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EDITORIAL.

PROFESSOR OSLER'S ADDRESS IN MEDICINE.

Professor Osler did well to select "The Treatment of Disease" as the subject for his address before the Ontario Medical Association. The views of the profession have undergone many changes upon disease, its etiology and its treatment, during the long centuries that separate us from those when Hippocrates speculated upon the laws that govern health and disease. It was well, therefore, for one of Professor Osler's knowledge of the history of medicine to pass under review some of these changes.

For long centuries the opinion held sway that sickness was "The scourge of God for the sinners of the world." This doctrine is by no means dead, and even to-day we see lingering evidences of it in many of the sayings and beliefs of the people, even among those who boast a good education. The Christian Science of to-day is a coarse and vulgar manifestation of the teaching that all disease is sin, and its cure must come by appeasing an offended deity; but this only by way of a fee paid to the so-called healer by the unfortunate victim of this gross superstition and compound of ignorance and credulity. The doctrine of demonology and witchcraft is far from dead, many there be who bend the knee to some unknown power or mystic force, as do the Indians to the spirit of the great Manitou. And so it is that thousands flock to various shrines. The temple worship of the ancients, the tomb worship of Mahomet, sacred grottoes, and the white lamb's skin nailed to a tree by the Western Indian, are all of a kind, and appeal to the psychic element in man.

The advances of modern medicine has shown how futile it must be to trust to such means in the treatment of cancer, an acute infection, or a dislocated joint. That an appeal to the imagination has a place in medicine, none who are conversant with the laws of psychology will deny. But this is a far different thing to a state of ignorant superstition. Professor Osler puts the case well by showing that the great scourges of the past were due to some infection and the violation of the laws of sanitation. The proper knowledge of disease has pointed the way to its

proper prevention and cure. Further, our advances in morbid anatomy has made it clear that there are many ills for which there is no remedy, nor likely ever to be one. The recognition of this limitation on the work of the healing art will do much to do away with mysticism. The words of warning given by Professor Osler that the art of medicine should not outrun its science are timely indeed. It should not "play the master where the true role is that of the servant."

Due thought is given to the great progress that medicine has made "along the new road in the treatment of diseases due to specific micro-organisms." "But in our pride of progress let us remember cancer and pneumonia." In a few happy touches of his pen he pictures to us the many treatments of pneumonia that have been in vogue in times past. "We still await, but await in hope, the work that will remove the reproach of the mortality bills in this disease."

We commend that portion of Prof. Osler's address dealing with the difficulty of breaking away from the fetters of bygone times, and the evils of polypharmacy. Wise words are uttered regarding a blind faith in such classes of drugs as emetics, expectorants, etc. Reference is made to the words of Dr. Sainsbury that we make too much "of the lesion only and not enough of the function which even a seriously damaged organ may be able to carry on." Yet, another danger is pointed out in that "Each generation attempts to put prematurely into practice theoretical conceptions of disease."

We should be independent. The literature that is poured out in such quantities by many publishing houses and manufacturing chemists indicate marked thralldom to old and preconceived views, and often blindly follows bad precedent. To all this we should be stoutly opposed. While due credit is accorded to some manufacturing chemists who have given new and useful remedies and preparations, as a profession, we should not allow the loud-mouthed pharmacologist to usurp our place and tell us what to do and how to treat our patients. A timely protest is entered against the audacity of many firms in presuming to teach the medical profession how to treat this, that and the other disease. It is not in the nature of things that pharmacists can know these things. They are not at the head of clinics.

We would urge our readers to pay special attention to that portion of his address where he deals with "An influenza-like outbreak of faith-healing which seems to have the public of this continent in its grip." This is an old, old story. If one will read the history of the bygone centuries he will soon learn that man has ever been grasping after the mystic. Just read the story of the Dancing mania and Tarantulism if one wishes to learn to what fearful extent the vagaries of the human mind may run. But coming back to a saner view of things "faith is the

most precious asset in our stock in trade." To this faith in a Buddha, an Aesculapius, a saint, or doctor, certain useless accessories have been added as the shrine, a temple, etc. Along with all this comes in suggestion in its power to make man think less of his ills, and to look with hope for his recovery. But to mental healing there are well defined limitations. Prayers do not set broken bones. When a deputation waited upon Lord Palmerston, then Prime Minister of Britain, asking him to set aside a day of prayer to avert the invasion of cholera, he replied that they go home and set their houses and streets in proper order. Clean up their premises and remove all filth from public places. If the disease then spread he would seriously consider their request for a day of prayer.

Professor Osler's words on the clergy and their attitude towards medicine are timely, indeed. We heartily endorse the statement "The less the clergy have to do with the bodily complaints of neurasthenic and hysterical persons the better for their peace of mind and for the reputation of the cloth." But we could also add that the clergy go far beyond their proper sphere when they give laudatory certificates of the virtues of mixtures the properties of which they know nothing. This is not honest, and a clergyman should be honest and truthful. He should tell of what he knows. It is a terrible thing, indeed, for a clergyman to give testimonials in favor of cures for the drink and drug habits, when the "cures" contain these very ingredients in abundance.

The practical work of teaching the student how to heal disease is well told by Professor Osler. We have often condemned the system—all too common—of crowding lectures upon the student until he has no time to digest what he is told. We are not opposed altogether to the didactic lecture, but so much depends on the lecturer. One man can make a dry bone interesting, while another man could not make any subject interesting. The lecturer who cannot attract his students without the whip of a roll-call, should be placed among the ancient relics in the college museum. In this situation he would be a constant reminder to the medical student of what to avoid.

Now comes a very important subject. Professor Osler refers to it thus: "I wish I could add in the offices of the general practitioners," when speaking of the means of teaching the student his practical knowledge of disease. We have referred to this on former occasions. We contend that it was a misfortune when the custom of studying under a preceptor became a thing of the past. We would like to see some plan evolved by which the student would have to spend one summer with a general practitioner. "The way is long by precept, but brief by example."

THE TUBERCULOSIS' PROBLEM.

Why do we return so often to this subject? The answer is that it is the most important one before the people of this country. It is much more important than the Grand Trunk Pacific Railway, or The Constitution of the New Provinces, or the Georgian Bay Canal, or the Tariff.

In 1901 there died of tuberculosis 18 per 10,000 of the population. The Dominion statistician gives the country's population at present as somewhat over the seven million mark. This means that at present this disease carries off annually about 12,000 of our people. If we put the average age at death of these as about 20 years, and the average yearly earnings in excess of the cost of living at \$100—and this is very moderate—the net loss on each life would be about \$2,500 on the usual expectation of life. This would give a net loss of at least \$30,000,000, gone from the resources of the country each year, by the death of 12,000 people of the average of 20 years.

But to this loss must be added the other losses caused by loss of time, medical attendance, nursing, trips in search of health, etc., plus all the grief and want to many a dependent one.

Can this be stopped? Yes, nearly all of it. Then if so, how? Let us try to answer this question.

1. The first thought would be to erect sanatoria for consumptives all over the country. This is good as far as it can go, but we fear it cannot overtake the work. There are at least four times as many ill each year as die. This would mean about 50,000 sufferers from tuberculosis in Canada. This would call for more sanatorium accommodation than we can ever hope for, even if only the more advanced cases were to be admitted. Suppose that the 12,000 who die each year are ranked as the advanced cases, at an average of 200 patients to each sanatorium, it would call for 60 such institutions, and we think this is away off in the distant future. And then there are left uncared for 35,000 to 40,000 gradually drifting into the advanced stage.

2. If it is impossible to manage the prevention and treatment of consumptives in sanatoria, how should the work be carried on? We must ultimately look to home treatment. As a powerful aid in this work the church should lend her helping hand. In Boston work of this kind is being successfully carried on. A congregation will take charge of a certain number of consumptives, and form these into a class for the study and care of the disease. A doctor acts with the committee. No one is allowed to remain a member of the class who does not obey the rules laid down for the care and treatment of his or her case. In this way a vast amount of education is carried on. This voluntary work is very valuable, but it does not go far enough, and we contend that there should be constant education throughout all the schools and colleges on this subject.

3. But to catch the thief it is necessary first to locate him, and we once more urge upon the governments of the various provinces to lose no time in passing such legislation as will call for the reporting of cases of tuberculosis. We can remember when there was much opposition to the reporting of scarlet fever and diphtheria, but this is now accepted by all as the proper thing to do. It is only a sentimental objection after all. In the United States there is compulsory registration of cases in nearly every large city. When registration becomes recognized as the proper thing to do, then these persons can be furnished with the proper information through the medical health officer or any other way agreed upon; but there must be light upon the subject. Sunlight kills more tubercle bacilli than all the other agencies in the world, and the light of education will prevent more cases than all other means put together.

4. But we must go further than all this. We must act. For the law breaker all civilized countries have been compelled, at great cost, to erect jails and prisons. In like manner, for those who cannot care for themselves the public, either as state or municipality, must step into the breach. No matter what the cost, duty must be done. For the defence of the Empire, we are willing to spend immense sums, and rightly so; but for the safety of the people in the matter of tuberculosis we are stingy enough. We have just pointed out that in deaths alone this disease is costing Canada about \$30,000,000, and perhaps as much more in sickness, and loss of time, and privation to families. It would pay well to spend a few millions to help those who cannot help themselves. *Salus populi suprema lex est.* But this is true prevention as well as amelioration of the unfortunate lot of the poor afflicted ones. On this point hear the words of Professor Adami, of Montreal:

“It must be realized that incurable cases are the most dangerous. They can be rendered harmless when they can be given room apart, when the bed linen can be boiled and sterilized. When these things are not possible, then for the safety of the community the only place for them is in the hospital for incurables. Here, as with the completely indigent early case, I hold that the care of these patients is not a matter for private charity, but devolves upon the state and municipality. The municipality, whether aided by the state or not, is responsible for the care of these, as for all other highly infectious cases.”

If any foreign enemy came into the country and destroyed the lives of 12,000 citizens, and seriously wounded about 40,000 more, we would spend every dollar in the treasury and sacrifice many lives in addition in our efforts to drive from our midst the enemy. In the case of tuberculosis we are engaged in a war against a terrible enemy of the human race, but one where the harder we fight it the more lives we save, and in the end the less money we lose.

THE TREATMENT OF CANCER.

Many have been the methods of treatment proposed and that have led to disappointment. It must be confessed that we have not as yet a cure for this disease. We all know the end to which the Doyen serum, the radium treatment, and the use of the x-rays have come. In some instances of favorable type there may be amelioration—or even a cure—but the goal is far from being reached by any or all of these methods.

In 1907, Dr. de Keating-Hart, of Marseilles, introduced a treatment which has been called fulguration. This method of treatment has been in the lime light of the German and French societies for some time. This method of treatment was urged by men of much influence, but it has completely collapsed. The air is now cleared.

Keating-Hart's method is to remove the tumor as thoroughly as possible and keep as well away from diseased tissue as the conditions will permit of. The field of the operation is then thoroughly sparked with an alternating current of high frequency and tension. This is very painful and the patient must be well under an anaesthetic.

When the fulguration has been about the head, neck, or chest there is much distress in breathing; the pulse becomes very rapid and weak, and the patient very weak. Many deaths have resulted from this state of shock. In cases where they recover from this state the after results do not appear to be any better than those following a carefully performed peace.

Opinion, however, is still divided and there are some of high standing who believe in fulguration. It may be said, however, that it has seen its day. Let this lightning method, as the Germans call it, depart in operation by the knife.

SANITARY WORK IN THE TROPICS.

Dr. W. C. Gorgas, Assistant Surgeon General in the United States Army, read a paper at the recent meeting of the American Medical Association on "The Conquest of the Tropics for the White Race." In speaking on malaria in the canal zone, he pointed out that the mosquito likes fresh, clean water to breed in. There must be plenty of grass and algae to shelter the young mosquito. In addition to this, the mature mosquito will not fly far, and is afraid of the wind, and must have the protection of foliage.

Drainage and the cutting away of the grass and foliage will soon rid a district of the anopheles and the malaria they spread. The following quotation from his address is interesting and encouraging:

"For the white man going to the tropics it is neither difficult nor expensive to protect himself from malaria. All that is necessary is to screen his house well and drain and clear off the brush within a hundred yards of his residence. This is much less expensive than the measures a man has to take in the temperate zones to protect himself from cold.

"The advances in tropical sanitation in the last fifteen years have shown that the white man can live in the tropics with as good health as he can in the temperate zones. This has been demonstrated by both of our military occupations of Cuba, and also by our occupation of Panama. The white man can protect himself against disease in the tropics at no greater expense than he would have to undergo in order to protect himself against cold in the temperate zones. The returns for his labor are many-fold greater in the tropics than in the temperate zones. I think, therefore, that the tendency in the next few centuries will be for the white man to drift to the tropics, and I dare predict that, by the time the year 1909 is as old as is at the present day the Norman Conquest of England, localities in the tropics will be the centers of as powerful and as cultured a white civilization as any that will exist in temperate zones.

"I believe that our work in Cuba and Panama will then be looked on as the earliest demonstration that the white man could flourish in the tropics and as the starting-point of the effective settlement of these regions by the Caucasian. I am inclined to think that at this time the construction of the Panama canal will be known less as a great commercial accomplishment or engineering feat than as the first demonstration of the fact that the white man can flourish in the tropics in spite of those most trying conditions which have in the past rendered it impossible for him to thrive."

The death rate in the Canal Zone under American rule fell from 52 per 1,000 in 1904 to 24 per 1,000 in 1908. The Canal Zone is now about as healthy as an ordinary large city.

MEDICAL EDUCATION IN CANADA.

When one remembers that Canada is yet a young country, it becomes a matter of no small pride that medical education has attained the high standard which it has.

Well nigh a century ago there were present in this country medical men whose faces were steadfastly turned to the future, and whose hearts were true and their courage great. Without means, and armed only with the feeling that the need was urgent, they began to teach medicine. In Montreal about 1826 such a group of medical men was found banded

together to give what instruction they could. In this way was laid the foundation of McGill Medical College.

In the beginning of all the medical colleges of this country the work had to be undertaken as a private venture. The universities had not then come into the country's affairs; and later, when there were universities, they were not disposed to undertake the work of medical education. In Toronto the work of educating the medical student fell to the lot of such men as Rolph, Hadder, Aikins, Wright, and Geikie. Arduous was their task, small was their reward if it be counted in money, but great, indeed, it was, if estimated at its worth in the life of those days in the making of this country.

In Canada the medical colleges are now connected with some of our universities. This is as it ought to be. The trend of opinion all along the line is towards a five years' course. It will not be long ere this will be the legal time limit of training of the medical student in all the provinces. In this respect Canada has just cause to congratulate herself, and has led many of the older countries. But, while the course has lengthened in time, it has also broadened and deepened in character. We do not know any country where the curriculum of study demands more of the student than in Canada.

But we lack one thing. To this subject we have often referred, and shall continue again and again to refer to it until it is secured. We refer to a common national standard of examination and registration. Most of the provinces have already signified their willingness to come under the provisions of the Roddick Bill. We think if the Province of Quebec could agree to the terms of the Roddick Act Dominion Registration would be attained almost at once.

Now that Quebec has adopted a five year course one of the main obstacles has been removed. It is true that in Quebec, the university degree carries the right to practice, but the difficulty of imposing a further examination test could be got over by accepting the university degrees from all the provinces, provided these maintain a high enough standard. This, the Dominion Council could determine. We have not great admiration for that system that is keeping the student running the gauntlet of too many examinations. Plato could be plucked by modern fellows in philosophy, and John Hunter could not pass the Ontario Council examination. Yet Plato is the world's immortal philosopher and John Hunter one of its immortal physiologists, pathologists and surgeons. Give a student a thorough training in scientific and clinical work, exact of him a thorough knowledge of his work as laid down by his university, and when he has secured his degree let him register and begin his life work in any province of this great Dominion. As Osler said a few years ago in his address in Medicine at the Montreal meeting of the Canadian Medical Association: "Let us have done with parochialism!"

THE FLEXNER SERUM IN CEREBRO-SPINAL MENINGITIS.

It may be stated that substantial ground has been captured in the treatment of this terrible disease. This is fortunate from several stand-points. In the first place the death rate is high, and those who recover are often to be commiserated rather than congratulated, because of the serious sequels left in the wake of the disease. In the second place there are good grounds for believing that like some other diseases it is becoming more prevalent.

In every case suspected to be one of cerebro-spinal meningitis, lumbar puncture should be at once performed, and if the fluid is purulent or cloudy, the serum should be injected and not wait for the bacterial examination, which can be secured later. The serum does no harm if used by mistake. All the fluid that will come away readily should be withdrawn. The removal of a large quantity of infected fluid is helpful. A large injection of the serum should be given. Local or general anaesthesia may be required. The serum should be warmed to that of the body. The serum must be injected slowly and under strict antiseptic precautions. A large needle should be used to permit free flow of the fluid and serum. A larger amount of serum may be injected than of spinal fluid removed, but the effects of increased pressure must be carefully watched. If the cerebro-spinal fluid be very thick and purulent and only a small amount will flow out, the canal may be irrigated with sterile saline solution, prior to injecting the serum. When no fluid will flow and the case is advanced there may be adhesions at the base of the brain. In such cases it has been proposed to inject the cerebral ventricles.

At first the doses were too small, about 5 to 10 cc. The initial dose should be at least 30 cc. In severe cases it may be 45 to 50 cc. It has also been found best to give a full dose for three or four successive days rather than wait to see if the first dose is going to do any good. In any severe cases the doses may be given at shorter intervals than 24 hours. The daily dose should be given until the cerebro-spinal fluid is quite clear. The symptoms may then be watched.

The mortality in this disease runs any where from 50 to nearly 100 per cent., usually about 75 per cent. Under the serum treatment the death rate is reduced to about 30 per cent. When the treatment is begun from one to three days of the disease the death rate was 23 per cent; when from four to seven days of the disease, it was 27 per cent.; and when after seven days, it was 39 per cent.

Relapses occur in about five per cent. of the cases, but they are seldom fatal, and yield to treatment. The time of convalescence is materially shortened. Complications and sequelae have been found to be infrequent.

When the patient recovers under this method of treatment, the recovery is usually quite complete.

This seems to be a fair representation of the status of the serum treatment of cerebro-spinal meningitis due to the *meningo-coccus*. It may be said here as in the case of diphtheria, that a mile-stone has been marked.

FLEAS AND THE PLAGUE.

Much original work has been done on the causation of the spread of the plague infection. One of the most recent articles is by Professor Shiga in *The Medical Press and Circular* for 23rd June, 1909.

Professor Shiga has conducted some very careful research work along this line. He has found the pest bacillus in every species of fleas.

His observations in Japan go to show that the rat flea or *pulex cheopis* is an ample means of spreading the infection. The *pulex cheopis* is being introduced at the sea ports, and soon infect the rat.

THE NEW GENERAL HOSPITAL.

The total cost of the new general hospital is steadily going up. When the scheme was first floated before the people it was thought by most people that the cost would be about a million and a quarter. The latest estimate which was given out a short time ago was to the effect that the total cost would be \$2,200,000, or one million more than was first intimated.

There have been some reasons for this. In the first place the site has cost a great deal more than was expected. The property which has been purchased for the site is located in the centre of the city where land values are high. But, in addition to this, the land was covered by houses placed closely together. These houses have very little value, and must be removed, nevertheless, they added very materially to the cost of the site, as the owners attached considerable value to their old homes. The site has cost somewhere about \$650,000.

Then, the estimates for the building have turned out to run at least \$1,200,000, perhaps this could be cut down a little, but it is just as likely to run over this figure.

When the site is secured and the building is up, a large amount of money is still required to make the institution ready for the reception of patients. So that the latest figures given out to the press of \$2,200,000 may not be far wrong.

If we remember aright the funds available for this work were somewhat as follows :

From the Provincial Government	\$250,000 00
From the University of Toronto	50,000 00
From the City of Toronto	200,000 00
From the Medical Staff	50,000 00
From donors about	600,000 00
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Total	\$1,150,000 00

The Hospital Board has made some money out of the rentals on the houses during the past two years. We have heard this put down at about \$50,000. So that the available money would be about \$1,200,000. Some of the amounts subscribed by donors is not yet paid in. On this part of the assets there may be some shrinkage, though not likely much, and may be made good by other donations.

This state of affairs brought the Hospital Board face to face with a difficult problem. Large sums had been paid in for the purpose of erecting a new hospital, and some move onward had to be made; and, yet, it was impossible to go on with such a large deficit staring the Board in the face.

A committee of the Board waited on the mayor with the view of finding out if the city would provide another \$500,000. But this is quite out of the question. The Council has no power to grant money without a vote of the ratepayers. The Act gave the Council power to make the first grant without a vote of the ratepayers, but this could not be repeated. It may be taken as certain that such a by-law would be defeated by a very large majority, as the city has already given \$200,000 to the new general, \$50,000 for a tuberculosis hospital, and \$200,000 in equal portions to St. Michael's, Grace, the Western, and the Home for Incurables. The ratepayers would call an emphatic halt.

In the papers a few days ago we learned that the Hospital Board propose conveying a portion of the northwest corner of the new site, or that portion on College and University streets, as a site for Pathological buildings. The University is to pay \$15,000 a year for forty years for this site, and is to have special concessions made to it regarding the control of the staff. The item of news reads thus :

“In return, the chief professors of medicine and surgery in the university are to be entitled to be heads of one service in medicine, and one in surgery of the hospital out of six, and the heads of the special departments in the hospital are to be filled by the chief professors in corresponding departments in the university.

"Other appointments in the hospital are to be made on the recommendation of a joint committee."

The whole scheme is a very large and heavy one, and reflects much credit on the courage and foresight of those who undertook it. For many years the hospital accommodation in Toronto was very deficient both in quantity and quality. This, however, is being rapidly remedied. The Home for Incurables is erecting a handsome new addition at a cost of upwards of \$50,000. The Toronto Western Hospital is now hard at work on a new and modern pavilion to cost at least \$75,000. St. Michael's Hospital has the funds to go on with a new wing as soon as its plans are completed. Grace Hospital has the funds to erect a new addition to its present building; or, if the union between it and the Western is consummated, to build on the large grounds of the latter institution.

It has been said that the new general hospital is going to cost far too much money for the accommodation which it will furnish. This criticism would be quite proper if it were only intended as a hospital; but it should be borne in mind that it is also for teaching purposes, and, consequently, must have many large lecture rooms, operating theatres, laboratory rooms, etc. This all takes space and costs much money. Until the structure is up, it would be premature to indulge in criticisms regarding the cost. The public may rest assured of this fact, that the Board of Governors have no other object to serve than to do the best they can for the public and the Medical College. The composition of the Board would justify the conclusion that the intentions will be the best and the administrative ability high.

We have not always been able to agree with the policy of the General Hospital, nevertheless, the objects before it are noble and should grow in the sympathy of the people.

DISEASED MEAT.

A few days ago the people of this country were told by Dr. J. G. Rutherford, Veterinary Director General of Canada, that they were consuming a vast amount of diseased meat. Indeed, it hardly required the statement of Dr. Rutherford to make this known. We think most observant people thought as much. If one will only take the trouble to observe the manner of caring for the meat around butcher stores, etc., he will soon become satisfied that the meat foods are not cared for in the most esthetic fashion.

Dr. Rutherford contends that the private slaughter house must be put out of business, and that the slaughter house under municipal control must take its place. As far as possible we concur in this. We have

said that large cities should have farms, and under municipal control supply the people with milk also. The statement is made that "there is official testimony on file at Ottawa to show abuses in Canada which cannot be referred to in print."

It is gratifying to learn that the Federal Government is carrying on a work of education in this matter for a system of proper municipal inspection. Animals should be slaughtered at a public abattoir. The Canadian Government offer a bonus of \$100 to each one of the Canadian Veterinary Surgeons who passed the examination at the end of a special course in Chicago in meat inspection, in addition to the inducement that they would be eligible for appointment to the Canadian meat inspection service. Dr. Rutherford states that worse things are taking place every day in Ottawa, Toronto, and other large Canadian cities than ever took place in Chicago.

There is a marked weakness in the Canadian Act, as Dr. Rutherford and his inspectors cannot interfere with a butcher or packer who does not send his meat outside of his own province for sale. It is only when the meat is shipped to another province or is exported that the inspectors have any power under the Act.

Words of strong condemnation are hurled at what is known as "Slink meat," or meat obtained by the slaughter of calves a few hours to two or three days old. This is most unwholesome food, and is put on the market as "canned chicken" or "jellied veal." So long as this is sold in the province where it is manufactured, the trade goes on without interference under the Act. The Act takes more care over the foreigners than over our own people. If such "chicken" is to be exported it can be inspected.

In seven months of 1908 no less than 121,549 pounds of meat destined for export were condemned. The amount for this year is even greater.

In the biological laboratory of the Experimental Farm there are samples taken from condemned carcasses which show an amazing and startling list of diseases in animals intended for human food. This is by no means as bad as much that is put on the market. Some packers have resisted the efforts made by the inspectors to remedy abuses in these businesses of an unspeakably filthy character. When, however, the department threatened to make the correspondence public these packers yield.

Dr. Rutherford gives some instances of very serious violation of every rule of health acts. Instances where people have slaughtered sick animals and peddled the meat. The Act should be amended so as to permit of provincial as well as interprovincial inspection.

“THE POWERS OF THE MEDICAL COUNCIL.”

Such is the caption under which the *Toronto Globe* writes an editorial in the issue of July 10th. In order that our readers may have the benefit of the *Globe's* exact position we give the full text of the article. Here it is :

“THE POWERS OF THE MEDICAL COUNCIL.”

“If it is expedient in the public interest that the Ontario Medical Council should be empowered to erase from the register of licensed medical practitioners the names of doctors found guilty of ‘nefarious or disgraceful conduct,’ then it must be expedient that it should be empowered to act promptly in those cases brought before it for investigation. It is in the last degree undesirable that unproved or uninvestigated charges of unprofessional or even criminal conduct should be left hanging indefinitely over the heads of practising physicians or surgeons, as may be the case under the present method of procedure.

“The Council meets yearly, and if a charge is made immediately after one meeting an inquiry cannot be ordered until the next one, and another year must then elapse before a report on the case can be made to the Council. To get over this difficulty it was moved at the present Council meeting that the Legislature be asked to amend the law with a view to shortening the interval between the lodging of the information and the final decision of the Council. The remedy proposed was to give the Executive of the Council authority to order an investigation at any time during the interval between two meetings of the Council, and thus make it practicable to have the inquiry completed in time to admit of the Council's giving its decision promptly and finally.

“This proposition was voted down by a large majority, and apparently for no good reason. In the opinion of the Council's solicitor, the by-law at present authorizing the Executive to take action in such cases is *ultra vires*; to amend the Medical Act so as to clothe the Executive with statutory powers would put its authority beyond doubt, but the Council seems afraid to ask for the needed legislation lest a worse thing happen to it. Its fear was well expressed by one member, who spoke of the Legislature as ‘a mine which is apt to explode at our feet.’

“The Council evidently feels that its position is invidious, and therefore weak. It is clothed with authority that may do untold harm if it is not wisely exercised. The manner in which the whole subject has been handled at this meeting is not calculated to strengthen the Council in the general public estimation.”

The *Globe* is quite in error when it states “The remedy proposed was to give the Executive of the Council authority to order an investigation at any time during the interval between two meetings of Council, and thus make it practicable to have an inquiry completed in time to

admit of the Council's giving its decision promptly and finally." The proposed amendment of Dr. Starr went much further than mere investigation. It would insert the words "or the Executive" after the word "Council." By this change the Executive could do any thing the Council could do, and consequently, strike a name off the register after holding an investigation. It would be a very serious matter to put such power into the hands of three members of the Council. For this reason, and a very good one, the Council voted down the proposed change. But the *Globe* contends that "This proposition was voted down by a large majority, and apparently for no good reason." We have given the reason which is unassailably sound.

Then, the *Globe* goes on to state that "the manner in which the whole subject has been handled at this meeting is not calculated to strengthen the Council in the general public estimation." It would look as if there was some one in the *Globe* office who had a sort of standing grievance against the Medical Council, and who took every opportunity to injure the status of a body that has done very much indeed, for the public and the medical profession of Ontario. There is no one "in the general public" that is so exercised about the powers of the executive committee as the *Globe* imagines. It may be a mere myth to get an excuse to hit at the Council.

In our opinion the Council showed great wisdom in not asking to have the Medical Act amended. This does not say for a moment that it is perfect, but there is very great danger that if once opened up far more harm would be done than good. The Medical profession does not advertise, and strenuously opposes those of its members who do so. When any case comes up where a member of the profession advertises in an improper manner the public press espouses his cause as against the Council.

When an attempt was made two or three years ago to secure a law that would restrain dishonest advertising of patent and proprietary medicines, the *Globe* waxed warm on the subject and opposed any Act that would interfere with vested rights and the gain to be made from the researches and discoveries of those who had remedies to place on the market. Just think of research and discovery in a proprietary medicine! Such talk would bring a blush of shame to the cheeks of a fallen angel. The rampant fraud in the advertisements regarding the merits of many of the proprietary medicines is beyond the power of language to tell.

In the *Globe* of 9th of July, 1909, on page 6 will be found an advertisement with the heading "After Suffering Ten Years." At the bottom of the advertisement we find these words: "If you would like special advice about your case write a confidential letter to Mrs. Pinkham, Lynn, Mass. Her advice is free and always helpful." We would invite the

attention of the *Globe* to page 165 of "The Great American Fraud," by Samuel Hopkins Adams, where it will be seen that a certain Lydia E. Pinkham died on 17th May, 1883, or a little over 26 years ago, and was buried in Pine Grove Cemetery, Lynn, Mass. It is quite clear that it must be some other person than the Lydia E. Pinkham who died many years ago who answers the letters of those women who "write confidential letters." Perhaps the *Globe* can tell us who does the answering? We would like to know.

But there is a phase of the Medical Council's work that the public press does not fully appreciate. The Council is not for the purpose of creating a close corporation and making gain for the profession of this province. It is for the purpose of maintaining a high standard of education in the interests of the people, and not for the purpose of keeping down the numbers in the profession after the manner of a trades' union. The Council also does what it can to restrain members of the profession from doing unprofessional acts. This is also in the interest of the people rather than the profession. It would be far more injurious to the people than to the profession were unscrupulous doctors allowed freedom to put forth fraudulent claims to cure. The Council also has limited powers with regard to striking a practitioner's name off the register. Here there is the right to appeal to a judge. The Council's powers are limited, and, such as they are, they might very readily be made less effective by an appeal to the legislature. We know that this body is made up of persons of the most divergent views on matters of this sort. Some are antagonistic to all corporations without reason; others are ignorant of the duties of the Medical Council and will not take the trouble to learn; others have selfish reasons to serve and wish the portals of the profession thrown open.

Perhaps this may be the ultimate solution and then the people must suffer at the hands of the king they have prayed for. It may come to this, and the attitude of the *Globe* is making rapidly towards this unfortunate end.

MEDICAL JOURNALISM IN CANADA.

We give our readers the benefit of the following extract taken from the *Medical Press and Circular* for 2nd June, 1909, on "Medical Journalism in Canada."

"Among the many problems engaging the medical profession in Canada at present, one of the most urgent is that relating to the medical press. The present state of affairs is as follows:—There are nine medical journals published in the country, one in the Maritime Provinces,

three in the Province of Quebec (two of which are in French), four in Ontario, and one in British Columbia. Of these the best known are the *Montreal Medical Journal*, the *Canada Lancet*, the *Canadian Medical and Surgical Journal*, the *Dominion Medical Monthly*, and the *Canadian Practitioner and Review*. It cannot be said that, apart perhaps from the first-named, any of these journals has any serious scientific standing. In fact, they are subscribed to partly on account of the local professional news they contain and partly for more personal reasons. As a consequence the clientèle of each journal is a very confined one, and no single one appeals to a very large circle of readers. Indeed, it is probable that each of the three London weekly medical journals reaches an audience considerably more extensive than any Canadian journal. There is, it will be noticed, no Canadian weekly medical journal in existence. This lack has been keenly felt of late years, and an active body of physicians, prominent among whom is Dr. McPhedran, of Toronto, have made many attempts to remedy it. The most obvious course would seem to establish a journal under the auspices of the Canadian Medical Association, and this body has actually agreed to the proposal.

"There are, however, more difficulties in the way than might at first sight appear. First is the question of support. It is gravely doubted whether a sufficient number of practitioners would subscribe to either the Association or to the journal directly to ensure the financial success of the venture. The distances separating the different parts of Canada are so large that the interests in common between Quebec and Winnipeg, for instance, are very slight, especially as mutual reciprocity between the provinces is so restricted. Therefore, for local medical news each district prefers to rely on its local journal, and for scientific literature on British or American publications. In the next place it is doubtful whether there is enough material to fill such a journal. The great majority of medical men in Canada, even in the large centres, are engaged in general practice, and the number of those who undertake any scientific research or who make original observations is very few. As a result the output of scientific work in medicine is strikingly small, and such as it is is sent to British, or more often to American journals. This state of affairs is, of course, likely to alter as the country gets more settled and developed, but such changes take place slowly. Still, the advent of a weekly Canadian medical journal cannot be long delayed, and it may be expected within a very few years at the longest."

We think Dr. A. McPhail, the editor of *The Montreal Medical Journal* would be the very first to disclaim the puff for his journal coming from the pen of the correspondent of *The Medical Press*. Speaking for THE CANADA LANCET, the oldest medical journal in Canada, we would

say that it has a large circulation throughout Canada, the United States, Mexico, South America, South Africa, East India, Australia, New Zealand, and Great Britain.

As to its scientific merits we leave that for our readers to judge. This thing is certain, we conduct a clean journal and abuse no man nor other journal, we give papers from month to month from the very best of contributors, we give a carefully prepared digest of current medical literature, we review with care all books sent to us, we give a full summary of medical news, and to the best of our ability we give editorial criticisms on medical subjects of interest. We give every month 80 pages of printed matter, selected as above. This is our answer to the *untruthful* attack on Canadian journals so far as THE CANADA LANCET is concerned. We receive many medical journals in exchange, and we do not find that many Canadian articles are published in British and American journals. On the other hand, many British and American articles appear in Canadian journals.

THE CANADIAN MEDICAL ASSOCIATION.

The meeting this year is in Winnipeg, on 23rd, 24th, and 25th of August. The fee is fixed at \$5. Arrangements have been made for good hotel accommodation for visitors. Secure a first-class ticket one way and ask for Standard Convention Certificate. This is signed in Winnipeg and entitles the holder to reduced fare home.

The following are the rates arranged with the G.T.R., the C.P.R., the C. N. R., the I. C. R., the R. and O. N., the N. N. C., the C.N.R., Steamboat Company:—Victoria, \$47.20; Vancouver, \$47.20; Calgary, \$24.80; Strathcona, \$24.80; Rossland, \$38.50; Nelson, \$36.20; Medicine Hat, \$19.85; Regina, \$10.75; Brandon, \$4; Kenoar, \$3.80; Fort William, \$12.60; Port Arthur, \$12.70; Soo, Ont., \$26.05; Windsor, \$26.05; Chatham, \$26.05; London, \$26.05; St. Thomas, \$26.05; Woodstock, \$26.05; Galt, \$26.05; Toronto, \$26.05; Guelph, \$26.05; Hamilton, \$26.05; Peterboro, \$27.95; Ottawa, \$32.60; Montreal, \$36; Kingston, \$30.95; Quebec, \$40; St. John's, N.B., \$44.45; Halifax, \$47.95; Sydney, C.B., \$52.95.

Tickets will be on sale from Halifax to Fort William from August 14 to 21. In British Columbia from August 16 to 19. Final limit of return September 25.

The programme promises to be an excellent one, both as to papers and the social side.

Dr. Blanchard and his committee of arrangements have left nothing undone to make the meeting a great success.

ORIGINAL CONTRIBUTIONS.

THE TREATMENT OF DISEASE.*

By WILLIAM OSLER, M.D., Regius Professor of Medicine, Oxford University.

AS true to-day as when Celsus made the remark—"the dominant view of the nature of disease controls its treatment." As is our pathology so is our practice; what the pathologist thinks to-day the physician does to-morrow. Roughly grouped, there have been three great conceptions of the nature of disease. For long centuries it was believed to be the direct outcome of sin, *flagellum Dei pro peccatis mundi*, to use Cotton Mather's phrase, and the treatment was simple—a readjustment in some way of man's relation with the invisible powers, malign or benign, which had inflicted the scourge. From the thrall of this 'sin and sickness' view man has escaped so far, as no longer, at least in Anglo-Saxon communities, to have a proper saint for each infirmity. Against this strong bias towards the supernatural even the wisdom of Solomon could not prevail; was not the great book of his writing which contained medicine for all manner of diseases and lay open for the people to read as they came into the temple, removed by Hezekiah lest out of confidence in remedies they should neglect their duty in calling and relying upon God? And the modern book of reason, which lies open to all, is read only by a few in the more civilized countries. The vast majority are happy in the child-like faith of the childhood of the world. I am told that annually more people seek help at the shrine of Ste. Anne de Beaupré, in the Province of Quebec, than at all the hospitals of the Dominion of Canada. How touching at Rome to see the simple trust of the poor in some popular Madonna, such as the Madonna del Parté. It lends a glow to the cold and repellant formalism of the churches. In all matters relating to disease credulity remains a permanent fact uninfluenced by civilization or education. From Hippocrates to Hunter the treatment of disease was one long traffic in hypotheses, variants at different periods of the doctrine of the four humours. As dominated by some strong mind in active revolt, it would undergo temporary alteration. The peccant humours were removed by purging, bleeding, or sweating, and until the early years of the 19th century there was very little change in the details of treatment. To a very definite, but entirely erroneous pathology was added a treatment most rational in every respect, had the pathology been correct! The practice of the early part of the last century differed very little from that which prevailed in the days of Sydenham, except perhaps that our grandfathers were, if possible, more ardent believers in the lancet.

In the past fifty years, in the memory, indeed, of some present, our conception of the nature of disease has been revolutionized, and with a

* The Address in Medicine before the Ontario Medical Association, Toronto, June 31st, 1909.

recognition that its ultimate processes, whether produced by external agents or the result of modifications in the normal metabolism, are chemico-physical, we have reached a standpoint from which to approach the problems of prevention and cure in a rational way. Let me indicate briefly the directions in which the new science has transformed the old art. In the first place the discovery of the cause of many of the great scourges has changed not only its whole aspect, but, indeed, we may say the the very outlook of humanity. No longer is our highest aim to cure, but to prevent disease; and in its career of usefulness the profession has never before had a triumph such as we have witnessed in the abolition of many fearful scourges. Great as have been the Listerian victories in surgery they are but guerilla skirmishes, so to speak, in comparison with the Napoleonic campaigns which medicine is waging against the acute infections. These are glorious days for the race. Nothing has been seen like it on this old earth since the destroying angel stayed his hand on the threshing floor of Araunah the Jebusite. For seven years now, Cuba, once a pest house of the tropics, has been free from the scourge which has left an indelible mark in the history of the Englishman, Spaniard and American in the new world. To-day the canal zone of Panama, for years the graveyard of the white man, has a death rate lower than that in any city of the United States. In the Island of Porto Rico, where many thousands have died annually of tropical anæmia, the death rate has been cut in half by the work of Ashford and others. But above all, the problem of life in the tropics for the white man has been solved since malaria may now be prevented by very simple measures. These are some of the recent results of laboratory studies which have placed in our hands a power for good never before wielded by man.

Secondly a fuller knowledge of etiology has led to a return to methods which have for their object not as much the combating of the disease germ or of its products as the rendering of conditions in the body unfavourable for its propagation and action. How fruitful in practical results, for example, have been the new views on tuberculosis! Not that the discovery of the bacillus itself modified immediately our treatment of the disease, but as so often happens, a combination of circumstances was responsible for the happy revolution—the recognition of the wide-spread prevalence of the infection, the great frequency with which healed lesions were found, and the knowledge of the importance of the character of the tissue soil, led to the substitution of the open-air and dietetic treatment for the nauseous mixtures with which our patients were formerly drenched. We scarcely appreciate the radical change which has occurred in our views even within a few years. Contrast a recent work on tuberculosis with one published twenty-five years ago. In the latter the drug treatment takes up the larger share, while in the former it is reduced to a page or two. And it is not only in the acute infections that

the use of the 'non-naturals,' as the old writers called them, had replaced other forms of treatment, but in diet, exercise, massage and hydrotherapy, we are every day finding out the enormous importance of measures which too often have been used with greatest skill by those outside or on the edge of the profession.

Thirdly, the study of morbid anatomy combined with careful clinical observations has taught us to recognise our limitations and to accept the fact that a disease itself may be incurable and that the best we can do is to relieve symptoms and to make the patient comfortable. The relation of the profession to this group, particularly to certain chronic maladies of the nervous system, is a very delicate one. It is a hard matter and really not often necessary (since nature usually does it quietly and in good time) to tell a patient that he is past all hope. As Sir Thomas Browne says: "It is the hardest stone you can throw at a man to tell him that he is at the end of his tether;" and yet, put in the right way to an intelligent man it is not always cruel. Let us remember that we are the teachers not the servants of our patients, and we should be ready to make personal sacrifices in the cause of truth, and of loyalty to the profession. Our inconsistent attitude is, as a rule, the outcome of the circumstances that of the three factors in practice—heart, head, and pocket; to our credit be it said the first named is most potent. How often does the consultant find the attending physician resentful or aggrieved when told the honest truth that there is nothing further to be done for the actual cure of his patient? To accept a great group of maladies, against which we have never had and can scarcely ever hope to have curative measures, makes some men as sensitive as though we were ourselves responsible for their existence. These very cases are 'rocks of offence' to many good fellows whose moral decline dates from the rash promise to cure. We work by wit and not by witchcraft, and while these patients have our tenderest care, and we must do what is best for the relief of their sufferings, we should not bring the art of medicine into disrepute by quack-like promises to heal, or by wire-drawn attempts at cure in what old Burton calls 'continue and inexorable maladies.'

Fourthly, the new studies on the functions of organs and their perversions have led to most astonishing results in the use of the products of metabolism which time out of mind physicians have employed as medicines. The old recipe books are full of directions for the use of parts of animals or of various secretions and excretions. Much of the humbuggery and quackery inside and outside of the profession has been concerned with some of the most unsavory of these materials. The 17th century pharmacopœias were full of them, and in his oration at the Hunterian Society, 1902, Dr. Arthur T. Davies has given an interesting historical sketch for their use in practice. Metabolic therapy represents

one of the greatest triumphs of science. The demonstration of insufficiency of the thyroid gland is a brilliant example of successful experimental inquiry, and as time has passed the good results of treatment in suitable cases have become more and more evident. Before long, no doubt, we shall be able to meet, in the same happy way, the perverted functions which lead to such diseases as exophthalmic goitre, Addison's disease, and acromegaly; and as our knowledge of the pancreatic function and carbo-hydrate metabolism becomes more accurate, we shall probably be able to place the treatment of diabetes on a sure foundation. And it is not only on the organic side that progress has been made. Important discoveries relating to the metabolism of the inorganic constituents, such as those relative to acidosis, have opened a new and most hopeful chapter in scientific medicine.

But the best of human effort is flecked and stained with weakness, and even the casual observer may note dark shadows in the bright picture. Organotherapy illustrates at once one of the great triumphs of science and the very apotheosis of charlatanry. One is almost ashamed to speak in the same breath of the credulousness and cupidity by which even the strong in intellect and the rich in experience have been carried off in a flood of pseudo-science. This has ever been a difficulty in the profession. The art is very apt to outrun or override the science, and play the master where the true role is that of the servant.

And lastly, we have advanced firmly along a new road in the treatment of disease due to specific micro-organisms, with the toxic products of which we are learning to cope successfully. The treatment with anti-toxins and bacterial vaccines, so successfully started, bears out the truth of that keen comment of Celsus—"He will treat the disease properly whom the first origin of the cause has not deceived." We are still far from the goal in some of the most important and fatal infections, but anyone acquainted in even slight measure with the progress of the past ten years cannot but have confidence in the future. Considering that the generation is still active which opened the whole question, we cannot but feel hopeful in spite of disappointments here and failures there. But in our pride of progress let us remember cancer and pneumonia. The history of the latter disease affords a good illustration of the truth of the remark of Celsus with which I began this address. Year by year the lesson of pneumonia is a lesson of humility. For purposes of comparison statistics are not available, but it is not likely that the great masters from Galen to Grisolle lost a larger number of cases than we do. Pneumonia has always been, as to-day, a dreaded and fatal disease. For one thing let us be thankful. We have had the courage to abandon the expectorant mixtures, the depressants, the cardiac sedatives, the blisters, the emetics, the revulsives, the purges, the poultices, and, to a great extent, the

bleedings. Surely our forefathers must have killed some patients by the appalling ferocity of their treatment, or to have stood it the constitutions of those days must have been more robust. We still await, but await in hope, the work that will remove the reproach of the mortality in this disease. I say reproach, because we really feel it, and yet not justly, for who made us responsible for its benign or malignant nature? We can relieve symptoms but we must find the means which will, on the one hand, limit the extension of the process, loosen the exudate, minimize the fluxion, control the alveolar diapedesis, and, on the other hand, diminish the output of the toxins, neutralize those in circulation, or strengthen the opsonic power of the blood. But some one will say—Is this all your science has to tell us? Is this the outcome of decades of good clinical work, of patient study of the disease, of anxious trial in such good faith of so many drugs? Give us back the child-like trust of the fathers in anatomy and in the lancet rather than this cold nihilism. Not at all! Let us accept the truth, however unpleasant it may be, and with the death rate staring us in the face let us not be deceived with vain fancies. Not alone in pneumonia, but in the treatment of certain other diseases do we need a stern, iconoclastic spirit which leads not to nihilism, not the passive skepticism born of despair, but the active skepticism born of a knowledge that recognizes its limitations, and knows full well that only in this attitude of mind can true progress be made. There are those among us who will live to see a true treatment of pneumonia; we are beginning to learn the conditions of its prevalence, it may yet come within the list of preventable diseases, and let us hope that before long we may be able to cope with the products of the pneumococcus itself.

Along these five lines the modern conception of the nature of disease has radically altered our practice. The personal interest which we take in our fellow creatures, is apt to breed a sense of superiority to their failings and we are ready to forget that we ourselves, singularly human, illustrate many of the common weaknesses which we condemn in them. In no way is this more striking than in the careless credulity we display in some matters relating to the treatment of disease. The other day the *Times* had an editorial upon a remark of Bernard Shaw that the cleverest man will believe anything he wishes to believe, in spite of all the facts and text-books in the world. We are at the mercy of our wills much more than our intellect in the formation of beliefs, which we adopt in a lazy, haphazard way without taking much trouble to enquire into their foundation. But I am not going to discuss, were I able, this Shawian philosophy, but it will serve as an introduction to a few remarks on the Nemesis of Faith, which in all ages readily overtakes doctors and the public alike. Without trust, without confidence, without faith in himself, in his tools, in his fellowmen, no man works successfully or hap-

pily. For us, however, it must never be the blind unquestioning trust of the devotee, but the confidence of the inquiring spirit that would prove all things. But it is so much easier to believe than to doubt, for doubt connotes thinking, and the expenditure of energy, and often the disruption of the *status quo*. And then we doctors have always been a simple, trusting folk! Did we not believe Galen implicitly for 1,500 years and Hippocrates for more than 2,000? Now, my first contention is, that we are still too apt to have the placid faith of the simple believer instead of the fighting faith of the aggressive doubter, and this has ever been our besetting sin in the matter of treatment.

In the progress of knowledge each generation has a double labour—to escape from the intellectual thralls of the one from which it has emerged and to forge anew its own fetters. Upon us whose work lay in the last quarter of the 19th century fell the great struggle with that many-headed monster Polypharmacy—not the true polypharmacy which is the skilful combination of remedies, but the giving of many—the practice of at once discharging a heavily loaded prescription at every malady, or at every symptom of it. Much has been done and an extraordinary change has come over the profession, but it has not been a fight to the finish. Many were lukewarm; others found it difficult to speak without giving offence in quarters where on other grounds respect and esteem were due. As an enemy to indiscriminate drugging I have often been branded as a therapeutic nihilist. That I should even venture to speak on the subject calls to mind what Professor Peabody of Harvard remarked about Jacob Bibelow, that “for his professorship of materia medica he had very much the same qualifications that a learned unbeliever might have for a professorship of Christian theology. No other man of his time had so little faith in drugs.” I bore this reproach cheerfully, coming, as I knew it did, from men who did not appreciate the difference between the giving of medicines and the treatment of disease, moreover, it was for the galled jade to wince, ‘my withers were unwrung.’ The heavy hands of the great Arabians grow lighter in each generation. Though dead, Avicenna and Mesue still speak, not only in the Arabic signs which we use, but in the combinations and multiplicity of the constituents of too many of our prescriptions. We are fortunately getting rid of routine practice in the use of drugs. How many of us now prescribe an emetic? And yet that shrewd old man, Nathaniel Chapman, who graced the profession of Philadelphia for so long, used to say “everything else I have written may disappear, but my chapter on emetics will last!” How much less now does habit control our practice in the use of expectorants? The blind faith which some men have in medicines illustrates too often the greatest of all human capacities—the capacity for self-deception. One special advantage of the skeptical attitude of mind is that a

man is never vexed to find that after all he has been in the wrong. It is an old story that a man may practice medicine successfully with a very few drugs. Locke had noticed this, probably in the hands of his friend Sydenham, since he says: "You cannot imagine how far a little observation carefully made by a man not tied up to the four humors would carry a man in the curing of diseases, though very stubborn and dangerous, and that with very little and common things and almost no medicine at all." Boerhaave commented upon this truth in a remark of Sydenham that "a person well skilled in cases seldom needs remedies." The study of the action of drugs, always beset with difficulties, is rapidly passing from the empirical stage and this generation may expect to see the results of studies which have already been most promising. It is very important that our young men should get oriented early in this matter of drug treatment. Our teachers used to send us to the works of Forbes' (*Nature and Art in the Treatment of Diseases*), and to Jacob Bigelow (*Nature and Disease*), for clear views on the subject. A book has been written by Dr. Harrington Sainsbury—the well-known London physician and teacher—(*Principia Therapeutica, Methuen*), which deals with these problems in the same philosophical manner. It opens with a delightful dialogue between the pathologist and the physician. He lays his finger on the weak point of the pure morbid anatomist who thinks of the lesion only and not enough of the function, which even a seriously damaged organ may be able to carry on. The book should be in the hands of every practitioner and senior student. Some of you may have heard of the lecture-room motto of that distinguished pathologist and surgeon, and the first systematic writer on morbid anatomy in the United States, S. D. Gross, who used to say: "Principles, gentlemen, principles! principles!" And it is upon these fundamental aspects that Dr. Sainsbury dwells in his most suggestive work, which I would like to see adopted as a text-book in every medical school in the land.

And we are yet far too credulous and supine in another very important matter. Each generation has its therapeutic vagaries, the outcome, as a rule, of attempts to put prematurely into practice theoretical conceptions of disease. As members of a free profession we are expected to do our own thinking. And yet the literature that comes to us daily indicates a thralldom not less dangerous than the polypharmacy from which we are escaping. I allude to the specious and seductive pamphlets and reports sent out by the pharmaceutical houses, large and small. We owe a deep debt to the modern manufacturing pharmacist who has given us pleasant and potent medicines in the place of the nauseous and weak mixtures; and such firms as Parke, Davis and Company, of the United States, and Burroughs and Wellcome, of England, have been pioneers in the science of pharmacology. But even the best are not guiltless of

exploiting in the profession products of a pseudo-science. Let me specify, three items in which I think the manufacturing pharmacists have gone beyond their limit and are trading on the credulity of the profession to the great detriment of the public. The length to which organotherapy has extended, not so much on this side of the water as on the continent, beyond the legitimate use of certain preparation is a notorious illustration of the ease with which theoretical views place us in a false position. Because thyroid extract cures myxædema and adrenalin has powerful action, it has been taken almost for granted that the extract of every organ is specific against the disease that affect it. This forcing of a scientific position is most hurtful, and I have known an investigator hesitate to publish results lest they should be misapplied in practice. The literature on the subject issued by reputable houses indicates, on the one hand, the pseudo-science upon which a business may be built up, and, on the other, the weak-minded state of the profession on whose credulity these firms trade. Another most reprehensible feature is the laudatory character of literature describing the preparations which they manufacture. Foisted upon an innocent practitioner by a travelling Autolyceus, the preparation is used successfully, say in six cases of amenorrhæa; very soon a report appears in a medical journal, and a few weeks later this report is sent broadcast with the auriferous leaflets of the firm. A day or two before I left England a pamphlet came from X & Co., characterized by brazen therapeutic impudence, and indicating a supreme indifference to anything that could be called intelligence on the part of the recipients. That these firms have the audacity to issue such trash indicates the state of thralldom in which they regard us. And I would protest against the usurpation on the part of these men of our functions as teachers. Why, for example, should Y. & Co. write as if they were directors of large genito-urinary clinics instead of manufacturing pharmacists? It is none of their business what is the best treatment for gonorrhæa—by what possibility could they ever know it, and why should their literature pretend to the combined wisdom of Neisser and Guyon? What right have Z. & Co. to send on a card directions for the treatment of anemia and dyspepsia, about which subjects they know as much as an unborn babe, and, if they stick to their legitimate business, about the same opportunity of getting information! For years the profession has been exploited in this way until the evil has become unwearable and we need as active a crusade against pseudo-science in the profession as has been waged of late against the use of quack medicines by the public. We have been altogether too submissive, and have gradually allowed those who should be our willing helpers to dictate terms and to play the role of masters. Far too large a section of the treatment of disease is to-day controlled by the big manufacturing pharmacists, who have

enslaved us in a plausible pseudo-science. The remedy is obvious—give our students a first hand acquaintance with disease and give them a thorough practical knowledge of the great drugs and we will send out independent, clear-headed, cautious practitioners who will do their own thinking and be no longer at the mercy of a meretricious literature which has sapped our independence.

Having confessed some of our own weaknesses I may with better grace approach the burning question of the day in the matter of treatment. An influenza-like outbreak of faith-healing seems to have the public of this continent in its grip. It is an old story, the oldest, indeed, in our history, and one in which we have a strong hereditary interest, since scientific medicine took its origin in a system of faith-healing beside which all our modern attempts are feeble imitations. Lincoln's favorite poem, beginning, "We think the same thoughts that our fathers have thought" expresses a tendency in the human mind to run in circles. Once or twice in each century the serpent entwining the staff of Æsculapius gets restless, untwists, and in his gambol swallows his tail, and at once in full circle back upon us comes old thought and old practices, which for a time dominate alike doctors and laity. As a profession we took origin in the cult of Æsculapius, the gracious son of Appollo, whose temples, widespread over the Greek and Roman world, were at once magnificent shrines and hospitals, with which in beauty and extent our modern institutions are not to be compared. Amid lovely surroundings, chosen for their salubrity, connected usually with famous springs, they were the sanatoria of the ancient world. The ritual of the cure is well known and has been beautifully described by Pater in *Marius the Epicurean*, Faith in the God, suggestion, the temple sleep and the interpretation of its dream were the important factors. Hygienic and other measures were also used, and in the guild of secular physicians which grew up about the temples scientific medicine took its origin. No cult resisted so long the progress of Christianity, and so imbued were the people with its value that many of the practices of the temple were carried on into the Christian ritual. The temple sleep and the interpretation of its dreams were continued long into the middle ages, and, indeed, have not yet disappeared. The popular healing shrines of the Catholic Church to-day are in some ways the direct descendants of this Æsculapian cult, and the cures and votive offerings at Lourdes and Ste. Anne are in every way analogous to those of Epidaureus.

As I before remarked, credulity in matters relating to disease remains a permanent fact in our history, uninfluenced by education. But let us not be too hard on poor human nature. Even Pericles, most sensible of men, when on his deathbed, allowed the women to put an amulet about his neck. And which one of us brought up from childhood to inveigle the

aid of the saints and to seek their help, which one of us under these circumstances, living to-day in or near Rome, if a dear child were sick unto death, would not send for the Santo Bambino, the Holy Doll of the Church of Ara Coeli? Has it not been working miracles these four hundred years? The votive offerings of gold and of gems from the happy parents cover it completely, and about it are grateful letters from its patients in all parts of the world. No doll so famous, no doll so precious! No wonder it goes upon its ministry of healing in a carriage and pair, and with it two priests as companions. Precious perquisite of the race, as it has been called, with all its dark and terrible record, credulity has perhaps the credit balance on its side in the consolation afforded the pious souls of all ages and of all climes, who have let down anchors of faith into the vast sea of superstition. We drink it in with our mother's milk, and that is indeed an even balanced soul which is without some tincture. We must acknowledge its potency to-day as effective among the most civilized people, the people with whom education is the most widely spread, yet who absorb with wholesale credulity delusions as childish as any that have ever enslaved the mind of man.

Having recently had to look over a large literature on the subject of mental healing, ancient and modern, for the new edition of my textbook, just issued, I have tried to put the matter as succinctly as possible; in all ages and in all climes the prayer of faith has saved a certain number of the sick. The essentials are, first, a strong and hopeful belief in a dominant personality, who has varied naturally in different countries and in different ages. Buddha in India and in Japan, where there are cults to match every recent vagary; Æsculapius in ancient Greece and Rome; our Saviour and a host of Saints in Christian communities; and lastly, an ordinary doctor has served the purpose of common humanity very well. Faith is the most precious asset in our stock in trade. Once lost, how long does a doctor keep his clientèle? Secondly, certain accessories—a shrine, a grotto, a church, a temple, a hospital, a sanitarium—surroundings that will impress favourably the imagination of the patient. Thirdly, suggestion in one of its varied forms—whether the negation of disease and pain, the simple trust in Christ of the peculiar people, or the sweet reasonableness of the psycho-therapist. But there must be the will-to-believe attitude of mind, the mental receptiveness, in a word, the faith which has made bread pills famous in the history of medicine. We must, however, recognize the limitations of mental healing. Potent as is the influence of the mind on the body and many as are the miracle-like cures which may be worked, all are in functional disorders, and we know only too well that now-a-days the prayer of faith neither sets a broken thigh nor checks an epidemic of typhoid fever.

What should be the attitude of the clergy, many of whom have been drawn into the vortex of this movement? I feel it would be very much safer to hand over this problem to us. It is not a burden which we should ask a hard-working, and already overwrought profession to undertake or to share. It might be a different matter if it were really a gift of healing in the apostolic sense, but we know this was associated with other signs and wonders at present conspicuous by their absence. Then, think of the possibilities for self-deception, of the saintly Edward Irving and the gift of tongue, of Monsieur de Paris, the French priest, and the miracles at his tomb, to the truth of which two fine quarto volumes with 'before and after' pictures attest! The less the clergy have to do with the bodily complaints of neurasthenic and hysterical persons the better for their peace of mind and for the reputation of the cloth. As wise old Fuller remarked, Circe and Æsculapius were brother and sister and the wiles of the one are very apt to entrap the wisdom of the other. Already the opportunity for deception of the public has brought out a swarm of sharks and gulls.

It adds immensely to the interest in life to live in the midst of these problems which concern us so closely. We must meet them with an intelligent cheerfulness in the full confidence that the angel of Bethesda never stirred the water without happy results. It is for us to see that the soldiers we are training for the fight against disease, bodily and mental, are well equipped for the battle, and let me briefly, in conclusion, indicate how I believe we should teach the art—the management of patients and the cure of disease. To know how to deal with disease is the final goal to reach which the whole energies of the student should be directed. We all recognize that it is in the out patient departments and in the wards—I wish I could add in the offices of the general practitioners—that he must get this part of his training, not in an elaborate course of lectures on the properties and action of drugs. In the congested curriculum it is by no means easy to find the proper amount of time even for this, the most essential part of his education. But as we learn the futility of the lecture room as an instrument of teaching men the art, so, I think, we shall gradually be able to adapt the courses so that plenty of time may be given to the practical study of the treatment of cases under skilled direction. We should take over to the hospital side of the school the whole subject known in the curriculum as therapeutics. The composition of drugs, the method of their preparation and the study of their physiological action should be taught in practical classes in the pharmaceutical laboratories. In the out patient departments and in the wards much more systematic practical instruction should be given how to treat disease and how to manage patients. If we could only get the students for a sufficiently long period in the hospital, what

helpful courses could be arranged in the senior years! Certain aspects of the subject must be ever kept before the assistants¹ and the students, considered perhaps, by different men associated with the clinic according to the special capacity of each one.

The fundamental law should be ingrained that the starting point of all treatment is in the knowledge of the natural history of disease. Typhoid fever, tuberculosis, pneumonia, and, where possible, malarial, should be used for this important lesson, and in the everyday routine observation of cases the student would learn to know the course of the disease, its obvious features, the complications likely to arise; and he would be taught how to discriminate between the important and the unimportant symptoms of a case. This work should form the very basis of his course in medicine, and it should be accomplished by a *seminar* to take the place of set lectures, in which the features of all the common diseases would be discussed.

The hygienic and dietetic management of patients has now come to be such a prominent part of the work of our hospitals that the student may become acquainted with the open-air treatment, the various modifications of diet suitable to different diseases, and the use of massage, electricity and other physical agents. But too often he is allowed to pick up this information in a haphazard, irregular fashion. One assistant of the clinic should be detailed to see that every member of the class knows, for example, how to arrange the open-air treatment for a tuberculous patient and how to supervise the diet of a diabetic case. The student should prepare personally the various nutritive enemata and be able to give the different kinds of massage, and I would have him thoroughly versed in all branches of hydrotherapy. A serious difficulty is that now-a-days the nurse does a great many things that it is essential the medical student should know how to do—the administration of hypodermics, the giving of a cold pack, etc.

Much more attention should be paid to the important subject of psychotherapy. It is not every teacher who has a special gift for this work, but if the professor himself does not possess it, he should, at any rate, have sense enough to have an assistant familiar with, and interested in the modern methods. How many of our graduates have been shown how to carry out a Weir Mitchell treatment or to treat a patient by suggestion? The student should be taught that the very environment of a well managed clinic is in itself an important factor in psychical treatment. A Philadelphia friend once jokingly defined my practice at the Johns Hopkins Hospital as a mixture of hope and nux vomica, and the grain of truth in this statement lies in the fact that with many hospital

¹ Post-graduate course in medical pedagogy would be most helpful, organized by five or six of the large colleges, and conducted by them in rotation, with teachers selected from the different schools. Many able young fellows take years to acquire methods to which they might be introduced in a six weeks' course.

patients once we gain their confidence and inspire them with hope, the battle is won.

And lastly, from the day the student enters the hospital until graduation he should study under skilled supervision the action of the few great drugs. Which are they? I am not going to give away my list. A story is told that James Jackson when asked which he considered the greatest drug, replied: "Opium, mercury, antimony, and Jesuit's bark, they were those of my teacher, Jacob Holyoke." "Yes," replied his interlocutor, "and they were those of Holyoke's master, James Douglas, in the early part of the 18th century." Mine is a much longer one! The student should follow most carefully the action of those drugs the pharmacology of which he has worked out in the laboratory. He should be sent out from the hospital knowing thoroughly how to administer ether and chloroform. He should know how to handle the various preparations of opium. Each ward should have its little case with the various preparations of the ten or twelve great drugs and when the teachers talk about them he should be able to show the preparations. He should study with special care the action of digitalis on the circulation in cases of heart disease. He should know its literature from Withering to Cushney. I would take it as the typical drug for the study of the history of therapeutics—the popular phase, as illustrated by the old woman who with it cured the principal of Brasenose—the empirical stage introduced by Withering in his splendid contribution—a model of careful clinical work of which every senior student should know; and the last stage, the scientific study of the drug which he will already have made in the pharmacological laboratory. He should day after day personally give syphilitic baby inunctions of mercury; he should give deep injections of calomel and he should learn the history of the drug from Paracelsus to Fournier. He should know everything relating to the iodides and the bromides, and should present definite reports on cases in which he has used them. He must know the use of the important purgatives and he should have a thorough acquaintance with all forms of enemata. He should know cinchona historically, its derivatives chemically, and its action practically. He should study the action of the nitrites with the blood pressure apparatus and he should over and over again have tested for himself the action, or the absence of action, of strychnia, alcohol, and other drugs supposed to have a stimulating action on the heart and blood vessels. While I would, on the one hand, imbue him with the firmest faith in a few drugs, "the friends he has and their adoption tried," on the other hand, I would encourage in him a keenly skeptical attitude towards the pharmacopœia as a whole; ever remembering Benjamin Franklin's shrewd remark that "he is the best doctor who knows the worthlessness of the most medicines." You may well say this is a heavy contract and one

which it is impossible to carry out. Perhaps it is with our present arrangements, but this is the sort of work which the medical student has a right to expect and this is what we shall be able to give him when in his senior years we give up lecturing him to death, and when we stop trying to teach him too many subjects.

THE ULTIMATE ENDS OF SURGERY, WITH SPECIAL REFERENCE TO THE SURGERY OF THE PELVIC ORGANS IN WOMAN.*

By W. P. MANTON, M.D., Detroit, Michigan.

LOOKING backward over the past, knowing the immediate and projecting into the future, it is seen that the aims of true medicine in its inclusive definition have been, are and always must be broadly philanthropic. The story of surgery as traced by the pen of the historian presents a fascinating picture of light and shadow, discouragement and cheer, failure and success, but withal a steady evolution to the accomplishments of the present.

Hippocrates working on fractures; Ambrose Pare tying arteries to save the patient from the "cruelty and inhumanity" of the cautery; Ephraim McDowell braving the violence of the mob to blaze a way to the abdominal unknown; Oliver Wendell Holmes and Semmelweiss, brunting calumny and abuse from fellow workers to prove the dangers of infection; Morton and Simpson, developing means to lighten the sufferings of the surgical patient, and many others perhaps no less conspicuous illustrate the devotion of the healing art to the betterment of the race.

Every surgeon worthy of his calling works along lines to anticipated results—the good of his patient. To save life, to prevent and relieve suffering, to correct deformity and defect, and, ultimately, to restore the individual to health and happiness are undeniably the ends in view.

Such is the "golden rule" which actuates and governs the surgeons' endeavors, and failure brings regret, begetting criticism and distrust of means and methods, while stimulating to renewed attempt through better knowledge and weighed experience.

In the past destruction too often led to unfulfilment of both plans and hopes; and yet the Finders of the Path toiling at disadvantage in new fields and untried ways, did their best according to the knowledge and the science of the day, clearing the way for future possibilities. But the substructure once put down, no one can find excuse for negligence in

taking vantage of the present known, and he who wilfully puts aside the golden flower of opportunity, fails in his chiefest privilege and most sacred obligation.

In a recent contribution the question is asked, "What constitutes a complete surgical cure?" And the answer, immediately following, avers "the psychical, the physiological and the anatomical—any one of which will, if neglected, mean a measure of failure for the operation."

Following the advent of antiseptis it was not strange that radicalism held sway for many years, and that, as DuBoise states, "surgeons did not hesitate to act with a confidence in the efficiency of their weapons that may, perhaps, have been exaggerated." But, however great the harm resulting from unwise aggressiveness, the evils done were counter-balanced by the value of the lessons learned; the knowledge acquired of structure and the tolerance of organs and parts to manipulation, and most important of all, the desire inspired to learn the secret of both normal and diseased.

In the surgery of the pelvic organs of woman in spite of constructive experience and improved technique, results have not always proved those sought for or expected; anatomical cure might be perhaps attained and physiological benefits seem altogether adequate, but the psychic end has often proved disastrous.

To the effects on the nervous system resulting from the precipitation of a premature menopause brought about by ablation of the ovaries was first ascribed the failure of many of these operations, and efforts were put forth to obviate the distressing symptoms.

Schroeder advanced the idea that by removing the diseased portion only of the ovary, leaving behind a remnant of healthy tissue, the untoward manifestations might be wholly prevented, or at least so mitigated as to become endurable. Moreover, some functioning parts of ovary still retained made possible hopes of future pregnancy. The idea was welcome, received universal attention, and in this country was taken up by Polk, the late Palmer Dudley, Burrage, myself and many others with the happiest outcome. From work on the appendages A. Martin essayed conservative operations on the uterus, especially in fibromyomatous conditions, and in this, too, success was equally pronounced.

The nervous theory of cessation symptoms did not, however, prove quite adequate, and later, from laboratory findings, experiments on animals and an exacter study of patients following operation, a more rational explanation was developed and is largely held to-day.

Investigations into the physiology and habits of the thyroid gland opened up new lines of research, prompted a closer scrutiny of the natural history of other glands, and in the end determined that the ovaries produced an unknown stuff related, not only to the symptoms manifested

after oophorectomy, but also to the normal functioning of other organs and the general system.

Born and Fraenkel found that an internal secretion enters the circulation from the ovaries and furnishes the impetus for changes incident to menstruation and pregnancy; but whether this secretion is elaborated by the interstitial cells of the gland or emanates from the corpus luteum has not yet been clearly demonstrated.

Experiments with the Roentgen ray seem to indicate that the functioning portion of the ovary lies in the cortex, for Bonin and others find the interstitial substance of the gland unaffected by such treatment, while the primordial and Graafian follicles atrophy and give rise, not only to a diminution or cessation of the menstrual flow, but also to an atrophy of the entire genital system and the breasts.

Further, following hysterectomy, the ovaries remaining—although Mandl and Burger saw degenerative processes and cystic changes in the ovarian follicles, which would at least retard ovular ripening if not preclude development—Felner has shown that in such follicles the theca interna is converted into lutean tissue, and from this, as many suppose, the internal secretion is derived.

On the other hand, Carmichael and Marshall in accord with Holzbach and others, find that "the removal of the uterus in an adult animal (rabbit) does not give rise to any degenerative changes in the ovaries if the vascular connections of the latter remain intact."

It is interesting to note in this connection that, in the case of third ovary reported by me before the American Gynecological Society in 1905, cystic degeneration seems to have started in the supernumerary gland as the result of the removal of the paired organs, possibly, as above suggested, the result of interference with the vascular connections. Reference to the now almost voluminous literature of this subject will indicate the interest taken in the elucidation of the problem, and will show that, notwithstanding the discrepancies in the conclusions arrived at by various observers, it is generally conceded as an established fact that an internal secretion from the ovaries positively exists, that its effect on the economy is marked, especially as regards psychic symptoms, and that it is essential to the well-being of woman during, and possibly before and after, menstrual, that is to say, reproductive life.

In a less settled stage is the question of an internal secretion from the uterus and the correlation of the functions of this organ to those of the ovaries. Abel and Zweifel found that in cases of hysterectomy in which a portion of the uterine mucosa was left behind, menstruation persisted and menopausal symptoms did not appear. Doran is inclined to support this theory after the analysis of 60 cases of sub-total operation. From his experiments Blair Bell is of the opinion that

ovulation depends on an uterine secretion which he calls "uterine," while Bond holds that a saline secretion from the endometrium antagonizes the ovarian secretion and thus serves to maintain the balance between the two organs. Pankow asserts that minor degrees of vaso-motor disturbance are to be attributed to removal of the uterus, while Fellner observed that following total extirpation of this organ the ovaries being left, 42 per cent., and after supra-vaginal amputation 57 per cent. of cessation symptoms occurred. In a case reported by Gellhorn persistent menstruation following oophorectomy resulted from adhesions between omentum and uterus by means of which vascularization of the latter was kept up. It seems, however, that almost any agent capable of producing uterine congestion will stimulate that organ to periodical bloody discharge, for Deals, Ficarelli and Halterback have found that oestrus and menstruation (?) particularly in dogs, can be evoked by the exhibition of such drugs as Yohimbin. In a case of my own following removal of both ovaries intact and in which there was no question of third ovary or vascular adhesions to continue the function, menstruation recurred regularly for a period of sixteen years, the climacteric coming on at the usual age. From such instances, which could be multiplied, it might be assumed that the ovaries are not the cause but rather the stimulus to menstrual discharge, but positive conclusions were better withheld until more certain evidences have cleared the question.

It has further been shown that all organs having an internal secretion "belong to a system the functions of which are to antagonize the poisonous products of metabolism, to increase or lower blood-pressure, and particularly to regulate nitrogenous and calcareous changes." (Fraenkel). It is apparent, therefore, from our latest knowledge of the physiology of the pelvic organs of woman, that it is safe to assume that the organism cannot well afford to part with any one of them.

From what has been said it is quite evident that I am harking back to the old plea for conservatism in pelvic surgery, in a round-about way, perhaps, but a way that points out conclusive reasons. Formerly, not much was known to guide attempts in assisting these patients back to health, and it was necessary to assume what now are demonstrable facts. Under present light, it is therefore obvious that if we would meet the requisites of cure conveyed in the statement earlier propounded, we must conserve and not destroy or eliminate.

But there is still another side to the question, hinged perhaps, on the foregoing, but yet itself apart. It is within the experience of every surgeon to have seen cases in which before operation the patient's dread has been so great as to give rise to psychic depression, possibly in some amounting to actual melancholia. The fear of unsexing, imperfect womanhood or loss of procreative power proving at times too great for even well poised mentality. Following operation the depression some-

times continues and occasionally, though, rarely, advances to dethronement of the mind. Both Dewey and I have shown that following operations mental alienation of such gravity as to necessitate the commitment of the patient to the asylum occurs not oftener than once in a thousand cases of those admitted to our public institutions. But this does not represent the actual frequency of post-operative insanity since, in many instances, the psychosis is of short duration and the patient is cared for in hospital or at home.

The most frequent sequelae of the surgery of the sexual tract may be embodied in the term "nervous wreck." These are familiar to all of us; cases, for the relief of which there seems little to be done, except perhaps through psychotherapy, and whose obsessions, imaginings and hypochondriacal pleadings are the bete noire of the surgeons existence and the opprobrium of surgery.

To obviate these things it is essential that we take cognizance of modern research and discovery, adapt our methods to the individual case, and by encouragement and cheer nurse mind and body back to health. If mental perturbation and distress exist, caused by the reasons mentioned, these will usually be allayed by the assurance that morbid parts alone will be removed, and anatomically and physiologically the patient will be as whole as before operation. By so doing in perfect honesty the end results will for the most part be the rounded cure. Failures there must be, for even the surgeon is finite, and judgment is fallible, but mistakes will lessen as experience grows, and failure prompt to better effort and more careful, thorough work.

As for the practical, increased experience in conservative operations on the pelvic organs of woman has not led me to change the position defined some dozen years or more ago.

My symptomatic cures remain between 94 and 95 per cent; the failures less than six per cent. Pregnancy has resulted in over five per cent. of cases; and there have been no deaths attributable to this particular mode of operation.

In myomectomy I do not hesitate to remove almost any number of growths provided sufficient uterine tissue remains from which to reconstruct a fairly normal organ. I have thus taken upward of thirty tumors, varying in size to a cocoanut, from a single womb, with uneventful convalescence for the patient. To the present time I have never seen "recurrence," of the fibroids, and the dangers of enucleation are no greater, if as great, than are those from total hysterectomy.

Finally, when all is done and the patient left with organs new-constructed, and mind at rest, one potent factor for the cure o'er sets them all, for there

"Is hope, the balm and life-blood of the soul."

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ON CHRONIC, MUCOUS, MOIST OR PROLIFEROUS CATARRH
OF THE MIDDLE EAR.*

By G. STERLING RYERSON, M.D., C.M., L.R.C.S. (Edin.),
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IT would appear on first sight that a paper on so common an affection as Middle Ear Catarrh would be a work of supererogation, but when one reflects that three-fourths of an aurist's work deals with this disease, and that the successful treatment is still a matter of difficulty, I may be forgiven for taking up the time of the section. Mucous catarrh of the middle ear is a progressive, insidious subinflammatory disease, characterized by subacute exacerbations, and tending not to resolution but to progressive loss of hearing. The symptoms are slowly increasing deafness, attended by tinnitus, giddiness, autophonia (hearing one's own voice loudly while deaf to other sounds), paracusis Willisii (better hearing of sounds during a noise), and paracusis loci (inability to locate direction of sounds). The noises in the head vary in character and are described by patients as hissing, throbbing, chirping, or booming sounds, and are compared by them to familiar noises such as the sound of escaping steam, etc. They are increased in damp weather, during easterly winds and very hot weather, by a strong wind, by digestive disturbances and by the excessive use of tobacco and stimulants, and are decreased during dry, fine or very cold weather. These noises have sometimes a double character, hissing accompanied by a higher or lower note. Hinsberg's dictum should be borne in mind in this connection. He states that "irritation of the cochlea produces subjective noises, while irritation of the vestibular apparatus sets up vertigo, disturbances of equilibrium, nystagmus, nausea and vomiting. If the cochlea is destroyed, deafness results, while after destruction of the vestibule and semi-circular canals we get less of equilibrium without dizziness or nystagmus." Tinnitus may also have a central as well as a distal origin, a fact which it is well to bear in mind in extreme cases. Hinton¹ reports a case in which increase of distressing tinnitus was accompanied by dimness of vision, and Park Lewis² has recently pointed out that tinnitus may be produced by irritation of the eye. I have now under observation a patient with a high degree of myopia who has been threatened for some time with detachment of the retina. The retina becomes hazy at one point and sight seriously impaired. Coincident with this a marked tinnitus arises, which disappears with the relief of the eye symptoms.

Autophonia is an annoying symptom. My observations lead me to think that it is more often observed in neurotic persons than in ordinary middle ear catarrh.

* Paper read at the annual meeting of the Ontario Medical Association, June, 1909.

Paracusis Willisii is frequently present. I regard it as an unfavourable symptom as regards prognosis.

Paracusis loci is almost invariably the result of the loss of hearing of one ear. The individual is unable to balance the sounds—so to speak—to adjust his aural accommodation, and hence is unable to ascertain the direction whence the sound comes. Does heredity play a large part in causation? I doubt it. Interrogation of a large number of persons suffering from middle ear catarrh causes me to believe that it plays a very unimportant part in causation. It is different with middle ear sclerosis, where it is an important factor. Gout and rheumatism have an influence, but an excessive susceptibility to acute coryza and influenza are the chief factors in the production of middle ear catarrh.

I will not spend any time on diagnosis, which is familiar to all, beyond saying that nasal and post nasal catarrh are essential features to keep in mind. With rare exceptions these cases begin as tubal and pass on to the middle ear catarrh afterward.

The prognosis is important. It depends (1) upon the amount of loss of hearing at the time of beginning treatment. I have never known a person whose hearing was reduced to hearing the watch on contact gain more than an appreciable amount of improvement. (2) On the proper adjustment of the treatment to the case, a matter in which considerable experience is required. (3) Persistence in carrying on the treatment. Many patients are irregular in their attendance and negligent of instruction as to care of health. (4) Removal of patient from noxious influences, and lastly, upon the tuning fork reactions.

Now, as to the local treatment. The nose and pharynx should receive our first attention. Polypi or adenoids should be removed and hypertrophies snared off or cauterised with the galvano-cautery. Defergent solutions should be used, such as Sciler's followed by astringents, preferably sulpho-carbolate of zinc or nizin made more palatable by the addition of glycerine and rose water. Applications to the Eustachian tube and middle ear are best made through the Eustachian catheter, but owing to septal deformities this is not always possible. In such cases I am accustomed to use vaporising solutions in a vapor box, such as chloroform, ether or a solution of menthol and camphor in spirits of chloroform, a chamber of ammonium inhaler, utilising the Valsalvan experiment to introduce the vapor into the ear. Of solutions, I prefer such oily ones as Blandine compound, benzoinol, either plain or with the addition of a small quantity of iodine. I have lately used a five per cent. solution of dionine with marked benefit. Massage, either by way of the Eustachian tube (internal), by means of Weaver's intra-tympanic masseur, 20 to 30 pounds pressure, or by the way of the external auditory canal, using a masseur, air driven or electric, and by means of the Siegel pneu-

matic speculum. Massage is of great importance, for in almost all cases there is a tendency to fixity of the ossicles. I have also used phono-faradic massage with considerable success. Electricity of itself I have rarely found of much benefit. I would be chary of placing much reliance on it except as an adjuvant. As to operative treatment I have seen benefit from making and maintaining an opening in the drum head. This latter I have achieved by spreading a thin layer of strong collodion on the drum and after a few seconds punctured it. There is a tendency to close but by persistence the opening can be maintained. Excision of the drum head and ossicles has been successfully performed by Burnett³, but I have no experience of it. The treatment of the tinnitus affords much food for thought. Besides the local measures already detailed for the treatment of the middle ear and tube, I have found that atropine used locally in the external canal will give same measure of relief. Bromides of ammonium, potassium and sodium, either singly or in combination are useful. Division of the tensor tympani has been practised with some degree of success, and finally, in very severe cases, some of which have a suicidal tendency, division of the auditory nerve has been practised by Krause⁵ of Berlin, Wallace⁶, Marriage and Parry⁷. The operations were successful, but the patients died.

Sohier Bryant⁴ has lately proposed an improved technique which may give better results.

It only remains to add that every attention should be paid to the patient's surroundings and general health. The susceptibility to cold should be combated by cold sponging, salt water baths, alcohol rubs, and above all, the administration of ordinary tincture of perchloride of iron. It is far preferable for this purpose to any of the newer preparations.

The duration of the treatment is a matter of moment. I do not think that anything is gained by daily treatment prolonged more than three weeks or a month. I mean the daily use of the catheter. Then the patient should be given a rest and a short course of a week's treatment should be followed every three months for a year or eighteen months. The results, other things being equal, of this course of treatment are most remarkable, even in advanced cases.

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REPORT OF A CASE OF INTERMITTENT CLAUDICATION.*

By H. B. ANDERSON, M.D., and A. J. WILLINSKY, M.D., Toronto.

A M., male, age 50, Hebrew, musician.
Family history is negative.

Personal history: He has had no illnesses with the exception of some venereal troubles. In his twentieth year he had an attack of gonorrhœa and unilateral epididymitis. Four years later he acquired syphilis but took no treatment for same as the attack was very mild.

Habits: He has been a moderate eater, but an immoderate drinker. During a period of twenty years he has drunk on an average forty ounces of beer and six ounces of rectified spirits per diem. He has also smoked from ten to twenty cigarettes per diem during the same period.

Present illness: About two years ago the first symptom, that he noticed, was the occasional occurrence of a cramp in the calf of the right leg after walking some distance. This symptom lasted for a few months and eventually disappeared. However, the other leg became involved and here the condition grew steadily worse. The cramps became so severe that he had to limp and even at times stand still. In the early stages of the disease he was able to walk quite a distance without feeling pain, but the attacks gradually increased in severity and occurred after very little exertion. He was seen by several physicians who diagnosed the condition as rheumatism and neuralgia.

Condition on February 1st, 1909: When he sits quietly he has no symptoms. After walking a short distance, from about 600 to 1,000 yards, the patient is generally seized with cramp-like pains in the left leg which makes him limp and finally he has to stand still. After three to six minutes he can resume his walk, but the same symptoms reappear. At times the patient experiences stabbing pains which radiate from the anterior superior iliac spine of the left side around the thigh along the calf and finally ending in the dorsum of the great toe of the left foot. At various times he has sensations of numbness and tingling in the left lower limb.

Physical examination, February 23rd, 1909:

General appearance: He is a well developed man. Numerous scars, presumably syphilitic, are scattered on various parts of the body. The skin over the feet and legs appears glossy and cyanotic. The cyanosis extends well above the knees. The crests of the tibiæ are roughened. The arches of the feet appear normal. The gait is normal except when he walks some distance and then he limps and finally stands still.

Cardio-vascular system: The apical impulse is not displaced, in fact the heart is quite normal for his age. Blood pressure is 130 m.m.

* Read at the Academy of Medicine, Toronto, March 9, 1909.

Hg. The radial artery is slightly thickened but is normal in other respects. Pulsation in the dorsalis pedis, internal plantar and popliteal arteries of both sides cannot be felt. Pulsation is also absent in the left femoral, but is present in the right.

Nervous System: The superficial, deep and organic reflexes are normal and so are the cranial nerves. Pain sense is relatively less marked in the left lower limb than in the right.

No other objective sensory disturbances can be found. A little tenderness on pressure can be elicited over the external popliteal nerve of the left leg. There are no motor disturbances except those previously described.

Urino-Genital System: Normal.

Blood examination: Haemoglobin 90 per cent., Reds, 5,000,000. Leucocytes 5,600.

This case gives us the picture of a disease which is relatively uncommon in Canada. *Intermittent Claudication*, as it was first called by Charcot, is a condition the etiology of which is not well understood. It appears according to Higier, that this disease is more frequently observed among Jews than in non-Jews. Alcohol and tobacco are considered by some observers to be important etiological factors. Erb was the first to recognize the frequency of these symptoms as due to arterio-sclerosis, hence the name *dysbasia angio-sclerotica*, but he denied its causative relationship to syphilis. However, Goldflam considers it to be due to a local endarteritis rather than a general arterio-sclerosis. Déjèrné holds that there is an angiospastic as well as an angiosclerotic element in this disease. The symptoms in this disease are simply a manifestation of inefficient circulation. The disease is somewhat related to erythromelalgia-scleroderma and Raynaud's disease.

PELVIC DISEASE A FACTOR IN INSANITY.

By ERNEST A. HALL, M.D., Vancouver, B.C.

A SOMEWHAT prominent practitioner of Birmingham has recently written a pamphlet entitled "Insanity Cured by a New Treatment," in which he gives histories of twenty-one cases of decided mental disease, in which recovery followed the stitching up of prolapsed kidneys. I give an extract:

"On September 9th, 1905, I visited a large public asylum. There I examined fifty of the inmates on the female side for the condition of "dropped kidney." These patients were not specially chosen for my examination. Fifty women, of all ages, being examined standing up.

29 had one or both kidneys badly down; 17 right kidney only down; 3 left kidney only down; 9 both kidneys down. So that 50 per cent. were in this physically crippled condition.

"One patient only of the fifty suffered from Glenard's disease.

"The cases where the prolapse existed suffered chiefly from melancholia, but mania and dementia also existed; and the majority of the sufferers were under forty years of age.

"At a private asylum 33 per cent. of the women had prolapsed kidney.

"During the past six years I have had under my care many cases of insanity due to dropped kidney.

"Most of these cases presented similar symptoms, and the majority were suicidal.

"The successful results of suturing up the kidney in these cases leaves no doubt in my mind as to the toxic condition of the brain set up by displacement of this organ.

"The poison is set up by the retention of urine in the displaced kidney—a daily dose of which is automatically administered to every individual suffering from dropped kidney. Some medical men attribute the whole series of symptoms created by dislocated kidney to traction on the ureter, blood vessels, and nerves. I divide the causes of the various symptoms as follows :

1st. Mechanical, by traction or pressure on blood vessels, nerves, ureter, colon, stomach, etc., causing gastric and intestinal symptoms, pain, dilatation of the stomach, colitis, ovaritis, and uterine troubles (the last so ably described by Goelet, of New York).

2nd. Toxic, through retention of urine—causing insanity, melancholia, mental depression, headaches, and morbid fears."

"The insanity written of in this paper is entirely caused by dropped kidney. I have met with it in women of all ages and types. I have also seen a few cases in men.

"The cause of the insanity is clear. It is toxic, and does not depend on the degree of displacement. A kidney only slightly displaced may have the ureter so kinked that the urine is as much impeded in its proper elimination as if the kidney were lower down. Great emphasis must be laid on this point, as students are chiefly taught the degrees of displacement, as if the greater degree were always the greater evil. The daily interference with the elimination of the urine and retention in the prolapsed kidney and ureter causes auto-intoxication leading to insanity and other disease of the nervous system.

"The insanity due to Bright's disease is of course well recognized. The insanity due to dropped kidney is curable, and will in the future also be well recognized.

"All phases of mental disturbances are met with in dropped kidney, but mental depression and melancholia are the most frequent.

"The following conditions are very common: Loss of memory, mental confusion, mental depression, melancholia, suicidal tendencies, homicidal impulses, morbid fears, and emotional disturbances.

"The frequency of suicide where dropped kidney exists is remarkable. In some of my cases, poor people, suicidal from dropped kidney, where the operation was recent and the friends have been unable to take the necessary precautions, they have got away and drowned themselves; whereas, if proper mental hospitals or wards had been established, these patients would have been restored to perfect mental health, and that without the unnecessary asylum stigma."

This seems incredulous, and I doubt if it be taken seriously by one per cent. of those who are listening to me to-day. I cannot corroborate these statements, but in the examination of nearly one hundred and fifty insane women I have found a percentage of abnormality of the pelvic organs almost as startling and as incredible to the average insane hospital superintendent, as the above statements are to most of us. In the examination of my cases I found but one case of prolapsed kidney, and before I had decided what to do with the case she drank two ounces of carbolic acid, and decided the matter for both of us. I can then say that one hundred per cent. of my cases with prolapsed kidney had suicidal impulse, thus so far agreeing with Dr. Suckling.

In estimating the work of others we must not overlook the personal factor, we read of Morton's spinal analgesia, and are incredulous, we see him at work and our opinion becomes modified. We read of Miss McGaw and etho-anesthesia, we see it done and are converted to what?—to the fact that there is a personality to reckon with in each case, the man behind the method, and that personal equation, psychic in essence, powerful in effect, it may be the suggestion of Bernheim, the persuasion of Dubois, or the unconsciously imparted impression upon the patient of inherent superiority and ability of the operator, call it what you may, it is this force which we must reckon with where we presume to estimate the work of any man upon living tissue. With this conception in mind I am prepared to consider Dr. Suckling's statements of his results, and further, express a belief that possibly even the author himself may have been mistaken as to the real cause of the altered mentality. We know that even the shock of the anesthetic, or the traumatism of operation has been efficacious in mental restoration, and that a fall from a motor car with a broken arm might have been as efficacious as a beautifully executed nephropexy, and these remarks apply as directly to my own cases. The psychic forces in conditions of somatic disease have been shown to be most important therapeutic factors.

We have but touched the fringe of this matter yet, and the more we study the abnormal mental, the more we are convinced that there is ample scope for the application of direct psychic treatment. There is no mental process without its physical counterpart, and there is no—but we must not wander into labrynth of psychology.

For some seven years I have been interested in the relationship of what we call mental disease to pelvic disease. I have, whenever the opportunity presented, examined the pelvic organs of those women who have presented well marked mental abnormality. The result of these examinations was a surprise, giving 92 per cent. of distinct pelvic disease, conditions which if found in sane women we would consider worthy of treatment. Now, I do not consider for one moment that the cause of the insanity in the ninety-two per cent. examined lay alone in the pelvic condition, for we find many case presenting apparently greater pathological conditions than any of these presented and retain a perfectly normal mentality, but I do state, accepting the dictum of Clouston, that insanity is due to heredity and strain, that granted predisposition to mental collapse, that the pelvic condition was probably a factor in the strain, and might be, in any individual case the last strain to break the camel's back. Insanity is the psychic sum of physical abnormalities. The prolapsed kidney, the salpingitic adhesions or the pressure or irritation of fibroids, are each factors in that sum, and the relief of that factor may be that which causes the turn in the balance. Persuasion and suggestion may have had their places as restorative agents.

As to how the turn from normal to abnormal condition is made through perepheral irritation, we wait for an answer. It is probably an abnormal psychic product through the associated sensations, let psychologists work that out. Let us at least understand that violent mania can be present without any observed organic brain disease, and that those organs which can be influenced by mental processes in health are the most potent, when diseased, in affecting the mentality. This applies equally to both sexes, and if we are to accept the statements of some of our Canadian experts, it applies with much greater force to the male sex.

I make no plea for tinkering gynæcology. I oppose the removal of normal structures, and repudiate the statement that we who practise gynæcology believe that a woman lives in her womb. It is ours to relieve pressure, repair laceration, and to restore function.

It is difficult to get a suitable nurse for these cases. They should be physically strong, as well as well equipped mentally, and able to satisfactorily cope with the delusions of the patient. Much of the patients' mental cargo has to be unloaded, and the return to the normal is frequently in direct proportion to the skill with which this is done.

Now, what has all this to do with us? We are not asylum physicians. Who sees cancer of the stomach first, when, if ever, it is in the curable stage, and who should be able to determine it in its incipiency?—The general practitioner. The same with mental disease, it is the family physician who first knows of these cases, and it is within his province to determine the underlying causes which are and have been at work undermining the physical constitution, giving rise to nervous irregularities. Many of these cases give evidence of the gathering storm for months. The family practitioner should be on the alert to detect these symptoms and realize their portent, and instead of retiring upon the first onset of their foe, considering the development of mental disease as the limits of his jurisdiction, it should be a call to renewed diligence in investigation. In every case there is a somatic basis, in some cases unremovable, in a great many cases curable. Insanity, taken in its early stages, should be as amenable to treatment as typhoid fever. The profession must awake to the fact that the time to treat insanity is in the early stages, the place is in the homes of the patients, or some convenient hospital, and the physician first to treat it should be the family physician, with associated consultants where possible. Failing this, then the transference to the public Insane Hospital. The mental invalid in the early treatment requires practically no mental treatment more than the typhoid delirient requires it. I do not wish to cast any reflection upon the public institutions. I can speak of our own in New Westminster as being absolutely up-to-date in all modern equipment, and the medical superintendent second to none, but ask yourselves what you would do with your daughter, should she show mental instability at or about the menstrual period. Would you not investigate and look upon the public hospital as the last resort? Then look upon the daughters of others as you would your own.

Let me condense in a few paragraphs my creed in this matter:

1. Every woman before being committed to an insane hospital should be examined by three, a specialist in nervous disease, in internal medicine, and a gynæcologist, and if a condition be found of sufficient importance to necessitate treatment, especially if it be of a part closely associated with the nerve centres, such treatment should be given irrespective of the quality or intensity of the mental symptoms.

2. Recognizing the importance of heredity as a factor in insanity, that having been once insane, the possibility of pregnancy should be removed. This I invariably do, with the consent of the friends, by resection of the tubes.

DIPHThERIA CARRIERS, WITH SUGGESTIONS
FOR CONTROL.*

By HERBERT E. CLUTTERBUCK, M.D., Toronto.

IN order to properly discuss this subject, it will be necessary to consider, first, the nature of the infection; secondly, its mode of transmission.

Diphtheria is caused by the Klebs-Loeffler Bacillus. It occurs in different morphological forms, some more virulent than others. These are usually spoken of as the granular forms and are more frequently found in the throat. Other types less virulent, are with greater frequency found in the nose. These organisms are present in acute sore throats, being the causative factor, in a vast majority, and remain in such throats for some time after the individual is clinically well.

The organisms may be also present in the throats and nose of well persons, thus constituting a grave public danger.

In the first case another danger arises from the fact that individuals sick with diphtheria may only be so slightly ill as to scarcely excite in their relatives' minds any desire for medical services, and physicians themselves too often make errors in diagnosing them.

It would be better if we were to disregard entirely the old clinical classification of sore throat, and recognize only the bacteriological method of diagnosis, for the very reasons before mentioned.

It has been shown that the bacillus diphtheriæ may exist in the throat and nose and yet present no symptoms because that either no toxin formation goes forward or else if such are formed they are neutralized as fast as they are formed. This point has been well shown by Hill, of Boston, and his investigation shows, further, that a certain percentage of cases do not show the presence of the bacillus diphtheriæ early in the case, but do so afterwards. He examined 336 cases; 92 per cent. yielded positive cultures on the first examination; 5.6 per cent. were negative on the first culture and positive afterwards, and 1.9 per cent. were unsatisfactory on the first culture but positive afterwards, so that clinical evidence in these cases is not reliable. Further, one negative primary culture should not cause a reversal of an original diagnosis of diphtheria, if such has been made, as it is now well known that about one in twenty cases give negative bacteriological findings early in the attack.

Now, what are the carriers of diphtheria contagion? That is to say, what is the mode of transmission? Formerly it was thought that articles of clothing were the chief carriers of infection; now we know better, and it is more than likely that in the great majority of cases the

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infection is carried through the contact of individuals carrying in their throats and noses the infectious bacilli.

In regard to infectious material adhering to clothing, toys and articles of furniture, Hill, of Boston, carried out some interesting experimental work. He examined swabs from sheets, pillows, furniture, walls and floor near the patient. About fifty swabs were taken in each room; with these results: Out of a total of 532 swabs, only two positive results were obtained and fourteen doubtful ones. Of the two positive ones, one was from a toy flag which had been handled and would, of course, have been about the patient's face. The other was from a handkerchief. The doubtful ones were all from sheet, pillow, mattress, bed frame and floor, and the doubtful cultures were not virulent when injected into guinea pigs. This goes to bear out the idea that infection does not generally travel far beyond the immediate neighbourhood of the sick person.

He further experimented with drying experiments to test the life duration of the organism. Briefly, his results showed, that at the end of three weeks, only ten per cent. survived, from which he argues that by the end of three weeks a large proportion of the bacilli thrown out during an average case of diphtheria will either be dead or very much attenuated, and will be found chiefly on those articles which have been in direct contact with the patient's mouth. This fact will rather dispose of the more prevalent idea that it is dangerous to be even in the neighborhood of a case of diphtheria; it is, in other words, not an air-borne disease.

Then, there comes up the question, how much danger we are in from bacilli carried in the throats and noses of well persons, and also the question as to whether our present method of releasing individuals from quarantine, is as safe, in the public interest, as it should be.

Considerable experimental work bearing upon these two points has been worked out by a Committee for the Study of Diphtheria Bacilli in well persons, and by studies of well-marked epidemics in institutions. One result, so far, of the committee's work has been to show that the diphtheria organisms may be present in both throat and nose of individuals exposed to diphtheria, who are yet not themselves ill.

In Providence, out of 768 cases, 32 showed both throat and nose infected, 35 throat infected, nose not, 98 throat not infected, nose infected; 621 both negative.

In the Willard State Hospital, out of 921 cases, only one case showed an infection of the throat without the nose; 118 showed infection of the nose without throat infection, while 902 were negative in both instances.

It is to be noted here that in such persons, supposedly not dangerous to their fellows, infection existed in a considerable number, and the fur-

ther interesting fact that in the majority of such cases, where it is innocent, as far as the individual is concerned, the infection is contained in the nose.

This committee further investigated as to how frequently infection was present in the throats and noses of well persons not exposed, so far as known, to diphtheria, and it will be sufficient to give the Providence results. In the Providence Hospital, of 30 cases, 6 showed double infection; 2 infection of the throat only; 12 infection of nose only, and 10 negative.

At the pulmonary clinic, out of 10 cases, 1 had the throat infected only; 3 the nose infected only, and 6 were clear.

In a school free from diphtheria for three and one-half years, out of 160 cases examined, 10 showed double infection; 13 th throat only, and 16 nose only, while 121 were clear; so that we see that well persons, exposed or not exposed, may be carriers of the infection. One might detail many illustrations to show how epidemics had followed the carrying of infection by well persons.

The next question is concerned with determining how best to find out when it is safe to lift the quarantine from known infected persons, because it is certain that with any method, other than a bacteriological one, a comparatively high percentage of error on the wrong side is introduced. Hill, of Boston, who has done so much excellent work in studying these questions, shows that 28 to 30 per cent. of cases are released from quarantine if only one negative culture is demanded, although, in the vast majority of this percentage of cases a second culture shows the presence still of the diphtheria bacillus. A second consecutive negative result, however, he found reduced the error to about three per cent. He shows that, instead of prolonging the quarantine, a systematic resort to bacteriological examination of the throat in diphtheretic individuals is not alone, as we have shown, the only safe method of allowing release from quarantine, but actually cuts short the period of quarantine in many cases.

His experiments on the persistency of the bacilli in the throat show 40 per cent. negative, within 20 days; 60 per cent. before 25 days; 74 per cent. within 30 days; 86 per cent. within 35 days, while only 13 per cent. lasted from 35 to 65 days. The average 21.3 days of quarantine, and shows, as I have said, that the bacteriological method shortens the detention time of very many cases, while the danger to the public, of any one still infected going broadcast, is averted. The progress towards the control of diphtheria certainly lies with the Board of Health laboratories.

Since diphtheria is in great part, then, a disease spread by contact, and not by the air, it follows that schools and institutions are favorite

places for the spread of such a disease, and the obstinate nature of some recorded epidemics in institutions has often been noted.

In Minnesota there is a school for boys which, despite most careful methods aimed at stamping it out, the disease has been prevalent for twelve years. At the Utica State Hospital two years' work has not stamped it out, and examples might be multiplied, but from our present knowledge these deductions can be made: First, our greatest weapon is the Board of Health laboratory. All means calculated to extend its usefulness should be eagerly sought. This affects both the physician and the general public, and it seems not too much to anticipate the time when every County town might easily have a sufficient bacteriological outfit to serve such purposes, for that County, working under a central organization in Toronto. In institutions it would be advisable to isolate every incoming individual until by bacteriological examination the throat and nose was found to be free of diphtheria organisms.

Secondly, among school children, the physician should regard every case of sore throat as a case of diphtheria, until he has by the means at his disposal, and referred to in this paper, proved it to be otherwise.

Third—when a case is found to be diphtheria it should be thoroughly and rigorously isolated, for upon the thoroughness of such will depend much of the success of the later work for its suppression.

In the case of children home from school with diphtheria a placard is necessary, because it keeps many away who would expose themselves. It is not necessary, in the case of wage earners, to tie up the whole household, because as has been shown, there is no danger unless they are in contact with the patient. Furthermore, as has been shown, we would arrive at a greater degree of safety in regard to the control of this disease, if we insisted that before a case is declared free, that two free cultures, at least, should be taken from the patient, and the throats and noses of those forced to be in contact with the patient declared to be free, in the same way, of the same organisms.

In institutions, when a focus of disease shows itself, a bacteriological examination of the throats and noses of all the inmates within any possible range of the infection should be carried out, and when discovered, rigorously isolated. In institutions it will be safer to establish three classes of cases. First, those who are isolated from known diphtheria. Second, those who are isolated from sore throat, until such a time as its character can be determined. Third, the well cases.

Following the lifting of the quarantine thorough disinfection of the patient's clothing, bedding and all articles in the room should be carried out.

In regard to proper methods of disinfection, it might not be out of place to say a word on the disinfection of rooms, for it is certain that a

vast deal of almost completely valueless work of this kind is done. Now-a-days, we use Formalin almost entirely for room disinfection, and it is an efficient disinfectant if properly used.

These directions are contained in a paper by Professor Novy, of the University of Michigan, after an exhaustive study and testing on the value of different disinfectants in an infected room. First, all cracks or openings in the plaster or in the frames about the doors and windows should be tightly closed with cotton. Second, the linen, clothes, blankets and quilts should be stretched out on the line so as to expose as much surface as possible to the disinfectant. Books should be suspended by their covers. They showed that gaseous disinfection has very little power of penetration, hence things should not be thrown in heaps. Third, Formalin is not very active unless there is moisture present in the atmosphere, and to that end it is necessary to spray the articles and walls pretty thoroughly with water. Fourth, they found that about five ounces of Commercial forty per cent. solution was necessary for one thousand cubic feet of space, and such a room should be left closed for ten hours.

MALIGNANT DISEASES OF THE NOSE.*

By D. J. GIBB WISHART, Associate Professor of Rhinology and Laryngology,
University of Toronto.

THE remarks that I have to make upon this subject are intended to be a recital of the cases that have fallen under my own particular observation, rather than an endeavour to put forward anything new, either with regard to the etiology or the treatment, and I therefore propose to confine myself to a narration of these cases, followed by a few remarks.

These cases are nine in number, but of these the histories of two are not available, but the remaining seven are as follows:

Case 1. Mr. J——, merchant, age 54, referred by Dr. Howitt, October 14th, 1894, complaining of stuffy sensation in the left nostril, accompanied by slight bleeding, some clots being ejected every day when the nose was blown. General health was poor. On examination a bleeding polypoid mass with enlargement of the turbinal (inferior) was noted.

Two weeks later the above mentioned growth was removed with the snare, and uncovered bone was made out, both on the upper part of the septum and in the ethmoidal region.

The patient was not seen again until May, 1905. He had contracted grippe early in the year, during which he suffered frightfully from neuralgic pain in the left parietal region, and over the left frontal sinus.

* Read before the Toronto Academy of Medicine.

The left nostril was occluded by a large bleeding mass from which there was an offensive discharge and odor. The cheek had been swollen for three weeks, and the left nasal duct was occluded. A small portion of the growth was removed for examination, upon which the report was as follows :

External appearance—four or five small polypoidal looking growths from a third to a half an inch in length, surface smooth and white on all sides, and somewhat soft in consistency. The substance was made up of fibrous matrix, and alveoli containing rather loosely packed cells. The matrix consists of soft looking fibrous tissue with numerous connective tissue cells, oval, spindle, and triangular. The fibrillation is not very distinctly marked, the cells are not markedly epithelial in character, the nucleus occupying a very large part of the cell and staining sharply. The arrangement points more strongly to Carcinoma than to Sarcoma. The growth is probably Carcinoma of a scirrhus variety (alveolar).

After consultation with Dr. McDonagh operation was decided upon. An incision was made through the cheek from the left inner canthus downwards parallel with the nose, and a second incision beginning at the same point extending outwards underneath the orbit. The flaps were dissected back, and a portion of the nasal bone, the nasal process of the superior maxilla, and the outer wall of the antrum were removed, and the growth found occupying the upper portion of the antrum, and the ethmoidal region, as far back as the sphenoidal sinus. The floor of the orbit, and body of the ethmoid with the outer wall of the nose were completely removed with the growth, and a large quantity of pus evacuated from the sphenoidal sinus. The incision healed by first intention. On the fourth day the patient complained of great pain in the head, especially in the vertex, with tenderness in the neck, defective speech, faulty memory, and a temperature vacillating between 97 and 101 degrees. These symptoms gradually disappeared, and the patient was seen for the last time on the 20th of July, when with the exception of a large granulation the nose was found perfectly healthy, and the general condition much improved. The patient was sleeping poorly but was suffering no pain. I did not see him subsequently, but learned that all the symptoms returned and that he gradually sank, and died some months later. 07-

Case 2. Lionel P.—, age 17, mailer, referred by Dr. Gordon in January, 1900. Complained of a stuffing up of left side of nose for past six months, right side became stenosed later, voice is dead, blood comes away into throat and through anterior nares at night. Hearing is failing in the left side. Pain, loss of flesh, and failure of health are absent.

On examination, a smooth, evenly rounded, resistant mass occupies the outer wall of the left nostril towards the back, and has pushed over

the septum to the right. * Postnasally a mass can be made out filling the posterior nares, but not protruding backwards. The colour is similar to that of the surrounding tissues. There is no sign of a bleeding point.

The patient was not seen again for three months, when all the symptoms were found increased, the growth was nearer the anterior nares, and soft and moveable in places; the soft palate was depressed, and a large whitish mass protruded into the naso-pharynx. There was a marked odor.

Beyond a note that the galvano-cautery was applied two days later, I have no further notes of the case, or of the pathological report, but he came under the care of Dr. Price-Brown, who obtained excellent results as he has already reported.*

Case 3. Miss G.—, nurse, aged 35, referred by Dr. H. B. Anderson, October 22nd, 1902, with the following history: Fatigued by her work, the patient, who was of a thin, nervous build, came home for a rest, and in June consulted the family physician about pains about the head and face, which were ascribed to neuralgia due to residence in a very damp house, and were relieved by suitable anti-neuralgic treatment. At this time the face, eyes, nose and mouth were carefully examined, as the mother stated that she had dreamt that the pains were due to a tumor behind the eye.

The patient was not seen again till the middle of September, when the pains had returned. She was kept under observation, and as she began to complain of a stuffy sensation in the left nostril, with an occasional bloody discharge, and to show some bulging of the left eye, she was admitted to the hospital. On examination, I found an irregular mass growing in the region of the middle meatus on the left side of the nostril, a well marked proptosis of the eye, and by transillumination an absolutely dark antrum. A section removed from the nose showed the growth to be a round celled sarcoma. The origin of the growth was probably from the roof of the orbit, and it had involved the antrum, invaded the orbit, and extensively involved the ethmoid. Operation was not consented to, therefore the patient was immediately put upon Coley's fluid, injections of a half minim locally as well as at distant points being as rapidly as possibly increased to doses of three and a half minims, at which point the treatment had to be moderated as the depression and chills attendant were too severe.

A combination of smaller doses of the fluid, with fluorescent rays were then adopted for a time, but beyond a slight check no improvement

*Dr. Price-Brown reports.—March, 1909. This patient for years has enjoyed excellent health. There is no return of this disease. It was on October 31, 1902, that the patient was first seen by him. At that time as already reported, the tumor had grown enormously, filling the nostril to the outlet and also the naso-pharynx, holding the compressed prolapse in a fixed position. Hearing is likewise in a normal condition.

was noted. The patient died in the end of March, 1903, after the growth had involved the neighbouring tissues extensively.

For these notes I am indebted to Dr. Anderson, as the hospital records were destroyed.

Case 4. Mrs. S.—, aged 62, referred by Dr. Grey, July, 1904. Complained of bleeding and pain in the left nostril for past six weeks. The bleeding was not severe, but continuous, an average of eight handkerchiefs per day being soiled thereby. The pain is in the left nasal bone, extending outwards under the eye, dull in character and intermittent. There is complete left nasal stenosis. General health has been very poor, but of late is improving. There is no history of any blow or injury.

Examination by transillumination showed the left antrum completely obscured. A tumor filled the middle meatus and extended back into the posterior nares. A portion was removed for examination and was reported by Dr. Anderson to be round celled Sarcoma.

Operation was advised and this was performed by Dr. Teskey, assisted by the writer. The incision was made through the cheek in a line extending from the inner angle of the orbit downwards and slightly outwards to the mouth. The tumor was entirely removed and was found to fill the antrum and to have a probable attachment to the floor of the orbit which, with the inner and posterior walls of the antrum were fully removed. The glands were not involved and the bleeding was very severe.

I am indebted to Dr. Grey for the additional notes: The wound was slow in healing until the patient was put upon small doses of Iodide of Potash. The discharge ceased in a few weeks. In the following May a sloughing ulcer appeared in the joint of the right great toe, this was healed at the end of six months, but two months later an ulcer appeared upon the left foot, which healed, only to be followed by an ulcer upon the front of the right tibia, which progressed unfavorably, was followed by general septicæmia which resulted in death in May, 1906. At no time was there any evidence of a return of the growth in the nose or in any part of the face.

Case 5. David Y.—, aged 57, referred by Dr. Barber, November, 1906. Complains of very severe pain in the left side of the face below the eye, and also from the ear down the ramus of the jaw. Onset occurred about one year ago, but the chief suffering has been within the last four months. Has expelled a thick clot of blood from the left nostril now and then, and of late has suffered from dysphagia, and marked loss of flesh.

On examination the following conditions were found: Nose, right side absolutely free and patent, with septum deflected to left posteriorly—left side unusually patent in front, but apparently filled up from floor to roof posteriorly with an indefinite mass, which bled on being probed,

and was coated by pus points. Pharynx—soft palate swollen on left side, as if pressed down from above and firmly fixed, leaving very free access to the naso-pharynx, which is filled up on its left side, by an irregular mass, apparently pedunculated, but on palpation found to be fixed extensively to the left side and very firm in consistence. Transillumination is negative. Hearing, left ear watch equals pressure. Optic disk healthy. The patient is weak, easily fatigued and anemic.

The patient was admitted to the hospital, and under cocaine, several applications of the galvano-cautery with removal of the slough by snare and forceps, after the method advocated by Price-Brown, were made at intervals, and respiration restored on the left side. The bleeding was slight, but the suffering continued very severe, and morphia became a constant necessity, while the patient grew weaker rapidly, and finally refused to submit to further applications.

The anesthesia was never satisfactory, as if the cocaine were pressed collapse became imminent, and the patient suffered severely from each application, but refused to submit to general anaesthesia. Slight loss of power in the left external rectus was noted the day before he left the hospital.

The Section removed by the cautery was submitted for examination, and reported "Malignant."

Case 6. Mr. J. H. M.—, aged 48, blacksmith, referred by Dr. S. H. Thorne, was seen for the first time October 24th, 1907, and gave the following history: Many years ago the nose was broken, leaving a projection on its right slope about opposite the lower end of the nasal bone. Some right nasal stenosis noted twelve months ago which became complete about six months later. There has been a constant oozing of a sanious muco-purulent discharge sufficient to soil from three to four handkerchiefs per day. Until the past month there has been no pain about the face, but of late there has been occasional soreness and tenderness to the inner side of the right eye. Frontal and occipital headaches of a severe type have been present until the past ten days. There has been swelling and bulging present in the right side of the nose for the past six months, increasing of late. Patient has lost twenty pounds in weight in the past year, but is otherwise in perfect health. There have been no ear symptoms, no diseased teeth, no epistaxis, no post-nasal dropping, and no treatment of any kind. Upon examination the following points were noted: The nose presented a crescentic curve to the right with some general bulging of that side of the nose and slight tenderness upon pressure opposite and below the inner canthus, an irregular growth projected from the external wall close to the entrance of the right nostril resembling degenerated polypoidal tissue, the stenosis was complete, the left chamber of the nose was capacious and perfectly free. Rhinoscopically,

there were no evidences of disease whatever, and a complete view of both choanae was easily obtained. Vision normal in both eyes, with the assistance of a convex lens, optic discs normal. With transillumination the light penetrated the left frontal sinus satisfactorily, but the right sinus seemed small and indistinct, no penetration could be obtained on either side of the face. A small portion of the growth was removed for examination by the pathologist and the haemorrhage was not marked. No evidence existed of enlargement of glands.

Dr. Cummings kindly examined the patient with the Fluroscope and reported that the antrum and ethmoidal regions appeared to be completely occluded with growth, and that the frontal sinus which was small, was hazy and probably filled with pus.

MICROSCOPIC REPORT ON PATHOLOGICAL SPECIMEN.

Irregularity in size and shape of the nuclei is a marked feature—variations from a small round to elongated and large nuclei. Mitoses are frequent, as many as four being noted in one field, immediate division also being found.

The cell protoplasm in many fields run together so that no cell outline is discernable. In other places the cells are distinct, occasionally the eccentric nucleus of the "plasma cell" being noted. Blood vessels are not plentiful, but when found, no lining endothelium can be made out. The sections from septum of nose differ only in seeming to have a more orderly arrangement of the neoplastic cells and in showing a greater number of endothelium cells scattered throughout the section. Sections were stained with eosin methylene blue, but did not stain very distinctly.

From the above examinations it appeared evident that a complete evisceration would be required of the right nasal fossa and antrum, and that possibly the frontal sinus would require to be opened. The patient however, desiring as little deformity as possible, and the skin of the face being involved, it was decided to reach the parts in the first place by a Rouge operation, and if subsequently found necessary, to perform a Killian operation upon the frontal sinus.

The patient was anesthetized and a preliminary larygotomy performed after the manner described in Butlin and Bond in the *British Medical Journal*, 5th January, 1907, page 7, which is briefly as follows: The skin is pinched in a vertical fold at a point opposite the upper border of the cricoid cartilage, this is transfixed transversely with a tenotomy knife and the forceps placed upon one small vein which was bleeding. A pair of sharp pointed scissors curved on the flat are then forced through the crico-thyroid membrane close above the margin of the cricoid cartilage and the blades opened and withdrawn. Into this incision is placed

a pair of dilating forceps between the blades of which a small canula is inserted. Through this the anesthetic was continued, the pharynx was then thoroughly packed with a long strip of gauze and the operation proper proceeded with. The gingivo-labial margin from the level of the first molar tooth of the right side to a corresponding point upon the opposite was then incised to the bone and the tissues pushed up until the structures issuing from the infra-orbital foramen of the right side were exposed, together with the anterior nares, to secure which a perpendicular incision was made in the front part of the septal cartilage, the tissues were kept well retracted by the assistant and the anterior wall of the antrum removed, at this point the haemorrhage from the growth became very severe. As quickly as possible the whole of the anterior wall of the antrum and the outer wall of the nose were completely removed and the contents evacuated. The turbinal bones and the innermost ethmoid cells were all absorbed or existed only in small fragments, but with the curette all the ethmoidal cells were carefully removed until the cribriform plate of the ethmoid was made smooth and a smooth surface also obtained upon the outer wall. In doing this the sphenoidal sinus was also opened and made part of the cavity by the removal of its anterior and inferior walls. At the same time it was discovered that the mucous membrane over the ethmoidal portion of the septum was degenerated and the bone laid bare at one or two points. All the mucous membrane, bone, and cartilage of the upper half of the septum on that side were carefully removed; but as the mucous membrane of the opposite side seemed to be healthy it was left in place.

To gain access to this large area the nasal process of the superior maxillary bone had been removed entirely as far up as the floor of the frontal sinus. This was now examined and a thickropy gelatinous whitish fluid was found exuding through the remains of the infundibulum; but the bone was found healthy in all directions and as it was found impossible to remove the floor of the sinus without a skin incision it was deemed fair to leave the sinus alone.

The wound was then thoroughly cleansed and swabbed with chloride of zinc, and lightly packed with iodoform gauze, after which the skin was allowed to fall back into place and no stitches were inserted, but after the instillation of atrophine the eye was carefully bandaged.

During the entire operation the patient gave no trouble, and on removal of the gauze packing from the pharynx the lower parts were found quite dry.

The patient made an uninterrupted recovery, the gauze packing being removed on the second day and not replaced, the cavities douched with an alkaline solution and dusted with iodoform powder. The appearance of the face was not affected except by the removal of the dimple

of the right inner ala nasi, the patient's eye not even being discolored.

Case 7. Powell Pompier, 17, Italian labourer. Blocking and bleeding on the right side of the nose, noticed first about August, 1906, before he left Italy, but does not appear to have received any treatment. Came to Canada, and has been engaged in railroad construction in the north, during which time the two conditions referred to have become worse, and in addition he has lost the sight of the right eye completely. Entered hospital in November, 1907, when the following conditions were present: Right nostril completely occluded by a greyish mass of irregular appearance, bleeding easily. The ala and nasal bone swollen or pushed out by the mass above mentioned. The right eye protruding and the upper eyelid dropped, and there is a swelling to the outer side of the orbit above the zygoma. On opening the mouth the right palate is darkened in hue, and towards the back of the hard portion it bulges downwards. In the post-nasal space a smooth mass occupies the space almost entirely, but is not attached to either wall, and the finger can be passed below the mass to the septum, a proceeding followed by rather free bleeding. The odour from the nose is most offensive. The glands are not enlarged. The examination of the eye was kindly made by Dr. Reeve, who reported paresis of the external rectus and levator palpebrae superioris muscles; fundus apparently normal, movements of the eye, except as above quite satisfactory. The growth has probably invaded the back of the orbit, behind the attachments of the external muscles, and crossed to the outer side involving both the third and sixth nerves and the optics. A section was removed from the nose for the pathological department, which is stated to be purely inflammatory, without evidence of malignancy.

After consultation with the members of the Ophthalmic and Oto-Laryngologic Section of the Academy of Medicine, it was decided that the case was inoperable the growth probably arising in the ethmoid region, and being too widely diffused to admit of successful removal. A few days later as the bleeding was becoming serious the external carotid of the right side was tied with ordinary catgut, circulation established itself within ten days in the temporal artery, and bleeding became more severe. Believing this to be due to the absorption of the catgut before a firm clot was formed, the artery was again cut down upon, and tied, no sign of the previous ligature being visible, and circulation fully established.

Sarcoma is stated to be the most common form of malignant disease found in the nose, and my cases conform to this rule, four being Sarcoma, one Carcinoma, one unclassified, and the one where the pathologist is at fault, will prove to be Sarcoma when a deeper section is obtained for examination.

As to the percentage which these bear to the number of patients seen I cannot speak, further than to say that the proportion is probably somewhat large, as Herzfeld reports only one case among 28,000 out-patients, and Finder five cases among 40,000.

Sarcoma is stated by Lack to spring most frequently from the anterior part of the nasal septum, but not one example of this seat of origin has come under my observation, the ethmoid or the floor of the orbit being the probable point of origin in all but two, the others being uncertain, but probably from the outer wall below the middle turbinates. This would coincide with Finder, who says that fifty per cent. spring from the middle turbinate, and twenty-one per cent. from the inferior turbinate body.

Sarcomata are usually of the small spindle celled variety, but my pathological reports are not detailed enough to make inferences justifiable. However, none of the remaining varieties, except round celled, were present.

Among the symptoms present the observations with regard to the frequency of epistaxis and pain are well borne out, in only two of the cases did the bleeding cause marked depression or anaemia (cases four and five). Pain was an early symptom in three, absent in two, and late in one.

Upon the question of cause I fail to see that my cases afford any clue. In one (case four) there is a possibility that syphilis was coexistent, that is if the beneficial action of Iodide of Potassium implies the presence of syphilis, which I do not admit. The lesions in the legs may have been of the nature of metastases. The idea has been advanced that the ordinary nasal mucous polyp may, as the result of repeated removals, undergo malignant transformation, but in only one of my cases (case one), could such a transformation have arisen, as mucous polypi were not present in any of the others, and in this I believe that the bleeding and the diseased bone indicate the contrary, and further, that if I had been sufficiently alert and secured a pathological examination of the polyp, malignancy would have been found. No cases of nasal polypi which have passed through my hands, and of these I have observations extending over many years, and repeated examinations at long intervals, have ever shown a tendency to become malignant.

The average age of my cases (41), is above the usual which is stated by Bosworth to be under (39).

What is to be said with regard to treatment, for this is after all the important question from the patient's point of view? Coley's fluid was used in only one of the cases here discussed, but I used it in another, a girl of about twenty, of whose history I can only find a couple photographs, and here also, although it was thoroughly tried, it proved of as

little avail as in case three. This experience would not discourage me in using it again if the case came under observation at an early stage, but unfortunately this is not usual.

The only other method of treatment that I have attempted is surgical removal, and here I have had no successes except in case four, where life was certainly prolonged, and I have hopes that in case six if I can keep it under observation so as to apply the cauterizer to any suspicious points at once, I may be able to prolong life by at least two years. Some form of operation I am convinced is, however, the only method of treatment that we can adopt with the data at our disposal at present, and yet we have to confess to our patients that our most recent authority, Lambert Lack, states that "it is probable that almost every case of Sarcoma of the nose ends fatally," "that in my most successful cases of alveolar Carcinoma recurrence took place in a little over two years after operation"—while in Squamous Carcinoma the fatal issue may be postponed four to five years or even longer.

CHRONIC APPENDICITIS WITH TUMOR MOVEABLE AND RECURRENT HAEMMORHAGE.*

By EVERETT HICKS, M.D., Port Dover.

THE case I am about to report is one of those classed as relapsing appendicitis in Osler's Modern Medicine, and the unusual features of the case were moveable tumor and recurrent haemorrhage.

W. P., age 11, a boy of fair physique. Previous to January, 1905, he was in good health. That month he had a mild attack of scarlet fever with an acute attack of typical appendicitis closely following it. During the succeeding six months he had numerous attacks with severe pain, vomiting, marked rigidity and tenderness. I advised operation but this was refused and I lost the case. In the summer of 1907, two years ago, I saw him again in consultation with his physician. The patient had a sharp attack, a marked tumor was present in the appendiceal region and he had also had a moderate haemorrhage from the bowels. His physician diagnosed intussusception, but it still seemed to me a case of appendicitis and I advised against operation in his condition at that time. Throughout 1907 and 1908 he had probably a dozen attacks of similar character.

In the latter part of 1908 he came under my care again and I saw him in five attacks. The first day of each attack was characterized by severe colicky pains, sometimes a diarrhoea, vomiting and a fever of

* Read at the meeting of the Ontario Medical Association.

101 degrees. During the second day constipation and fever of 100 degrees. The tumor would be plainly palpable low down on the right side close to or below the anterior superior spine. By the third day but little fever, but the haemorrhage would occur and the tumor might or might not be in a new location. As the attack wore off the tumor would often be found high up and to the right of the umbilicus and freely moveable. In January of this year I operated at my private hospital and found conditions as follows: A very moveable cæcum and a long post-cæcal appendix not adherent in any way but angulated and vascular and with its mesentery shortened. The shortening of the mesentery caused the ileum and the cæcum to be obstructed by drawing them together and a tumor partly gaseous and partly inflammatory was produced. As the inflammation subsided and peristalsis became more active the tumor moved up or down swinging on the loose cæcal attachment. I could find no reason for the haemorrhage. Since operation the patient has had one or two mild painful attacks but no haemorrhage, no fever nor tumor during these attacks. His general health is better and his chronic constipation is cured.

THE CARROLL FUND COMPLETED.

It will gratify all to learn of the completion of the fund for a home for the wife of Major Carroll of yellow-fever fame. Major Ireland, of the medical corps of the Army, who so kindly assumed charge of the receiving of remittances, announces that the contributions now in his hands are sufficient to pay off the entire indebtedness on the property and leave a small balance. Further contributions for this fund are, therefore, unnecessary. The committee is to be congratulated on the able and rapid manner in which it has raised this amount, and the profession at large, and others, are to be thanked for the manner in which they generously and promptly responded to the appeal for contributions. The success of this undertaking is an evidence of the honor and esteem in which Dr. Carroll's memory is held for his self-sacrifice which led indirectly to his fatal affliction. In suffering himself to be bitten by yellow-fever mosquitoes as one of the necessary steps in solving the problem of that disease, Dr. Carroll merely followed what seemed to him to be in the line of duty. But history inscribes his name among the heroes and martyrs, and enrolls among his debtors not only his profession and science, but also commerce, his nation and the whole world. *Jour. A. M. A.*, July 3.

PERSONAL AND NEWS ITEMS.

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ONTARIO.

Dr. Towle, of Springbrook, has sold his practice to Dr. Charles Totten.

Dr. James LeTousel, of Goderich, has passed the joint examination of the Royal College of Physicians and Surgeons of Edinburgh.

Dr. A. B. Welford, of Woodstock, is the president of the Canadian Club in that town.

Dr. Thistle, of Toronto, is taking a trip to the west coast this summer.

Dr. Ernest Jones, of Toronto, is spending the summer in Europe, doing work on the nervous system.

On 9th July, Stratford carried a by-law to grant \$15,000 for an extension to the General Hospital Building.

Drs. Drake and Meek, of London, have gone to Europe to attend the International Medical Congress.

Dr. McPherson has succeeded Dr. Bingham as Medical Health Officer of Peterborough.

Dr. James S. Sprague, who practiced for 35 years in Stirling has removed to Perth.

Drs. Ryerson, Bruce, McPhedran, Primrose, W. H. B. Aikins, and Harris have gone to Europe to attend the International Medical Congress.

Dr. Harold Clarke, son of the Dean of the Medical Faculty of the University of Toronto, has been appointed to the House Staff of Blackwell's Island, N.Y.

The Secretary-Treasurer of the National Sanitarium Association has received a check for \$500 from the McArdle Estate of St. Catharines, in aid of needy consumptives in the Muskoka Sanatorium.

Dr. H. C. Elliott, of Cobourg, has been appointed by the Ontario Government official examiner of lunatics for the counties of Northumberland and Durham.

There is to be established at the University of Toronto, by the Medical Alumni, a scholarship in memory of the late Dr. G. A. Peters. A committee is raising a fund of \$5,000 for the scholarship.

The supplementary examinations in medicine begin on September 14. Wednesday, September 1, is the last day for receiving applications to write on these examinations.

The cooks in the Victoria Hospital, London, went on strike because the Lady Superintendent, Miss Stanley, would not allow them to wash clothes in a room where food was prepared for patients. Miss Stanley is sustained by the hospital trustees.

Dr. Sheard has agreed to accommodate a case of smallpox from the Dovercourt district outside Toronto's limits in the Swiss Cottage Hospital. This is a young girl, but it is not known how she contracted the disease. The township authorities have agreed to pay the city \$200.

Sir James Grant, of Ottawa, attended the meeting of the American Society for the Study of Alcohol and other Narcotics. He gave an address on "Disturbed Nutrition in the Nervous System," and on motion of Drs. MacNichol and Crothers was tendered a hearty vote of thanks.

The Court of Appeal has granted a new trial in the case of Dr. Stephen B. Pollard, of Toronto, setting aside the conviction against him for performing an unlawful operation. The ground for this judgment is that evidence was admitted at the trial which should not have been accepted.

Mr. John Ross Robertson has had a plant installed at the Hospital for Sick Children, Toronto, for the Pasteurization of Milk. It is capable of treating milk for 2,000 children. The needs of the institution will be first attended to, and then outsiders may secure pasteurized milk at cost.

There is to be established at Toronto University by the medical alumni scholarship in memory of the late Dr. Geo. A. Peters. The committee consisting of the following: Prof. I. H. Cameron, Dr. F. Le M. Grasset, and Dr. Primrose, plan to raise \$5,000, and \$2,000 of that has already been subscribed.

The supplemental examinations in medicine for the University of Toronto have been fixed for 14th September, 1909. The applications to write on these must be in by 1st September. Registration begins on 14th, and the Academic year on 28th September. The opening lecture will be given at 8.30 p.m., on the latter date.

Peterborough has decided to build an isolation hospital, and work will be started as soon as possible. The smallpox patients there, of whom there were thirty at one time, had to be isolated in a large tent. The epidemic has been pretty well stamped out, there being only three cases at present.

In order to become a student in the department of medicine of the University of Toronto the student must have completed his matriculation by securing one of the following standings: (1) A degree in Arts from a Canadian or British University; (2) have matriculated in Arts or Law of the University, or (3) have registered as a matriculate of the College of Physicians and Surgeons of Ontario.

An interesting meeting of the Niagara District Medical Association was held in Welland, when Dr. Barker, the young Wellander who succeeded Dr. Osler at Johns Hopkins, Baltimore, delivered an illustrated lecture on new methods in the diagnosis of the heart. The following

officers were elected:—President, Dr. Wilson, Niagara Falls, N.Y.; Vice-President, Dr. Sheenan, St. Catharines; Secretary-Treasurer, Dr. N. Walker, Niagara Falls. Following the meeting the visiting physicians were entertained by the staff of Welland County Hospital.

Professor Ramsay Wright in addressing the International Council of Women on the subject of heredity, said: "Statistics show that the fertility of the drunkard, the insane, the criminal is higher than the normal birth rate. This is serious, indeed. Many prominent naturalists have said that it would be better to allow nature to take her course and thus weed out those with an abnormal craving for drink, leaving only a race of strong people, capable of withstanding temptation, rather than to introduce prohibition. This latter method, though a shorter way of getting rid of liquor, does not destroy the craving. Tuberculosis, or the root for the disease, insanity, criminal tendencies and other diseases were also transmitted by heredity, he said. Marriage regulation, affecting criminals, habitual drunkards, those having mental trouble, and men and women infected with transmissible chronic disease, was the only sure method of putting a stop to the conveyance through marriage of these disturbances which have created so much trouble."

QUEBEC.

Dr. Ridly MacKenzie, of Montreal, is having a holiday in Scotland.

Dr. T. G. Roddick, of Montreal, is in poor health, and is spending the summer in Europe.

A citizen of Montreal has given \$125,000 towards a sanatorium for tuberculosis.

Drs. Shepherd and Birkett, of Montreal, are in Britain, and will likely take in the Congress at Budapest.

The following interesting extract is taken from Dr. Charlton's article in *The Montreal Medical Journal*:

"This piece of early history of the growth and development of hospital work and medical education is worthy of note.

Two of the most important events in its medical history had already taken place in Montreal. The establishment of the first English hospital—the Montreal General Hospital—and the first medical school—the Montreal Medical Institute.

The hospital had now been in existence for ten years, and during these years it gave ample promise of the ultimate high position it was to occupy not only in Montreal but throughout the whole of Canada. With what pride must its little band of faithful workers have watched its growing usefulness. The first addition to the hospital was a wing added in 1832 in memory of its first President, the Hon. John Richardson, as one of Montreal's oldest and most respected citizens. It was

resolved to perpetuate his name and connection with the hospital by building a new addition to be named after him. The public subscribed largely, and in September, 1831, the corner stone was laid. By the 7th of December, 1832, the new addition was ready for patients. With this new addition the hospital now contained 19 wards, and 160 beds.

The founding of a medical school in Montreal had given a great impetus to the study of medicine. Each year the school grew in usefulness, but the year 1829 saw a change; it ceased to be an independent school, and became known under the name of the Medical Faculty of McGill University. The founders of the school gave up its identity to save the Charter of that University, and it is interesting to note that it was owing to a medical man that there was any University, for if it had not been for the untiring exertions of Dr. Stephenson, who, when others were indifferent, worked with such energy that he secured the bequest of James McGill for a college, when his will was being almost successfully put aside by his heirs. From that time to the present, it has been the leading Faculty in the University, making the name of the University known far and wide through the names of its teachers, "composed as it always has been of men ranking among the first in the profession." The Medical Faculty has every reason to be proud of the long list of names of its staff, men who set the love of their profession before the gain of money, and it was a common occurrence for them to help out the meagre income of their Faculty from their private means.

As Dr. Osler has expressed it, 'faithfulness in the day of small things may be said to have been the distinguishing feature of the work of the Faculty in these early days. The lives of the senior members taught us youngsters the lessons of professional responsibility, and the whole tone of the place was stimulating and refreshing.' Again, the testimony of Sir William Dawson, in his address at the Semi-Centennial—'They were able and good lecturers, fit men to make the beginning at such kind of work,' and then he mentions the names of Drs. Holmes, Campbell, Hall, Bruneau and Fraser, etc.

The first session of the Medical Faculty of McGill took place in the winter of 1829-30. In the session of 1830-31 the students of the Medical School formed themselves into a Medical Society, and this was the parent of the present fine society that the students now possess. It seems strange that during all these years the students should not have had a journal of their own. Some years ago the matter was brought before the undergraduate body and the advisability of starting a journal suggested. The proposal was enthusiastically received. The late Dr. James Stewart so approved of the idea that he spoke to the students at one of their meetings, offering his support to such a scheme. The first diploma was issued by the Medical Faculty in 1833 to E. M. Logie. It

is not on parchment but on ordinary paper, the size of foolscap, and written in the neat, legible handwriting of Dr. W. Robertson. The diploma was recently presented to the Medical Faculty by the grandson of Dr. W. Robertson, the late Angus Hooper, Esq.

Before the year 1833, the Medical Faculty moved from its first quarters, No. 20 St. James street, to a larger house in the same street, which stood between the Bank of Montreal and the Cemetery. The school remained there until the year 1843. The winter course lasted from November 2nd to the first week of April, a term of about six months. Five lectures per week were given, and two lectures a week in the Clinical Course."

MARITIME PROVINCES.

The Maritime Medical Association met this year at Charlottetown, P.E.I. The meeting was a very successful one.

Dr. N. S. Fraser, of St. John's, Nfld., has been visiting Halifax for sometime.

Dr. A. C. Hawkins has completely recovered from his attack of typhoid fever, and resumed work again.

Dr. J. W. Clarke, of Tatomagouche, lost his only son, aged ten years, a short time ago.

Dr. F. V. Woodbury was operated on recently for an attack of appendicitis. He made a good recovery.

WESTERN PROVINCES.

Regina is asking for tenders for a hospital to cost \$100,000. The work is to go on at once.

The Gray Nuns, of Regina, are going to erect a hospital to cost \$150,000. The city donated the site.

At the recent meeting of the Masonic Grand Lodge of Saskatchewan Dr. John. M. Shaw, of Regina, was re-elected secretary.

The Regina Clinical Society is doing good work. The report of its meetings show that much interest is taken in them by the local physicians. Dr. John M. Shaw is president.

The annual meeting of the Saskatchewan Medical Association was held in Saskatoon, July 6th, 7th and 8th. The programme was a good one, and the interest in the meeting excellent.

At the convention of the University of Saskatchewan the degrees of M.D., C.M., were conferred on A. S. Gorrell, William Dow, A. G. Graves, and Harry Morell.

The following are the officers of the Manitoba Medical Society; Dr. Harvey Smith, President; Dr. Hicks, 1st V. President; Dr. J. Matheson,

2nd V. President; W. J. Halpenny, Hon. Secretary; Dr. Rorke, Hon. Treasurer; Drs. Wright, Keele, Ross, Speechly, and Harrington, Executive Committee.

The elections for the College of Physicians and Surgeons of Saskatchewan resulted as follows: Dr. Stanley Miller, Battleford; Dr. A. M. G. Young, Saskatoon; Dr. J. T. Irving, Yorkton; Dr. A. E. Kelly, Swift Current; Dr. W. A. Thompson, Regina; Dr. H. Eaglesham, Weyburn; Dr. A. W. Argue, Grenfell.

BRITISH COLUMBIA.

An important meeting of the Medical Council was held July 17th. The Council heard the plea of the visiting physicians from the middle west for reciprocity in registration in the proposed Interprovincial Association of Manitoba, Saskatchewan, Alberta and British Columbia. The important subject will be fully considered and finally dealt with at the annual meeting of the Council to be held at Seattle on July 27. The Council took drastic action upon a complaint against one of the members of the association, striking his name off the rolls. This physician is Dr. William H. Willson of Nelson. Dr. Willson had, it was alleged, while in a state which rendered him unfit to attend any patients, attended a case of confinement in which the patient died. Dr. Willson had been practising in this Province for ten years. *The Globe*, Toronto.

FROM ABROAD.

The Royal Institute of Public Health of Britain has awarded the Harben Gold Medal to Professor E. Von Behring, M.D., Marburg, Germany, for his eminent services to public health.

South Africa has lost two excellent physicians in the death of Dr. W. A. Brodie, of Johannesburg, at the age of 54; and Dr. P. F. Grant, of Potgietersrust, in his 40th year. He was a son of the late Sir Alexander Grant, formerly principal of Edinburgh University.

The population of Japan is placed at 50,000,000. It is estimated that there are about 750,000 insane persons in the country. There is practically no provision for these. Japan is quite behind in this matter.

Dr. J. Hall, of St. John's Wood, London, has bequeathed the University of Glasgow £35,000. It is to found the "Hall Tutorial Fellowship" in surgery, medicine, and midwifery. Each fellowship to £200 per annum.

A keenly contested struggle has gone on for some time between the medical men in New South Wales and the lodges on the matter of fees. The medicals contending that they are inadequately paid, and the lodges showing a disposition to sweat the profession.

Dr. John Thomson, of Brisbane, Australia, died at the age of 62 in May last. He had filled very important public offices for 35 years in Queensland. He held the rank of Colonel in the Defence Forces of the Commonwealth.

According to the statements of Dr. L. Rogers, Indian Medical Service, no less than 17 per cent. of all the deaths in India is due to tuberculosis. This makes the disease a more serious affair than the plague, cholera, smallpox, and dysentery.

D. M. Bourneville, M.D., Physician to the Bicêtre, of Paris, died in the end of May last. He graduated in 1870, and gave much attention to nervous and mental diseases. He was a close associate with Pascal, Claude Bernard, and Charcot.

In the London County Council meeting, Dr. Beaton said that there were 60,000 London school children in need of treatment of the eyes, 15,000 were suffering from disease of the ears, and 4,000 had ringworm, out of a total of 600,000 children. There is room here for preventive medicine.

Professor D. J. Cunningham, the eminent anatomist died on 23rd June. A few months ago he went Egypt in the hopes that rest and the change of air would restore his strength. It failed, however, and he died shortly after returning home. He was professor of anatomy in the University of Edinburgh.

The Imperial Army Council has informed the Militia Department of Canada that two commissions will be granted annually in the Royal Army Medical Corps to Canadians who have qualified in the medical schools of Canada. One candidate is to be nominated half yearly by the department.

The people of France are beginning to realize the evils of the large amounts of alcoholic beverages consumed by the people. France is highest on the list of the European countries. It is claimed that the enormous quantities of alcohol consumed is a potent factor in the decrease in the population of the country.

Many who visited Edinburgh during the past 25 years, will regret to learn of the continued ill health of Professor John Chiene, C.B. He was a student under Goodsir, Lister, and Syme. He succeeded Professor James Spence in 1882. During all these years he has been connected with medical education in Edinburgh he has never forgotten the dying injunction of Goodsir—"Teach the Students." Mr. Chiene has been compelled to tender his resignation of the Chair in Surgery.

From the reports of the Medical Councils of the Transvaal, Natal and Cape Colony, we learn that these governing bodies are very strict as to the registration of practitioners, dentists, midwives, and nurses. A Dr. Kauin had published a pamphlet treating of private diseases. He

was ordered by the Transvaal Council to desist from its publication and recall from the market all unsold copies, and that he would be examined in three months to ascertain if these conditions had been carried out.

A German physician states that health and longevity are influenced by weight. He found the greatest vitality and lowest mortality in persons whose weight is within 10 per cent. of the standard. His conclusions are based on the records of 200,000 males. For the normal weight of a man 40 years old and 5 feet 6 inches tall 150 pounds is accepted, while the rule adding three per cent. in weight or each extra inch proves fairly accurate. The standard weight increases with age in little men up to 45, in middle-sized men up to 50 and in the tall up to 55 or 60.

The York Health and Housing Association in England has done much good education work. The effort of the society is to create a sound public opinion with regard to health, and to be in a position to do this the members have had to resort to the best authorities on the subject and have taken from the first their stand on scientific principles. Two valuable charts have been issued setting forth the comparative nutritive values of foods, and energizing values as well as by means of coloured designs. Along with these are given tables of quantities of foods necessary and simple recipes within the means of persons of small income. The charts have been widely distributed throughout England. 90,000 copies having been sold. They have proved of immense economic value, showing as they do that no family of five persons can live on seventeen shillings a week.

OBITUARY.

J. M. DUNSMORE, M.D.

Dr. Dunsinore died recently in Stratford, at the age of 77 years. For many years he enjoyed a very large practice and was highly esteemed. He took a wide interest in things outside of his professional duties.

P. E. JONES, M.D.

Dr. P. E. Jones, ex-Indian Agent of the Mississaugas of the New Credit, son of the celebrated missionary and chief, the late Peter Jones, and a personal friend of the late Sir John A. Macdonald, died at Hagersville on 29th June, 1909, after a lingering illness. He was a life member of St. John's Chapter, A.F. & A.M., Hamilton. Dr. Jones was a graduate

of Queen's, and a noted chess player. He at one time owned the largest collection of Indian relics and curios in the Province, many of which are now to be seen at the Washington Institute. It was chiefly through his efforts that the claim of the Chippewa Indians against the Dominion was admitted.

JOHN R. BALLAH, M.D.

Dr. Balloh was in his 30th year. He was assistant pathologist in the Provincial Bacteriological Laboratory at Regina. He was very highly esteemed by all who knew him.

A. S. MARTIN, M.D.

Dr. Martin was in his 35th year. He had always practised in Regina. He was a graduate of Trinity University, Toronto. He leaves a widow.

W. G. RATCLIFFE, M.D.

Dr. W. G. Ratcliffe, aged 31 years, one of the most promising physicians of St. Catharines, died on 12th July, from typhoid fever. He was taken ill about ten days ago. He was born in Ancaster, Ont., in 1878, and was a graduate of Toronto University in 1899. He leaves a widow.

W. G. McINTYRE, M.D., M.P.

Dr. Wilbert G. McIntyre, M.P. for Strathcona, died 21st July, following an operation for kidney trouble. The attendant physician, Dr. J. M. Holson, after consultation with other doctors, determined to take the only remaining chance to save the patient's life, and had him removed to the General Hospital. He did not rally from the shock, however, passing away about five o'clock.

MISCELLANEOUS.

BURDEN OF PROOF AND OTHER REQUIREMENTS IN ABORTION CASES.

The Supreme Court of Colorado says, in *Fitch vs. People*, where it affirms a conviction of procuring an abortion, that the law of that state has wisely provided that but one fact can justify the procuring of, or attempting to procure, a miscarriage; that is, that the act is done by or under the advice of a physician or surgeon, with intent to save the life of the woman, or to prevent serious and permanent bodily injury. It is not incumbent on the state to prove beyond a reasonable doubt, or at all, that "the use of the instrument was not necessary to save life," that it was not used "to prevent serious and permanent bodily injury," or "was not done under the advice of a physician or surgeon." The exceptions contained in the statute are matters of defence which must be made to appear by the defendant from the evidence.

The crime is complete when the instrument is used with the intention of procuring a miscarriage. Whether miscarriage does or does not follow is immaterial. An instruction offered in this case appeared to have been drawn on the theory that the woman might have miscarried by reason of her own acts in the taking of drugs or the use of an instrument, and that proof in support of such a theory would warrant the acquittal of the defendants; but such is not the law.

Again, the court says that the defendant offered no justification for having used an instrument with the intention of procuring a miscarriage, and no instruction on that theory should have been given. She denied that she had used any instrument that could have produced a miscarriage. She testified that she used only a speculum, and that that instrument was used only for the purpose of making an examination, and that its use could not have produced a miscarriage. But the only question presented to the jury by her plea of not guilty and all the testimony in the case was, did she, or did she not, use an instrument with the intention of procuring a miscarriage? And not, did she, or did she not, use an instrument with the intention of procuring a miscarriage, under the advice of a physician, to save life, or to prevent serious or permanent bodily injury? Therefore, even though the instructions apparently cast on her the burden of proving facts in justification, there was no error, because under the testimony no such question should have been submitted to the jury. The burden of proving the facts necessary to conviction devolves on the state; and if, from all the evidence, a reasonable doubt exists in the mind of the jurors as to the guilt of the accused, he must be acquitted. Yet, in a case where justification is not relied on as a defence, the defendant is not harmed by an instruction which casts on him the burden of proving facts in justification.—*Jour. A. M. A.*