned, and his wife could come and nurse him. He is compelled, if worth it, to pay out $1,000, say $50 for himself and $950 for the public. Is this right?

The city of Chatham had a considerable number of cases of smallpox last winter, of a very mild type. It was urged on me as Medical Health Officer that on account of the mildness of the cases, and the sore arms from vaccination, and the great expense incurred by isolation, etc., it would be cheaper and better to stop all precautions, and let the rest of the susceptible people take the disease. I said no; admitting it would be better and cheaper for Chatham, the rest of the county must be protected. Let the county do the same, they said. I said no; the matter concerns the whole province—so it does. The individual pays to protect the municipality, the municipality to protect the county, the county to protect the province.

Is it not a fair proposition, that the municipality should pay the individual expense in excess of that for an ordinary illness? Should not the county pay for being protected by the municipality, and should not the government pay for the protetion the province receives? The expense for protecting the public should be fairly apportioned between the province and each of its divisions. The place to stop an epidemic is at the very start, so all the people are vitally concerned in the first outbreak in every instance.

They should provide for the appointment and control of County Health Officers, dismiss them for cause, and also pay a portion at least of their salary. Respecting the Pennsylvania plan of Divisional Health Officers, I am informed that it works out well and is worthy of study and consideration.

A Medical Health Officer should be a competent man. He should be required to keep himself engaged constantly in the work, and the territory allotted to him should be large enough to meet the requirement, whether it be an electoral division, a county or a group of counties.

The Province of Ontario should be fully abreast of the times in all health matters, and can be. The Provincial Board of Health are very anxious that it should be, but they cannot move faster than the public will allow. You gentlemen are the educators of the public in matters sanitary and hygienic, and the health enactments, after they pass through the Legislature, will reflect your precepts and teachings to the public.

DR. OLDRIGHT.—Symposium on the Profession in Relation to the Public. I desire to move a resolution in connection with this subject, and to give a few reasons for it. The resolution is as follows:

That the Committee on Public Health be requested to take

such steps as may best conduce to advance the organization of a system of County Medical Officers of Health.—Carried.

Why should we have County Medical Officers of Health? By having the large field of a county, or, if necessary, of a union of counties, a sufficient salary can and should be given an officer to enable him to devote his whole time to the work, and to be independent in the performance of his duty. The salary voted by the County Council can be supplemented by fees for laboratory work, examining sections, cultures, or for practising physicians and surgeons. The University of Toronto has provided a curriculum leading up to the Diploma of Public Health, but there have been no candidates. Why? There is no encouragement for men to prepare themselves by taking the course. Those who read attentively the columns of the *British Medical Journal*, or who come in contact with English practitioners, must be struck with the greater prominence and greater professional interest existing there in public health work. One reason why matters such as those referred to this afternoon do not receive from the general public the attention they deserve is this: To the medical profession the correct position is so self-evident that they forget that the public need to have them explained and proved to them. Take for example the matter of vaccination in connection with the schools, and the action of the Board of Education of Toronto. Those opposed to vaccination, some of them conscientious but ill-informed, had the room packed with their supporters, whilst the correct view was represented by only one medical practitioner outside of those who were members of the Board of Education. The speaker urged the members of the Association to explain these matters to their representatives in parliament, and other representative persons, and to press them upon their attention. Such persons are desirous of understanding these matters rightly, and many of them are desirous of acting rightly on them, but they require to be informed and convinced regarding them.

Dr. Harrison (Selkirk) —Made a few remarks as to the necessity not only on the question of legislation, but of educating the people as to the necessity of educating the people to the necessity of adopting and carrying out the rules of public health. That the great mass of the people are lamentably ignorant of its necessity.

Beverley Milner.—We have heard a great deal concerning the attitude of the public in the matter of compulsory vaccination owing largely to the number of infected arms follow-

ing vaccination, but have overlooked the one great cause of such infections in which we must take our share of the responsibility. If the physician, when vaccinating a patient, be careful to ensure absolute cleanliness, and instruct the patient or parent how to care for the arm, and the necessity for carrying out his instructions, there would be an end to infected arms and, consequently, an end to the foolish talk of the anti-vaccinationist.

ALBERT A. MACDONALD.—Referred at first to the question of remuneration of medical officers of health, saying that their services were and are of inestimable value to the public, and that such services should be paid for in a suitable way, and that the figures named are away below what they should be. With regard to vaccination, one who has gone through epidemics of smallpox has no difficulty in making a diagnosis. Dr. Harrison has put it well when he made the remark that a severe case could be seen, felt, smelled and tasted. I do not believe that one can readily forget the offending nature of the disease. It is not necessary in an enlightened audience such as this to discuss the "efficiency of vaccination," but I would regret very much if the expression of one of the former speakers (a member of the Board of Education of Toronto), should go without notice. I should be sorry to have the opinion go abroad that the Ontario Medical Association is in accord with the opinions expressed by Dr. Hunter. You all know the value of vaccination, and by your applause I take it that you favor it as I do. Dr. Milner did well to call your attention to the harmful effect of carelessness in vaccinating and in subsequent dressing. If you take ordinary care and apply the rules of aseptic surgery to the little operation of vaccination you will never have untoward results.

JOHN HUNTER (Toronto).—I wish to refer to one phase of the writer's paper when he spoke sarcastically of the action of the Board of Education of Toronto, *re* the rejection of the clause insisting upon the vaccination of school children. In regard to the Board, so far as I know, the great majority are in favor of vaccination. The reason why eleven out of the twelve members voted against compulsory vaccination were these: There is a law, on the statues, requiring the vaccination of every child under the age of three months. The members of the Board of Education believe that the Government should enforce this regulation, as at that age the arm of the child could be protected, whereas in children attending school their arms are exposed to all manner of injury from their playmates.

The Government has all the machinery necessary to enforce its regulations, and therefore it should not be thrown on school boards to do police work. Again, the apathy exhibited by the laity towards the value of vaccination is largely due to want of knowledge. Medical men of the city showed no zeal whatever on the subject. Hundreds of anti-vaccinationists attended the Board meeting when the question was under discussion, whereas only one medical man put in an appearance. Hundreds of children were withdrawn from our public schools and sent to private schools, over which there is no state supervision whatever, when compulsory vaccination was in force. Since the repeal of this clause, most of these children have returned to the public school. It is the duty of our profession to educate the people on this question, and when we have done so there will be little need for compulsory vaccination. Parents will have their children vaccinated and re-vaccinated as a matter of safety.

CONGENITAL UMBILICAL HERNIA, WITH REPORT OF A CASE.

By A. E. McColl, M.D., Belleville, Ont.

According to Blake, in the Reference Handbook of Medical Science, hernia is a term used to denote a protrusion of a viscus from a cavity in which it is normally contained.

Congenital umbilical hernia is, therefore, not limited to those cases in which there is implied a pouching of the abdominal wall or cord, forming a sac for the displaced contents, but includes all those cases of congenital protrusion of the abdominal contents, whether inclosed by a sac or not.

Congenital umbilical hernia is a protrusion of more or less of the abdominal viscera, situated at the umbilicus, and present in children at birth.

Cumstan classifies congenital umbilical hernia, according to the time of development, into two classes. First, those that develop in the embryo. Second, those that develop after the formation of the umbilical cord.

In the earlier months of intra-uterine life a great part of the intestinal canal of the embryo lies without the abdominal cavity, and is gradually drawn in as the abdominal walls develop. If

arrest of development of the abdominal walls takes place, then part of the viscera are never enclosed. This is one variety of embryonal hernia.

In this form the viscera may be free in the amniotic fluid, or may be enclosed by a thin membrane, the primary membrane of Rathke. There is no peritoneal covering, as that develops with the abdominal wall.

If these eventrations are large, the children are usually dead at birth, or die shortly after. There is very frequently some other congenital malformation accompanying it, as imperforate anus, etc. Another variety of embryonal hernia is due to the partial persistence of the vitelline or omphalo-enteric duct.

The duct for a time is normally pervious, but finally loses its lumen and becomes a fibrous cord passing from the umbilicus to the ilium. If this duct does not close, then it becomes a diverticulum of the intestine, opening in the ilium, and extending into the cord. It is usually about the size of the gut at the ilium, getting smaller at the blind end in the cord. This variety, from the nature of its formation, is irreducible. Sometimes the duct is closed at the ilium, so that when the cord drops off a blind fistula remains.

Another variety is when a loop of intestine is retained in the cord. At a certain stage of development, according to Mall, a great amount of shifting takes place in the embryo, from the head to the tail, and the liver rapidly enlarges. This forces back some of the intestine into the cavity of the umbilical cord. At a later period, on account of the rapid development of the lower part of the body, the peritoneal cavity becomes larger, and the intestines are drawn back to their place. At this time the omphalo-enteric duct becomes atrophied, stretches out and breaks under tension, and the last loop passes into the abdominal cavity. If the atrophied duct should be short and thick, it holds the last loop in the cord, to which it becomes adherent. This loop may extend quite a distance in the cord, and is also irreducible.

These two varieties are usually small and frequently overlooked. Fatal results have followed an inclusion of this form of hernia in ligature of the cord.

The second class include those hernias which develop in the fetus after the abdomen has closed and the cord is formed, and are called fetal hernias. At this period the intestine is free from the omphalo-enteric cord and the parietal peritoneum is complete. Consequently, in their formation the peritoneum is pushed in front, and a true sac is formed. As this form appears after the

abdominal walls have enclosed the viscera, it really is an acquired hernia, though present at birth. It dissects into the tissues of the cord, which are spread over it and form a second covering which is continuous with the skin. They vary greatly in size and may contain the greater part of the abdominal viscera. The liver, in part, is present in a large proportion of the cases. The contents may be seen through the coverings during the first hour or so after birth, until the outer layer dries out and becomes opaque. The two coverings may be separated in places by Wharton's jelly, or may he quite adherent.

As growth is very rapid during fetal life, a very slight difference in the rate of growth of the viscera to that of the containing wall would soon produce undue abdominal tension and cause a hernia. In nearly all these hernias the abdominal walls are much thinner than usual, as if having been subjected to a gradual process of stretching.

Congenital umbilical hernia is very rare. Lindfors, of Munich, in a record of over twenty thousand births, found one in five thousand cases.

In the cases collected by different observers, the number of boys was much greater than the number of girls.

The diagnosis is, as a rule, easy. The only kinds that present any difficulty are the small ones in the base of the cord.

A number of cases are recorded in which the ligature on the cord has included a hernia which has resulted in either a fecal fistula or death, if a loop was included. They can usually be recognized by bulging at the base of the cord when the child cries, and cannot be made smaller by stripping the cord.

Urinary omphalocele may be distinguished by containing fluid and by its transparency.

With a view to treatment it is important to distinguish the various forms. To distinguish a diverticulum from a loop may be very difficult. If the bulging in the cord is very small it is probably a diverticulum. Rolling the cord between the fingers may aid. The fetal class has two coverings and Wharton's jelly, while the embryonal form of the first class has only a thin membrane, if covered at all.

The prognosis, on account of more active surgical interference, has become very much better than formerly.

Irreducible hernias are usually beyond treatment, except the omphalo-enteric forms, which may be relieved by operation.

In a large proportion of eventrations there is some other defect of development, that adds to the gravity of the case and may be incompatible to life.

The fetal forms, if not too large, afford a very favorable prognosis. Cases of spontaneous cure have been recorded, but they are very few. Macdonald cites 12 cases treated by compress, of which 9 died; 19 by laparotomy, of which only 2 died.

Of cases collected by Safford, 64 were treated by laparotomy and suture, with 65 per cent. recoveries. 1 by simple ligature, recovery; 5 by Olshausen's method, all recovered; 15 cases expectantly, one-half recovered.

Operation should be undertaken without delay, as the coverings very soon dry up and break down. As the patient is so young, every possible care must be used to prevent shock, and the operation should be limited to the shortest time possible.

A number of operative methods have been proposed, but nearly all of them deal with the fetal forms, and will be referred to later. In eventrations or those covered with a thin membrane, the only operation is to incise a piece from the border throughout and close the opening. Lateral incisions may be used to assist in closing the opening.

In the second variety of embryonal hernias, if a small diverticula be present in the cord and the diagnosis is certain, it may be treated by ligature and cautery similar to treating an appendix. If a large diverticulum be present, or a loop of intestine be adherent to the cord, then laparotomy is indicated. If it proved to be a diverticulum, probably the best method of treatment would be resection and closure of the stump with purse-string ligatures. If an adherent loop of intestine be found, then resection and anastomosis is out of the question in so young a patient. I would suggest the following method. Make an incision around the umbilicus, and free the cord and included intestine from the abdominal wall. Remove redundant tissue from the cord. If possible, split the cord between the two parts of the loop and thereby straighten it out, but in any case drop the loop with the cord tissue attached into the abdominal cavity and close the opening. The tissue would absorb and release the loop. In similar cases, that have been treated expectantly, death has not resulted from strangulation, but from peritonitis after the cord has fallen off and left the intestine exposed. Therefore the danger from strangulation would not be great.

In the fetal forms a peritoneal sac is present. They are nearly all reducible if the abdominal cavity can hold them.

Various operations have been suggested, and they may be divided into two classes: first, those in which the peritoneum is not opened; second, those in which the abdomen is opened and the peritoneal sac removed.

Of the extraperitoneal methods, Olshausen's is probably the best known. He made an incision through the skin very close to the edge of the hernial ring, incising all tissues but the peritoneum. This ring of skin, with the outer covering of the hernia, were separated from the peritoneum, working from the circumference to the centre. The hernia, with its peritoneal sac, was then reduced, and the opening closed with sutures that did not include the peritoneum.

Dhorn separated the outer covering from the peritoneum before making the skin incision. Others have removed triangular portions of skin from above and below the hernia, in order to get better approximation.

Of the methods where the peritoneal sac is removed, the variations of technique relate to modes of suture and methods of forming flaps to properly close the abdominal opening, similar to those proposed in umbilical hernias in adults.

In September, 1905, I encountered a large hernia of the fetal type in a male infant weighing about nine pounds. The child was perfect in every other respect. The hernial ring was three and a half inches in diameter. The sac protruded over four inches above the abdominal wall, and was slightly transparent. The cord proper began below and to the left of the apex of the tumor. About one-third of the intestines was in the hernia.

Nine hours after birth, with the assistance of Drs. Gibson and Boyce, I performed the following operation.

I began by attempting to separate the outer covering from the peritoneum. It proved rather difficult to carry out, and was abandoned. The detached part of the outer covering was removed. When the cord was cut the artery retracted, and a ligature had to be applied *en masse*. An incision was then made through the skin one-fourth of an inch from the margin of the ring, completely encircling the hernia. The tissues were divided to the aponeurosis of the oblique muscles.

This ring of skin and tissue was removed with curved scissors. The sutures were introduced, care being taken to include the aponeurosis.

After the sutures were introduced, the hernia was reduced and the abdominal walls brought together. The breathing of the infant immediately became labored. The hernia was then partially released and the anesthetic stopped. Closure was then completed gradually. The usual dressings were applied and the abdominal wound was supported by wide adhesive straps that went completely around the body, crossing in front and extending

to the sides. The wound was examined on the third day, when it was found that the two middle sutures had cut through, leaving an opening about an inch long. The bottom of the opening was covered with granulations and loose white flakes, the remains of the outer membrane.

The opening contracted rapidly and was closed in about ten days. For the first few days drop doses of chlorodyne were given as a sedative. The abdomen was supported by adhesive strapping for about two months. Since then a support has not been necessary, and at present the scar seems as strong as any other part of the abdominal wall.

The child is now over two and a half years old and has not been ill a day. The abdomen is somewhat more prominent than it ought to be, and the walls slightly thinner, but strong.

From this experience I may be permitted to draw the following conclusions:

If, after reduction of a fetal hernia, the edges of a ring can be easily approximated without undue tension, then abdominal section and removal of the peritoneal sac would be the quickest and easiest and most effective method of dealing with it.

If the edges of the ring cannot be approximated easily, then extra-peritoneal methods are more likely to give good results. Even if the opening on the abdominal wall be so large that partial closure only can be effected, still, with the aid of proper abdominal support, cicatricial contraction will soon close the opening.

It is not necessary to take up too much time in attempting to remove the outer membrane, as it will absorb or at least give no trouble if drainage is insured. As the abdominal walls are usually thin and weak, lateral incisions would only increase the general weakness of the abdominal wall. It would be preferable to leave large central openings to heal by granulation than close by the aid of lateral incision.

Flap methods of closure would seldom be feasible, on account of the time necessary for their performance and the difficulty of dissecting the thin abdominal wall.

Discussion.

Dr. Primrose recorded two cases, one of which was that of an infant four days old, weighing 3 1-2 lbs, with a large hernia into the cord. The child exhibited very little vitality. The pulse could not be felt, and the fontanelle was flaccid and showed no pulsation. The hernia was dumb-bell shape and extended from

over the sternum to the symphysis. It was covered by amnion. An incision was made and the contents of the hernia were found adherent to the coverings. The abdominal cavity was too small to receive the hernial contents. The case was considered inoperable, and the child died when 40 hours old.

THE AFTER TREATMENT OF ABDOMINAL SECTIONS.*

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The after treatment of laparotomies has been rendered much easier during the last few years for the following reasons: First, on account of the much better preparation of the patients by the nurses before the operation there is less trouble with the bowels afterwards, because there is less handling of the bowels and consequently less distension. Distension used to be our greatest bugbear, and caused the death of many patients by ptomaine poisoning and pressure of the heart. It was due to temporary paralysis of the bowels resulting from prolonged exposure and handling during the operation. Now the patients, except in cases of grave emergency, come into the hospital at least two, or better still, three days or a week before, during which time by careful diet and rhubarb and soda mixture the coated tongue is cleaned up and the distended bowels are gently and gradually emptied of their decomposing contents. So that when the patient is placed in the Trendelenberg posture, instead of the intestines bursting out at the first incision, there is on the contrary an inrush of air and at once the intestines disappear up under the diaphragm and are seen no more during the rest of the operation, in ordinary cases of ovarian cyst and fibroid tumor. In fact the author has formulated the axiom: It is unlucky to see the intestines and still more so to touch them. Formerly, on the contrary, they were not only being seen and handled during the whole course of a long operation but they were being chilled by the application of towels wrung out of hot water, which soon became an evaporating lotion, so that the patient went off the table with a temperature of 96, in a state of shock.

For the second reason why the after treatment gives us so little anxiety we have to thank the general practitioner, who sends us the patients much earlier, before the intestines have become adher-

*Abstract of paper read before the American Gynecological Society at Washington.

ent to the tumor. Consequently we can do quicker operations with less anesthesia and less hemorrhage. For the the third reason we owe a debt of gratitude to Professor Trendelenburg, of Leipsic, who by inventing his posture has enabled us not only to avoid the intestine but also to prevent hemorrhage and arrest it by seeing and tying every bleeding point in the uterus or broad ligaments.

Fourthly, we have to thank Fowler, of Brooklyn, who by advocating the semi-erect posture after bad cases has converted many of the latter into mild ones. Many cases of pus tubes and appendicitis which would have given the writer great anxiety because of the extensive infection of the peritoneum, gave very little trouble owing to Fowler's position, which permitted large quantities of infected pus to escape through a large perforated tube extending from the abdominal incision down through Douglas' cul de sac and out through the vagina. As much as forty ounces of foul smelling fluid has drained away instead of being carried widely over the peritoneum.

A fifth reason why we have less trouble with the after treatment is that by the use of a thirtieth of strychnine three times a day for a few days before and a week after the operation the paralysis of the bowels is prevented. When there is a temperature, however, the strychnine may be replaced by five grains of quinine three times a day. They are both splendid intestinal tonics.

The Diet.—By gradually restricting the diet before the operation to things which leave little residue, and especially by the avoidance of milk which not only leaves large masses of cheese but also is one of the worst things for fermenting and making gas, the need for severe purging has been done away with. Indeed the writer believes that he has seen several deaths from severe purging with salts in the old days. During the first twenty-four hours nothing is given by the mouth unless there is dry retching in which case a few tumblers of hot water with five soda mint tablets in each are allowed as an alkaline wash to remove the acid secretions of the stomach. During the second day large quantities of hot weak tea or beef tea or weak lemonade may be taken. If the patient cannot retain it and the urine is concentrated, then water must be given by the rectum, as she will suffer from uric acid pains all over her as long as her urine remains very red. The third day she is given large quantities of water gruel; it must be nicely made and flavored with salt, sugar and nutmeg, vanilla or lemon. The fourth day all kinds of farinaceous food, such as many kinds of porridge, rice, sago and tapioca with cream, not milk. The fifth day toast and tea and preserves are added to the above, and at the end of the week she is put on full diet with the exception of meat. With this diet the bowels give very little trouble, a small soapsuds enema every morning being all that is necessary. It brings away a little gas and makes the patient feel more comfortable. As the tongue

is generally coated from the anesthetic and from the morphine we give rhubarb and soda mixture, which relieves the heartburn and acidity as well as acting as a gentle laxative. Morphine is looked upon as a causer of pain as well as a reliever, so that only one quarter is given when the patient wakes up from the anesthetic and another late that night; only rarely does she need a third quarter the second night. The distension pain of morphine is often worse than the pain of the operation. Five grains of assafetida three times a day relieves this pain, while of course morphine increases it.

Thirst gives very little trouble now: First, because the patients are no longer violently purged with salts before the operation; second, because they are urged to drink large quantities of fluids the day before the operation; third, because all arteries are tied before they are cut and hemorrhage during most operations is a thing of the past; fourth, because operations which used to take an hour now take twenty minutes, and as the bowels are no longer exposed there is no need for keeping the operating room at a temperature of 80 or 90, which caused profuse sweating and thirst; Fifth, in the rare cases, in which the operation has lasted more than an hour or much blood has been lost, we replace it by putting a gallon of normal salt solution into the abdomen, or a pint every four hours per rectum, very slowly. If rectum is irritable and will not retain it, five or ten drops of laudanum in starch will quiet it.

Getting up.—Although the patients often feel able to get up a few days after their operation, and could do so with impunity, their wound being closed in most cases with through and through silk worm gut sutures, yet their is little to be gained by their doing so. They were sick women when they came for operation, most of them anemic, and a few weeks in bed near a sunny window would do them good, anyway. Added to the illness which brings them to us there is to be added the anesthetic, the operation, the pain and the morphia; all things which make them more ill. The author has tried getting them up early and has found that at the end of four weeks they were not so well as those who remained in bed four weeks. We have found it advantageous, however, to allow them to sit up in bed frequently during the third week, and to allow them to walk about the hospital and even to go up and down stairs the fourth week. They are also encouraged to move their legs frequently while lying in bed.

Routine.—Some maintain that each case requires a different treatment, but the author claims that it is a great saving of wear and tear on everybody connected with the case to formulate definite rules for the after treatment of laparotomies and to abide by them, allowing the house surgeon or head nurse to vary them a little at their discretion, but also at their peril.

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Selected Article.

A STUDY OF ONE THOUSAND CASES OF ECTOPIC PREGNANCY REPORTED IN THE LITERATURE OF THE PAST TEN YEARS; WITH ESPECIAL REFERENCE TO DIAGNOSIS AND THE REPORT OF CASES OCCURRING IN THE WRITER'S SERVICE.

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The purpose of this paper, as its title implies, is to carefully analyze the symptoms in a large number of cases of ectopic gestation, to the end that the conclusions reached may aid and prompt the practitioner in recognizing and differentiating a condition, the early detection of which frequently saves life and always prevents dangerous and incurable pelvic complications.

In perusing the literature we have certain difficulties to contend with, inasmuch as the history of many cases is incomplete. This unfortunate circumstance is atoned for, in a measure, by the fact that in one series of cases reported special efforts have been made to bring out certain sets of symptoms, while other groups of cases are reported in reference to other combinations of symptoms. By combining this extensive material it is possible to arrive at a fair estimate of the importance, frequency and value of the various symptoms and phenomena through which an ectopic gestation declares itself.

Cases are found in considerable number in which a differential diagnosis prior to operation was practically impossible. The causes of these diagnostic failures are so clearly and efficiently portrayed by the different writers that several paragraphs may profitably be employed to arrange and classify this group of cases with the view of deducing from them certain guides and methods, which may result in a marked reduction in failure to detect this rather frequent condition.

The literature distinguishes sharply between the diagnosis before rupture and the striking symptoms at the time of, or immediately after rupture. With the advent of more accurate

pathological data this difference becomes a little hazy and in many instances disappears altogether.

While it is not the purpose of this paper to deal with either the etiology or pathology of ectopic pregnancy, yet a reference to these subjects will be necessary now and then for the purpose of realizing the comparative value of certain symptomatic data.

The close relationship, as far as symptoms are concerned, which ectopic gestation of necessity bears to normal pregnancy, constitutes one of the principal reasons for its early escape of recognition both by the patient and physician.

The frequent co-existence of ectopic and normal gestation further aids in concealing the abnormal condition, and adding to this the numerous instances in which cardinal symptoms are wanting and other pathological conditions present with somewhat similar physical findings, the subject becomes complicated to a degree that not infrequently defies differentiation.

VARIETIES.—The primary seat of growth and its subsequent location after rupture of the first gestation sac, determine the variety of ectopic pregnancy. Since an impregnated ovum may begin its growth in the ovary or in any portion of the lumen of the tube and uterus, theoretically an unlimited number of varieties is possible.

The number of these varieties, as far as practical recognition is concerned, is reduced to very few by the general distension of the tube, either from growth of the ovum or from repeated hemorrhages and changes which take place after rupture or abortion.

Practically, the literature considers the location of the ovum anywhere between the ampulla and the tubo-uterine junction as belonging to the isthmic variety. The instances in which the ovum develops in the wall of the tube are distinguished from the ordinary isthmic form as tubal interstitial.

The cases reported of this variety show the lumen of the tube to have been intact and not involved in any direct connection with the gestation sac. The isthmic variety, occurring in the lumen of the tube, constitutes by far the bulk of the cases reported—more than ninety per cent. The tubal interstitial variety seems to be very infrequent. (This may be acounted for by imperfect examinations of the specimens removed, it being only in the last few years that this form has been recognized as such at all.) The remaining ten per cent. of cases are consumed by the interstitial form, numbering three per cent., developing in the corunal wall, at the tubo-uterine junction; the ampullary, having their seat in the ampulla of the tube; and the

ovarian variety, in which the ovum develops in the ovarian tissue proper. Of these last-mentioned cases more than a score have been reported with careful microscopic examination, establishing beyond doubt the existence of true ovarian pregnancy.

By rupture or abortion of the tubal variety of gestation, the tubo-abdominal, the abdominal, the tubo-peritoneal or peritoneal forms may occur. A number of these cases has been reported in which the pregnancy continued to term. Evidence exists to prove that early rupture of an ampullary or an ovarian pregnancy gives rise in at least some instances to the so-called tubo-ovarian type. An ovarian pregnancy may rupture directly into the peritoneal cavity and produce the peritoneal type.

It is generally accepted that in order to continue its growth after rupture or abortion the ovum must be expelled with its amniotic sac intact. The term tubo-abdominal is here employed in reference to the class of cases rupturing between the layers of the broad ligament, and which to begin with are of the tubo-intraligamentary type. Continuing their growth, they dissect up the peritoneum, occupy the abdominal cavity, remaining at all times extraperitoneal. This variety is quite distinct from that type which ruptures directly into the peritoneal cavity and continues its growth intraperitoneal. Cases of extraperitoneal gestation in which the tube does not form a part of the sac are styled in their early stage as intraligamentary and later develop into the abdominal form. The peritoneal variety requires no further explanation.

COURSE AND TERMINATION.—The ovum established in some particular location continues its growth and increase in size, until it meets with some of the unfavorable events to which it is subject. From separation of the chorionic villi from the wall to which they are attached, due perhaps to abortive attempts, hemorrhage results, with consequent death of the ovum. This is followed by its complete or partial absorption, in some cases, while in others the production of a mole results. On the other hand, should the ovum continue to live, it may enlarge until the elasticity of its host is overcome and rupture of the sac occurs.

A tubal pregnancy is frequently dislodged from its site of growth by an abortive process, which may be complete or incomplete. An ovarian pregnancy ruptures into the peritoneal cavity. The tubal form ruptures either into the peritoneal cavity or into the intraligamentary space. The tubal interstitial type ruptures into the peritoneum or the lumen of the tube, while the interstitial is propelled either into the peritoneal or the uterine cavity.

The intraligamentary form may undergo secondary peritoneal rupture. A tubal abortion may expel the ovum into the peritoneal or uterine cavity or into the interstitial portion of the tube itself, from which position it may later rupture into the peritoneal cavity.

It is interesting to know that, aside from traumatism and manipulation, rupture of a gestation sac results from two distinct causes or a combination of these; distension from repeated hemorrhages, and the destructive action of the trophoblasts on the wall of the sac. The latter factor probably acounts for some of the painless ruptures.

Investigation of the records of 1,227 cases shows 45 per cent. to have been tubal abortions, and 44 per cent. tubal peritoneal ruptures, with only eleven cases of rupture into the broad ligament and 25 cases unruptured. There was also a number of undetermined cases. Some allowance must be made for incorrect observation, as the later authors report a greater percentage of tubal abortion in their series.

From this it will be seen that tubal abortion is the most frequent occurrence, peritoneal rupture second, and rupture into the broad ligament very infrequent. With a few exceptions rupture or abortion takes place in from two weeks to three months after impregnation, the average time being eight weeks. As a consequence of either rupture or abortion, the patient may succumb to hemorrhage. The blood may become encapsulated, producing an hematocele which, from repeated hemorrhages into its cavity, may undergo secondary rupture into the general peritoneal cavity. Absorption of large accumulations of blood is not uncommon, and this fact has stimulated the expectant method of treatment.

In a certain number of cases of rupture or abortion, the hemorrhage takes place gradually. A plastic wall is created about the hematocele, and a smooth, globular tumor is formed which, when situated at the ostium of the tube, is known as peritubal, and when beyond the osteum, as paratubal hematocele. Rupture and abortion may occur simultaneously and give rise to both varieties of hematocele on the same tube. These tumors are freely movable and have the appearance of cysts. The ovum may pass into the peritoneal cavity and continue to term as an abdominal pregnancy and remain for years as a lithopedion.

SYMPTOMS.—A mass situated within the pelvis or lower abdomen is present in all cases of ectopic pregnancy. This mass may vary in size from that of a uterus at term to that of a

nodule demonstrable only by the microscope. It may correspond, in feel, to an enlarged tube, ovary, or tumor in the uterine horn, which may be freely movable or firmly fixed by adhesions. It may occupy the space between the layers of the broad ligament on either side, or extend completely across the pelvis from one side to the other, surrounding and enveloping the uterus and bladder in a fixed, immovable mass. Its location may be the Douglas cul-de-sac, or it may fill the peritoneal cavity.

In a series of 354 cases the right tube was involved 189 times and the left tube 147 times. A few cases are reported in which both tubes were involved, either simultaneously or consecutively. In a series of 1,000 cases, the ovary was the seat of tumor 20 times and the tubo-uterine junction 32 times, while 11 cases found the tumor between the layers of the broad ligament.

PAIN.—Owing to the incompleteness of the reports of most cases in regard to symptoms and pathologic findings, a percentage computation of the value of pain as a diagnostic aid is not possible. In this part of the work it has been necessary to make use of isolated material here and there in which the relation of symptoms to pathology is carefully recorded. From the studies of the histories of these cases, which unfortunately are few, sharp, agonizing localized pain is to be associated with acute distention of the gestation sac; localized, gnawing, uncomfortable, painful sensations are to be associated with a gradual increase of pressure within the sac, and moderate cramp-like local pains are constantly found in tubal abortion. Severe pain, intermittent or constant, felt in a considerable portion of the pelvis, is usually a forerunner of the rupture of a pelvic hematoma or hematocele.

The advent of rupture relieves the tension in the sac and abolishes the pain associated with it. As a negative argument supporting the association of pain and distention, a number of tubal pregnancies and nearly all of the ovarian variety have ruptured without the phenomenon of pain. The microscopic examination in these cases demonstrates the rupture due to the destructive action of the trophoblasts of the ovum, and not to a sudden or gradual distension to a point of overcoming the elasticity of the gestation sac—a quite significant fact to bear in mind.

Concerning the diffuse general pains in the abdominal and pelvic cavities, it is well known that any growth within the abdomen will at times cause more or less peritoneal irritation. Con-

sistent with this we find more or less general abdominal pain in the majority of cases of ectopic pregnancy. A general abdominal tenderness following the phenomena of rupture and analogous to the pain of a peritonitis, is as a rule associated with free blood in the peritoneal cavity. The palpation of an ectopic mass is always productive of pain, because it increases the pressure within the sac. The irritability of the peritoneum after the escape of blood into its cavity is evidenced by severe pain on the slightest pressure over the abdomen.

A series of 70 cases of tubal abortion suffered cramp-like pains. Six cases of ruptured ovarian pregnancy complained of no pain. A series of 60 cases had more or less marked abdominal pain in 57 of the number. Out of 27 cases, 13 suffered no pain at or immediately preceding rupture. A series of 30 cases of tubal pregnancy complained of more or less pelvic discomfort. One case complained of sharp pelvic pains with a constant gnawing sensation; the operation showed no rupture. Eight cases had sharp localized pain; 4 showed tubal rupture. 2 tubal abortion, and 2 were unruptured. Eleven cases of hematosalpinx had pains varying from cramp-like to just uncomfortable. Four patients had bearing-down pains; of these, 2 were were ruptures and 2 were abortions.

From this array of data, it appears that localized cramp-like pains are fairly constant in cases of tubal abortion and are presumably due to intermittent contractions of the tubal wall and intratubal bleeding, with consequent increase in tension.

The number of tubal and ovarian pregnancies unaccompanied by pain is best explained by the action of the trophoblasts which, eating their way through the wall of the gestation sac, permit rupture without the necessity of a pressure sufficient to overcome the elasticity of the sac.

The investigation of the histories of the ruptured cases shows, in the main, that primary rupture may occur with little or no pain. On the other hand, an hematocele or hematoma of large extent becomes, when distended by a fresh hemorrhage into its mass, the seat of severe and unbearable pains, which disappear when rupture relieves the tension. Acute distension is always productive of a severe localized pain. Slow gradual distension of a gestation sac or hematocele is productive of gradually increasing suffering. This, no doubt, accounts for the statement so often found in the literature that the severity of the pain bears little relation to the gravity of the case. Rupture relieves the tension and consequently abolishes the pain. Blood

in the peritoneal cavity, found after rupture, produces a general diffuesed pain over the abdomen similar in character to that of a beginning peritonitis.

Hemorrhage in connection with ectopic pregnancy is found within the tube, between the layers of the broad ligament, or within the peritoneal cavity, where it may be encapsulated or free. Hemmed in by the layers of the broad ligament, blood rarely accumulates in dangerous amounts. Leaking out slowly into the peritoneal cavity, as from tubal abortion, it sinks into the Douglas cul-de-sac and there becomes encapsulated. Poured out rapidly into the peritoneal cavity, it may exsanguinate the patient.

The site of a peritoneal rupture determines, in some cases at least, the extent of free hemorrhage into the peritoneum—the nearer to the uterus the rupture in the tube occurs, the more copious the flow of blood. When a sufficient amount of blood exists free in the peritoneal cavity its presence may be elicited by the usual signs which a fluid gives when in that location, viz., dulness in the flanks, percussion wave and change of percussion dulness when shifting position. The character of the blood found on opening the peritoneal cavity is of diagnostic value. Fresh hemorrhage and recent clots usually denote primary rupture and should guide the operator to the ovary or tube. Old clots, with little or no fresh hemorrhage, are associated with secondary rupture of an hematocele, hematoma, or hematosalpinx, which materially changes the immediate operative technic. The causes of these phenomena are too apparent to need discussion.

Associated and Concurrent Symptoms.—Age: The age is of no particular diagnostic significance, except, however, that the cases of ectopic pregnancy occur during the child-bearing period. In 280 cases the ages, as reported, varied from 21 to 45 years, the average being around 30 years. In the case of some of these pregnancies going to term, or nearly so, and then remaining indefinitely as lithopedia, there is scarcely a question but that the age limit at which some of these cases might apply for treatment might be set far beyond that of 45 years, *i.e.*, long after the child-bearing period. The age at which this serious malady occurs may be considered as reducing the mortality, inasmuch as in the prime of life these patients are able to withstand the depletion occasioned by hemorrhage, to which at a later or earlier age they might succumb.

Previous Pregnancies: That normal impregnation of the

ovum has occurred previously and may take place after an ectopic gestation, abundant evidence is at hand. Investigation of 280 cases finds 243 to have been normally pregnant from one to eight times, and in only 37 cases were the women pregnant for the first time. A long period of sterility preceding the ectopic gestation is also negatived by the report of patients who had been pregnant from three to two years previously. That normal pregnancy may coexist with the ectopic type is abundantly proven by the report of more than 100 such instances.

Signs and symptoms of pregnancy may all be present, or present only in part, or they may be entirely wanting. From the histories of 223 cases, fifty per cent. show great irregularity in menstruation, both as regards time duration and amount. In some the bleeding was profuse and continuous, in others intermittent, in some described as spotting. Ten per cent. of cases had lost one or more periods, and 25 per cent. had no menstrual irregularity. In a series of 30 cases no decidua was shed in 16 cases, and no irregular uterine hemorrhage occurred in four cases. The uterus was found to be enlarged in the majority of cases. Out of 27 cases eight had marked symptoms of pregnancy and eight showed none whatever. In 60 cases changes in the breasts occurred nineteen times, and decidua was cast off in 11 cases. In a series of 30 cases, 6 had all the symptoms of pregnancy, and 11 had only nausea and vomiting.

Shock, feeble and rapid pulse, have occurred in nearly all cases of profuse hemorrhage into the peritoneal cavity. From the reaction of the peritoneum to the presence of blood, nausea, vomiting and intestinal stasis, with consequent meteorism, are described again and again. Shock and nausea without pulse changes have been found frequently with the occurrence of fresh hemorrhage into a hematosalpinx, hematoma or hematocele. A few cases have been recorded of severe intra-abdominal hemorrhage and slow pulse.

Depending upon the location and size of the gestation sac, the uterus will suffer displacement in various directions, or may become fixed by adhesions to the tumor. The tumor may be located so as to be influenced by change in the volume of bladder and rectal contents, when the acts of micturition and defecation will be associated with pain.

Coitus, for similar reasons, may be accompanied by pain. Coughing, sneezing, laughing or any other act which increases the intra-abdominal pressure, is not infrequently associated with pain at the site of the tumor, for reasons already mentioned.

DIFFERENTIAL DIAGNOSIS.—The authentic report of more than 150 cases of coincident normal and ectopic gestation must be kept well in mind. Retroversion or anteversion of a normally pregnant uterus has, to the writer's knowledge, confused experienced operators and led them to laparotomize the patient. The production of abortion might in these instances have been preferable to a laparotomy. Solid tumors in the pelvis, aside from growing rather slowly as compared to the continuous distension of a gestation sac, are, as a rule, not painful to palpation and give no signs of impending rupture; micturition may be frequent and constipation marked, but the acts of defecation and micturition are not associated with pain.

It is with cystic tumors of the ovary or uterus, hydrosalpinx and hematoma from other causes than ectopic gestation, that the difficulty experienced has been of sufficient magnitude to prevent differentiation, and with these affections a doubt will probably continue to exist until operative interference tells the story. The infectious processes, such as pus tubes, ovarian abscess, cornual abscess, and pelvic cellulitis, have, as a rule, a fairly well marked history of infection before the beginning of the attack, as well as signs and symptoms of infection, such as leucocytosis, rise of temperature, and increased frequency of pulse rate which reach a climax and then subside with the production of inflammatory sequelæ, such as stationary pus sacs and adhesions of the different pelvic contents. Perforative appendicitis with local or general peritonitis has in addition to shock a typical history, severe septic symptoms, and not the pulse changes noted in peritoneal rupture of tubal gestation. The rupture of other abdominal viscera, giving rise to more or less profuse hemorrhage into the peritoneal cavity, is usually preceded by a definite history of disease in connection with the organ involved.

Hemorrhage into malignant growths in the abdomen or pelvis may simulate rupture of an ectopic gestation sac, as may also acute sudden hemorrhage into the intestinal wall. In the former condition a previous tumor with definite characteristics will usually clear up the diagnosis, and in the latter the position which it assumes does not, as a rule, correspond to that of ectopic pregnancy.

Of the five cases occurring in my own service, two were tubal abortions with encapsulated hematocele, one unruptured and two ruptured, all being of the tubal variety. Cases I. and II. were seen in consultation and operated upon within a few hours after examination. A tumor the size of a fist was present in the left

pelvis of both patients. It was tender to touch. Both had been curetted for a supposed abortion. In one the hematocele was intact. The other had half a pint of blood free in the abdominal cavity, and a hole in the lower part of the sac showed where secondary rupture had taken place. A portion of the omentum had forced itself into this aperture and had practically occluded it.

Case III. was a three or four weeks unruptured tubal pregnancy, found accidentally while operating for a large ovarian cyst. The left tube was involved.

Case IV. Primipara, age 17. Had missed two periods, after which she experienced sharp local intermittent pains in the right side of the pelvis, accompanied by some rise in temperature. Examination revealed a tender mass, the size of an orange, occupying the right side of the pelvic cavity. The symptoms subsided, and for two months the patient was free from unpleasant sensations. One evening the intermittent pains reappeared, and became so severe they decided the patient should submit to operation. The tube was found to have been ruptured, and formed part of the wall of the resulting hematocele, which was intact. A small fetus was found in the cavity of the hematocele.

Case V. Primipara, age 29. This patient had been perfectly well, had menstruated regularly and normally. One morning, without any warning, she experienced a severe localized pain in the right side, after which she fainted. Two hours later she regained consciousness and was able to summon aid. Examination at this time revealed a general soreness in the abdomen. Color and pulse good. A bimanual pelvic examination elicited nothing abnormal. During the evening and night following the general abdominal soreness increased. A gradual pallor spread over the patient's face, and medical aid was again summoned in the morning. She was then almost pulseless, her face was blanched, and she appeared to be in collapse. She was at once removed to a hospital and the operation was performed immediately. The peritoneal cavity contained about three or four pints of free blood and some recent clots. The tube was found to have ruptured near the tubo-uterine junction. Chorionic villi were found in the sac within the tube, but the fetus could not be found.

Case VI. M. S., age 31. Had a child ten years ago, and a number of miscarriages since, the last one occurring one year ago. She had menstruated regularly up to six weeks before the

onset of symptoms. She considered herself normally pregnant. One evening a sudden pain was felt in the right side of the pelvis. Examination revealed a tender mass, the size of a large orange, firmly fixed in the pelvis; pulse and temperature normal. The following day, pain had disappeared except some soreness over the abdomen. Operation demonstrated rupture of a tubal gestation and a small quantity of blood in the abdomen. A fetus ten weeks old was found in the peritoneal cavity. The cord and placental tissue were in the tubal sac. The tube was removed and the abdomen closed.—*Am. Jour of Surgery.*

Physician's Library.

Inflammation. An introduction to the study of pathology. By J. GEORGE ADAMI, M.A., M.D., F.R.S., Professor of Pathology, McGill University, Montreal. London: Macmillan & Co., Limited. 1907. Price $1.50 net. Canadian Agents: The Macmillan Company, of Canada, Limited, 27 Richmond Street West, Toronto.

In this rev sed and enlarged reprint of an article in Professor Allbutt's "System of Medicine," the all-important subject of "Inflammation" has been treated by Professor Adami in a masterly, and also in an exhaustive manner.

It is a work which will well repay the careful study any graduate in medicine and surgery may choose to give it, while to the undergraduate in the study of pathology we feel it is indispensible. As Professor Adami points out, the "System of Medicine," edited by Professor Allbutt, may not be within the reach of most students of medicine, but this little work is easily so.

In our yearly contact with students, in the teaching of clinical surgery, it has been our rule to lay great stress on, and devote much time to, the subject of inflammation, realizing as we do the absolute necessity of the student of surgery mastering this subject before entering on the study of the other phases of the science and art of surgery.

The space at our disposal will not permit us to enter into a more detailed analysis of this excellent work; suffice it to say it is thoroughly up-to-date. In chapter XXII., "On the Principles of Treatment," mention is made of some of the newer methods of treatment, *e.g.*, "Bier's method of induced hyperemia," "Mikulicz's of injections to develop the resistance period," and Sir A. E. Wright's method of employing the toxins of specific microbes to stimulate increased resistance to the local growth of these microbes.

Essentials of Obstetrics. By CHARLES JEWETT, M.D., Professor of Obstetrics and Gynecology in the Long Island College Hospital, Brooklyn, N.Y. Third Edition, thoroughly revised. 12mo, 413 pages, with 80 engravings and 5 colored plates. Cloth, $2.25 net. Lea Brothers & Co., Philadelphia and New York, 1907.

We find, on careful examination of this book, that it is admirably adapted to the requirements of particularly the third-year medical student beginning the study of obstetrics. It will also

fill an exceedingly good place in the working library of the final man, especially when "grinding" preparatory to examination. From it may be obtained a concise, compact and practical knowledge of the obstetric art.

Anesthetics and Their Administration. By FREDERIC W. HEWITT. Publishers: The MacMillan Co., The MacMillan Company of Canada, Toronto.

A review of the Third Edition of this work emphasizes the position which the writer has always taken, that one should approach the administration of an anesthetic with a prayer in one's heart rather than the frequent jest, and with the same sense of responsibility as the most conscientious operator goes to his portion of the task.

There is some abridgment of the detail of the earlier volumes amply compensated for by the elaboration of the chapters dealing with "Chloroform Anesthesia" and "Surgical Shock During Anesthesia," and by the addition of those upon "Ethyl Chloride" and "Acid Intoxication, the Result of Chloroform Anesthesia."

The volume as a whole is evidently the work of one who fully appreciates the importance of his undertaking to assist not alone the regular anesthetist, but as well those called much less frequently to induce surgical anesthesia. A full discussion of the various anesthetics, their relative dangers, the sequences, and the apparatus used in their administration, expressed in simple English, well illustrated with diagrams, forms a valuable portion of the work, appealing very directly to the student and the general practitioner.

International Clinics. Publishers: J. B. Lippincott Co., Philadelphia.

The second volume of the 17th series of the "Clinics" is at hand. It is a worthy successor of the sixty-five volumes which have preceded it, and is prepared with the same care both as to external form and internal substance.

To help the practical man of to-day seems to be the aim of each author almost without exception. We can recommend the "Clinics" to those heretofore unacquainted with its value, believing that every volume amply repays the expenditure made in

securing it by the eminently practical suggestions with which it teems.

Thoughtful papers on "The Vaccine Treatment of Infectious Diseases," "The Detection of the Ova of Intestinal Parasites in the Feces," "Local Anesthesia in Major Operations," "Post-Partum Hemorrhage," and "Appendicitis in Pregnancy," also upon "Experimental Cerebro-Spinal Meningitis," are but typical of the character of all the papers of the volume.

The *Interstate Medical Journal* (St. Louis) announces the purchase of the *St. Louis Courier of Medicine,* one of the oldest medical journals in the West, and its consolidation with the *Interstate* on July 1st. The *St. Louis Courier of Medicine* was established in 1879 by an association of prominent St. Louis physicians. It has always commanded a large following throughout the West and South, and held the respect and esteem of the entire profession of this country. This merger removes from the field an old and highly esteemed contemporary, and its consolidation with the *Interstate* adds strength and prestige to that periodical. This is the fourth medical journal that has been purchased and absorbed by the *Interstate* during the past few years.

The fourth American edition of Knopf's International prize essay, "Tuberculosis as a Disease of the Masses, and How to Combat It," is sold for 25c., paper bound; 50c. cloth bound. In quantities correspondingly cheaper. Published by F. P. Flori, 514 East 82nd Street, N.Y. Also for sale, "Charities," 105 East 22nd Street.

The Canadian Medical Protective Association

ORGANIZED AT WINNIPEG, 1901

Under the Auspices of the Canadian Medical Association

THE objects of this Association are to unite the profession of the Dominion for mutual help and protection against unjust, improper or harassing cases of malpractice brought against a member who is not guilty of wrong-doing, and who frequently suffers owing to want of assistance at the right time; and rather than submit to exposure in the courts, and thus gain unenviable notoriety, he is forced to endure black-mailing.

The Association affords a ready channel where even those who feel that they are perfectly safe (which no one is) can for a small fee enroll themselves and so assist a professional brother in distress.

Experience has abundantly shown how useful the Association has been since its organization.

The Association has not lost a single case that it has agreed to defend.

The annual fee is only $3.00 at present, payable in January of each year.

The Association expects and hopes for the united support of the profession.

We have a bright and useful future if the profession will unite and join our ranks.

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COMMENT FROM MONTH TO MONTH.

Psychiatrics in Ontario is making some progress. By the departure for Germany and England, at the instance of the Government, of Dr. Clark, Superintendent of the Toronto Provincial Hospital, and Dr. Ryan, occupying a similar position for the Rockwood institution at Kingston, to study modern methods and make observations abroad, an important advance has been made. When they return, primed with all that is needful to place psychiatry in Ontario in the very front rank, it is to be hoped that the first step forward will be the divorcing of politics and psychiatrics. Superintendents should have a large share in the selection of their assistants; and before an appointment be made they should at least have the opportunity to advise in the selection. The department having charge of these appointments might exercise a little common decency and remember that there might be others more qualified for superintendents, or even assistants, than one who has busied himself in the ranks of party.

Doctors of Refraction, travelling about the country, in touch with the medical profession, fully qualified M.D.'s, is a good suggestion proposed by the *Medical Record*. In country practices, and even in many large towns, not a single man scarcely

in the medical profession, understands the fitting of glasses. Being a somewhat tedious procedure, it would probably make too great inroad on his already busy life. But there is here a large field, and the *Record* particularly points it out to the young graduate. If a young graduate in medicine, fully qualified to test for refraction and fit glasses, were to establish a connection with the medical profession in a dozen towns, and strictly confine himself to that work, and that work alone, he would be a boon to the profession as well as to many people in the country, who perhaps buy their spectacles at the grocery store or have their eyes tested by a druggist, a jeweller, a veterinary, or a peripatetic so-called "doctor of refraction." The medical profession in a dozen towns, where there are no oculists, could well afford to take this matter in hand, and we commend it to county medical societies for their consideration. Perhaps one man might thus confine his work to a county or a group of counties.

Diet as a Therapeutic Measure in Diseases of the Skin is the title of a reprint we have received from Dr. George Henry Fox. Coming from such a good source, a few pointers in the dietary treatment of diseases of the skin will prove profitable. Few practise what they preach in this regard. Dr. Fox advises a careful regulation of the diet in all inflammatory affections of the skin. The majority of patients eat too much; and the excessive indulgence in food, combined with a sedentary life, leads to a large proportion of inflammatory skin diseases. A good plan of treatment in these is to reduce the weight all the way from five to twenty pounds. An excess of nitrogenous food is responsible for many cutaneous affections; such is the relation of psoriasis to a meat diet. In placing a patient upon a diet, select a few nutritious articles of food; then you know what your patient is eating. The avoidance of sweets and starchy foods, now and again, may be all right, but generally it is a colossal fad. Fresh fish has never, to Dr. Fox's knowledge, caused any trouble; and the advice to "avoid fried food" usually amounts to nothing. Everything should be "properly cooked." Even "red meat" is not so bad, and may be a great relief from squab and chicken. The two therapeutic handmaidens of diet are exercise and the cold bath.

Annual Meeting of the Canadian Medical Association.—Arrangements have been completed for the annual meeting of the Canadian Medical Association in Montreal on September 11th, 12th and 13th, 1907. The authorities of McGill Univer-

sity have placed the University Buildings at the disposal of the Local Committee of Arrangements, and it has been decided to hold the general meetings of the Association in Molson Hall, the Medical Section in the lecture-room of the Redpath Museum, and the Surgical and Pathological Sections in the lecture-rooms of the Arts Building.

The President's address, for which the first evening, September 11th, is reserved, will be delivered in the large hall of the Students' Union, and will be followed by a reception to the visiting members of the Association and their friends. The Students' Union is situated on Sherbrooke Street, opposite the University grounds, and is admirably suited for such a function. On the evening of September 12th there will be a smoking concert in the Victoria Rifles Armory. A garden party, golf match, and drives, to fill in the afternoons after the business of the sections has been concluded, have also been planned.

The staffs of the various hospitals have arranged to give clinics in the hospital theatres each morning at 8.30, at which members will have an opportunity of seeing rare and interesting cases in the service of the hospitals.

Local Anesthesia in Operations for Inguinal Hernia.—An article dealing with this subject, and more particularly drawing attention to the adequacy of local anesthesia in such cases, appears in the June number of the *Annals of Surgery*, from the pen of Prof. John A. Bodine, of the New York Polyclinic Medical School.

As pointed out by Prof. Bodine, and also as is well known to most practitioners, a large majority of patients with hernia prefer to endure the truss rather than submit to an operation for radical cure. Undoubtedly one great reason for this is to be found in the almost universal dread of general anesthesia. If, then, some means can be found whereby general narcosis can be dispensed with in this operation, a much larger percentage of patients are likely to seek a radical cure.

In his most interesting paper, Prof. Bodine has based his remarks and conclusions on a series of over four hundred cases operated on by himself for radical cure, with local cocain analgesia. Moreover, since the first operation of this series, he has used no other method of analgesia in these cases.

The method of procedure is, in brief, as follows:

The skin and subcutaneous tissues of the part to be incised are properly infiltrated by a 1-500 warm cocain solution, which

renders the incision of the external oblique aponeurosis painless. The ilio-inguinal nerve is located on reflecting the external oblique aponeurosis, and is cocainized, thus rendering practically the whole area involved non-sensitive. The parts supplied by the ilio-hypogastric and genito-crural are sufficiently narcotized by infiltration. By not cutting below the level of the external ring, all vessels of any moment are avoided. The sac, which, of course, has a different nerve supply, gives rise to little, if any, pain, so long as there is no forcible dragging on it.

The simplicity of this technic will appeal alike to the surgeon and the general practitioner.

Some of the advantages claimed for local analgesia in these cases are:

1. Pain is practically *nil.*

2. The passive condition of the patient renders haste unnecessary, and therefore makes for greater thoroughness.

3. Obviously greater safety to patient than with general narcosis.

4. Age, atheroma, lesions of kidney and heart offer no barrier, as in general narcosis.

5. In strangulated hernia local analgesia may be regarded as almost imperative, since it does away with any additional shock, enables patient to better control vomiting, and gives more time to decide on the circulation in the gut. ("In one instance the gut was wrapped in hot saline cloths for over an hour, until the circulation was established beyond a doubt.")

6. The greatest advantage of this method is perhaps the preservation of the structural integrity of the nerves in this area, thus preventing atrophy and weakening of the very portion of the abdominal wall which aids so much in the permanency of the cure.

Limitations to the use of this method are:

1. Fat is not œdematized by the cocain solution, and consequently there is pain while incising it. "The fat subject can be operated upon under local anesthesia successfully, but not painlessly."

2. Very large, complicated herniæ give rise to pain only when the gut and omentum are dragged upon."

Prof. Bodine remarks: "Certain advantages are inherently associated with local analgesia. It imposes upon the surgeon respect for tissues, gentleness of manipulation amounting to daintiness. Blunt dissection, tearing or rubbing the sac from the cord with gauze pads is impossible. The number of times the wound

is swabbed is economized, and all this is as it should be for the welfare of the wound."

He sums up his conclusion as follows: "Local analgesia is entirely adequate for the radical cure of inguinal hernia."

Canadian Medical Association—Transportation Rates, Montreal meeting 11th to 14th September, 1907.—The Standard Convention Certificate plan will prevail for this meeting; and all delegates, when purchasing first-class single transportation to Montreal for themselves, their wives or daughters (no others), must get from the ticket agent at the same time a Standard Convention Certificate, which, when vised at Montreal, will entitle holders to return free if three hundred are present holding these; one-third if fifty or over. Every one should, therefore, endeavor to make one of these three hundred, so as to provide for free return transportation.

British Columbia points.—The Canadian Pacific Railway will apply rate of single fare on certificate plan to Montreal and return, tickets to be sold and certificates issued on Sept. 1st and 2nd, and validated certificates honored for tickets for the return journey up to and including October 9th. Tickets good for continuous passage only in each direction.

Manitoba, Saskatchewan and Alberta.—On Canadian Pacific and Canadian Northern, tickets to be on sale 5th, 6th, 7th and 8th Sept. west of Port Arthur, and to be honored at Montreal up to and including the 11th of October. If Lake Route used in one direction, $4.25; both directions, $8.50 extra.

Ontario, East of Port Arthur, and Quebec, and Maritime Provinces.—Tickets for sale on the 7th and 8th Sept.; final purchase at Montreal, Sept. 18th. Passengers going rail and returning R. & O. Navigation Co., or *vice versa,* rate to be one and one-half fare—Toronto or Kingston to Montreal. Tickets will also be honored via R. & O. Navigation Co. on presentation of rail excursion tickets to the ticket agent at Toronto, or to the purser on board steamer, and payment of the following arbitraries, viz., $6.65 Toronto to Montreal; $3.50 Kingston to Montreal.

The General Secretary will issue his annual circular of information to members early in August.

Between Port Arthur and Halifax, the C. P. R., G. T. R., C. N. R., Intercolonial and R. & O. Navigation Co. are included in the arrangements.

News Items.

DR. T. A. STARKEY, McGill University, has gone to Europe.

DR. JOHN H. CONKLIN has purchased Dr. Little's practice at Alexander, Man.

DR. MARTIN, Dundalk, has gone to England to take a course in a London hospital.

THE Supreme Court of Canada has declared the Medical Act of Alberta *ultra vires*.

DR. W. H. B. AIKINS, Toronto, has returned from an extensive tour of Europe.

DR. JOHN CHISHOLM has located at Prince Albert and is building up a fine practice.

SEVENTY-FOUR were successful in the final medical examinations at McGill University.

Hon. Dr. J. S. Helmcken, Victoria, B.C., has recently celebrated his 82nd birthday.

DR. W. H. PEPLER, Toronto, has returned to his practice after several months' graduate work in New York hospitals.

DR. J. D. LAFFERTY, Calgary, Alberta, has resigned from the Alberta Medical Council to become Registrar of the College.

DR. T. CHISHOLM, East Huron's energetic representative in the Commons, returned last week from a trip west as far as Prince Albert.

DR. HARRY J. WATSON, Winnipeg, who recently underwent a serious operation in Toronto, has completely recovered and returned to his practice.

CANADIAN Medical Association.—Three hundred delegates are required to attend the annual meeting in Montreal, from Sept. 11th to 14th.

DR. GEO. E. SELDON, formerly of Ingersoll, house physician, has been appointed senior house surgeon to the Salford Royal Hospital, Manchester, England.

HON. DR. R. A. PYNE has resigned from the Registrarship of the Ontario College of Physicians and Surgeons, and has been succeeded by Dr. Jno. L. Bray, LL.D., Chatham, Ont.

DR. J. H. LEEMING, Winnipeg, has gone to Great Britain.

ALEXANDRA Hospital, Montreal, admitted in June 12 diphtheria, 47 measles, 10 scarlet fever, and 7 erysipelas.

THE Ontario Medical Council met this year at Kingston, and elected Dr. W. Spankie president, and Dr. Peter Stuart, Milton, vice-president.

DR. J. L. TODD, a distinguished graduate of McGill, has been appointed Professor of Parasitology, his work to be partly in connection with the development of bacteriology at McGill.

THE Faculty of Medicine of McGill has instituted a new chair in the History of Medicine, and Dr. Andrew McPhail, a distinguished graduate of McGill, has been appointed to be professor of the subject.

STRATFORD friends will be pleased to learn that Dr. Robert D. Forbes, son of Mr. John Forbes, Brunswick Street, has secured the highest surgical degree in England, that of F.R.C.S., he being the first Canadian from the Stratford district to attain that coveted honor.

DR. T. G. RODDICK has resigned his appointment as Professor of Surgery in McGill University, a post which he has held since the death of Dr. Fenwick in 1894; and Profs. James Bell and G. E. Armstrong have been appointed in his place as Professors of Surgery and Clinical Surgery.

MEDICAL STAFF AT MUSKOKA.—Drs. Harry James and J. S. Pritchard have been added to the medical staff of the National Sanitarium Association. The former will be assistant at the Muskoka Cottage Sanitarium, and the latter at the Muskoka Free Hospital for Consumptives. The resident medical staff of the Muskoka institutions now consists of C. D. Parfitt, M.D., M.R.C.S., L.R.C.P.; W. B. Kendall, M.D., C.M., L.R.C.S., L.R.C.P.; J. K. M. Gordon, M.D., and Drs. James and Pritchard.

Publishers' Department

SCOPOLAMINE NOT HYOSCINE!—A Caution.—In the *Archiv fuer Gynaekologie* Steffen gives some interesting details as to the use of scopolamine-morphine by Leopold. The latter has employed this method in three hundred labor cases. His verdict is that the method does not accomplish the desired results, it cannot be regarded as harmless for mother and child, and in private practice the by-effects liable to develop may render medical aid requisite at any moment. When men come to conclusions so opposite as those of Leopold and those reported by Gauss, we, to whom each observer is equally trustworthy and free from bias, can only attribute the diversity to a difference in technic. That this is so may be seen by Gauss' examination of Hocheisen's method. Gauss secured a specimen of the solutions employed by Hocheisen and tried them in ten cases, the results being far worse than those reported by Hocheisen. Every objection raised by Leopold has been examined and disproved by Gauss in his much larger experience. Weakness of the labor pains did not occur, to any material extent, more frequently or more markedly than in cases where this anesthetic was not used, nor were version and forceps required with greater frequency. The vomiting could only have been accidental, since it did not occur in Gauss' cases, excepting when it had commenced before the anesthetic was given. So also as to the perils to the child; Gauss showed that the mortalities of both mother and child were much less than they had been before this anesthetic was employed.

The extract, as presented in *The Journal of the American Medical Association,* gives palpable evidence of anxiety to make out a case against this anesthetic method. Even Gauss is made to rank as an objector to the method, by quoting eight troublesome cases which occurred, out of his one thousand; just as if such things never happened unless scopolamine was employed. To any one who wants the whole truth, and not a garbled *ex parte* statement, we refer to Gauss' statistics as given by Holt, in the May number of *The American Journal of Clinical Medicine.* But even were the account given a fair one, the reader will note that it nevertheless relates to the use of scopolamine, which, as commercially presented, *is not the same thing as the hyoscine used in America.* It is much as if men should insist that, because Germans injure themselves drinking too much beer, we in America should abstain from coffee.