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## EDITORIAL.

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### DEATHS FROM TUBERCULOSIS.

A short time ago Dr. C. J. O. Hastings, Medical Health Officer for Toronto, addressed the Imperial Order of the Daughters of the Empire, on the importance of paying more attention to the deaths from consumption.

This is a subject that we have been insisting upon for many years. We have called attention to the number of lives lost, to the value of these lives, to the number ill, to the monetary loss from sickness, to the spread of the disease by infection, and to the means of preventing this spread.

People are slow to learn such lessons, and, therefore, they must be repeated again and again. If there were 50,000 cases of bubonic plague, with 12,000 deaths in Canada in one year, there would be the most unceasing efforts to control the disease. In the case of tuberculosis, the people stand idly by and complacently accept the situation as a dispensation of Providence, whereas it is really the result of ignorance, carelessness, and weakness.

Of the means of spreading the disease, sputum takes the first place. This may be dropped around and disseminated on particles of dust, or be conveyed to foods or drinks. Sputum may also be expelled into the air in the act of coughing. These droplets may be inhaled by persons close by.

Flies have been shown to spread the bacilli. This is now a settled fact in bacteriology. The organisms of disease, especially the bacilli of tuberculosis, have been found on the bodies of flies, and also in their fecal deposits. Flies have been observed to carry the bacilli from sputum to exposed milk.

Coming to the question of the influence of cow's milk in causing tuberculosis, it must be admitted that there is much diversity of opinion. The weight of opinion is on the side that bovine tuberculosis may be conveyed to the human subject through the milk. This is mainly true of children. It is not by any means a very frequent occurrence, however, and we must turn our thoughts again to the real cause of the spread of the disease as being from person to person. The act of coughing, the

careless disposal of the sputum, and the swarms of flies, here play their part.

It is a healthy sign of the times to find the lay press on the side of reform and advancement in this great work. The following editorial comment from the *Star* is deserving of notice:

"There were 5,459 deaths in Toronto last year, and of these 600 were due to tuberculosis, or one in nine. This is startling in view of the fact that consumption is a disease curable in its early stages, and that by vigorous measures of prevention it might be made as rare as smallpox in Canada.

"Dr. Hastings, Medical Health Officer of Toronto, says that the need of the hour is a central dispensary in Toronto, where cases can be received and followed to their homes by nurses. Patients will be taught to treat themselves, and also how to safeguard others in their homes. When patients cannot engage a doctor, the department will test the other inmates of the house. Then provision will be made for isolation, either at home or in an institution.

"Dr. Hastings sees a grand opportunity for some public-spirited citizen to build a monument for himself in the form of a dispensary. Some of our wealthy men have made handsome contributions for various philanthropic purposes. Here is something new and distinctive, which will provide scope for benevolence and give the donor a fresh interest in life."

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### THE ONTARIO MEDICAL COUNCIL.

Dr. C. K. Clarke, Dean of the Medical Faculty of the University of Toronto, has been handing out some plain words regarding the Ontario Medical Council. The following quotations speak for themselves:

"Possibly the greatest hindrance to the highest development in the teaching of medicine in the university," states Dr. Clark, "has been caused by the fact that we are not able to adopt the most advanced methods, owing to the demands of the Medical Council for Ontario. It is an anomaly that medical educational standards and methods in a provincial university must be determined very largely by another provincial body out of touch, to a great extent, with university ideals and the requirements of modern medicine.

"That the Medical Council is a necessity no one denies; that its chief function is to direct medical education, set the standard and to conduct examinations, rather than to protect the general public from quacks and

dishonorable and criminal practitioners, is a very different matter. To many the latter function seems to be the all-important one. At all events the time has come when we must consider the advisability of endeavoring to establish the University Medical Faculty in such a position that it may develop, unhampered by narrow and humiliating restrictions.

"Students who pass the university examinations, and have then to undergo the council examinations, properly and justly complain of the strain to which they are unnecessarily subjected, and frequently assert that when they reach the final test, they are so fagged mentally that they are quite incapable of doing justice to themselves. No doubt this is quite true, and when we recollect that in many instances students of the very highest type, whose knowledge of their subjects was undoubted, have failed before the council, while weak students have passed, the explanation seems adequate."

That the Medical Council which has gone out of existence into a somewhat dishonored history did many things that lowered its standing, both in the eyes of the medical profession and the public, there can be no doubt. There was a fierce storm over the administration of the funds. There has also been much discontent on the method of conducting the examinations, and the results of the same. The curriculum of studies has not been exempt from criticism.

But the Medical Council has done much good in the past, and for the sake of its past, we must be prepared to forgive some of its recent failings. The medical council of Ontario is the Medical Parliament for Ontario. It is the one body that does not teach and is not looking for students, nor under any inducements to make itself popular with those who intend to study medicine.

We have often pointed out that in Great Britain a degree from the universities, and a diploma from one of the many teaching colleges, enables the holder to practise. All he has to do is to register his qualification in London, Edinburgh, or Dublin.

The General Medical Council of Great Britain fixes a standard and generally sees that the universities and colleges keep their standard of teaching and examination up to the requirements of the Medical Council. The condition in Ontario differs in this that the candidate for registration must pass the examinations of the Medical Council.

We have said many times in as plain words as we can command that there are too many examinations. It is a grave injustice to a student to leave his university examinations while fatigued and at once undergo the council ordeal. But this could be overcome by a joint board of

examiners, or by the Medical Council having assessors on the university board of examinations.

Whatever may be the outcome of the discussion, one thing must not be the result of it, namely, a medical educational monopoly. We are of the opinion that whatever rights are granted to one university, must be granted to the others, these putting themselves in proper condition, if not so now, to teach their students as modern medicine should be taught. If they cannot do this, then they should pass out of existence.

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### THE RESIGNATION OF DR. J. N. E. BROWN.

It came as a surprise to learn that Dr. J. N. E. Brown had tendered his resignation from the office of Superintendent of the Toronto General Hospital.

Dr. Brown has been a most efficient officer and the good will of the staff and trustees will follow him.

It is very difficult to secure such persons to act as the heads of public institutions and, when secured, they should be properly paid.

To one of Dr. Brown's ability, the salary could not have been the main reason for his holding the office. He loved his work, and made it a great success.

It is intimated that Dr. Brown will go to Europe for some months visiting the hospitals there. In the autumn season he will take up the work of Secretary of the American Hospital Association.

Dr. Brown formerly spent six years in the Yukon, where he did some excellent work in the interests of the health of Dawson City and the Yukon.

Wherever Dr. Brown may go, he will be followed by our very best wishes. He is still in the prime of life, and there is no doubt a bright future lies ahead of him.

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### MEDICAL INSPECTION IN TORONTO SCHOOLS.

The Board of Education for Toronto approved of the recommendations of the Finance Committee regarding this aspect of the board's work.

Dr. W. E. Struthers was appointed Chief Medical Inspector. The names of Dr. W. F. Bryans, Helen MacMurchy, and George Elliott were also mentioned. The salary fixed for Dr. Struthers is \$2,500. Our only quarrel with this is that it is too small, and hope it will soon grow larger.

There are to be eight assistant medical inspectors at \$800 a year. There will be one superintendent of nurses at \$1,800 a year, seventeen school nurses at \$600 each, or a total of \$10,200. One clerk at \$600, supplies are put at \$300, miscellaneous outlays at \$500, and dental inspection at \$1,200. This makes a grand total of \$23,500.

A movement was set on foot that the medical inspection of the schools should be under the Medical Health Officer. This we have on a former occasion opposed. The Board of Education is expending the money on the improvement of the conditions of our public schools, and this board ought to have the management of the inspection.

We are glad that the city has at last decided to do something worthy of its name.

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### THE VALUE OF REPORTING INFECTIOUS DISEASES.

Within the past few days the papers have been telling us that doctors are not reporting the cases of infectious diseases that come under their observation.

This is not news to the medical profession; for we think it has long been known that there has been marked indifference in the matter of reporting these cases by some members of the medical profession.

In a circular letter sent out recently by Dr. Hastings, M.H.O., the section of the Health Act is quoted to the effect that "Diphtheria, small-pox, scarlet fever, cholera, typhoid fever, measles, whooping cough, or other diseases dangerous to the public health," should be reported.

We are of the opinion that very few reported cases of measles or whooping cough. Typhoid fever may have been reported by some, but it certainly was not the general practice to do so. Mild cases of scarlet fever may often have been left unmentioned.

We have had the reporting of infectious diseases in Toronto for many years, and we are of the opinion that the practice has not materially lessened the incidence of these diseases.

So far as measles and whooping cough are concerned, it comes to this, that every one who is born and lives will one day have both of these diseases. We think that all efforts to prevent their spread are quite useless. Coming to typhoid fever, it might turn out that the city is guiltier than the people. The city supplies the people with infected water. Typhoid is very rarely contracted from person to person. All over the country and in all the cities of the country are those whose excreta are contaminating water and milk. Before municipalities say too much, they had better put their own houses in order. They should not sell disease-laden water.

These diseases will come in epidemic form. In Toronto in January, 1910, there were reported 140 cases of scarlet fever; while during the January of this year there were 331 cases. Diphtheria and typhoid fever this January were not so frequent as during January a year ago, whereas scarlet fever was two-and-a-half times more common.

We do not advocate the doing away with the reporting of certain infectious diseases. But we do think that the reporting of measles and whooping cough is quite unnecessary. We further believe in a period of, say 50 years, the reporting of scarlet fever will make very little if any difference to the number of cases that actually occur, as adults are liable to the disease and readily contract it.

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### HOSPITALS FOR THE INSANE, IDIOTS AND EPILEPTICS.

The report for these institutions for Ontario is to hand for the period from 1st January, 1909, to 31st October, 1909.

The number of males cared for was 2,634, and the females numbered 2,897.

The amount collected from paying patients for the ten months was \$140,048.18. The amount contributed by municipalities was \$100,188.60, or a total amount collected of \$240,230.78.

The daily average of patients was 5,500. The admission for the ten months were 843, and the deaths were 259. There were 450 discharges, as follows: Recovered, 277; improved, 152; unimproved, 21; not insane, 1.

Training schools for nurses have been inaugurated at Hamilton, Kingston, Toronto, Mimico, Brockville, and London. Much good is expected from this movement, as it will greatly improve the quality of the nursing.

During the ten months there were deported 168 persons. This would mean to the Province a saving of over \$400,000 on maintenance. In 1906 there were 19 persons; in 1907, 87 persons; in 1908, 263, and in 1909, 168, or a total of 537.

The recovery rate was 5.09 per cent. of the total number of insane. Of the 843 admitted during the year, there was no trace of any hereditary taint in 277, and nothing was ascertained in 325 cases. There was a paternal taint in 84, a maternal in 80, both paternal and maternal in 18, and a collateral taint in 59. This would not go to show that heredity plays as important a role as some have thought.

The total expenditures for ten months were \$736,796.95. The total days' stay of patients for the same period was 1,672,100. This would make the average daily cost of maintenance per patient to be 44 cents.

The results in the several institutions was as follows: Per day in cents—Brockville, 43.6; Cobourg, 44.3; Hamilton, 41; Kingston, 49.1; London, 43.6; Minico, 47.7; Orillia, 29.8; Penetang, 47.2; Toronto, 48; Woodstock, 80.3.

The report is a unique credit to the management of the various institutions.

In the institution at Orillia for the care of idiots, we find there 786 patients. The income from paying patients was \$15,967.88 for the ten months ending 31st October, 1909.

In the institution for epileptics at Woodstock there were 121 patients, 70 males and 51 females.

The total expenditures on the Orillia institution was \$68,057.11, and on the Woodstock institution, \$24,525.27.

In the epileptic institution we find that from 1st January to 31st October, 1909, there were admitted 27 males and 15 females. There were discharged improved, 18; unimproved, 3; died, 3; number who left, 24, leaving 121.

This institution is one of the most interesting and useful of all our public charities. So far it has been very helpful to many of this class.

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#### THE MEDICAL DEPARTMENT OF LAVAL UNIVERSITY.

In our January issue we made some observations on the medical department of Laval University. These remarks were based upon the Carnegie report on the medical education in the United States and Canada.

The remarks have brought forth a carefully prepared reply from Dr. E. P. Lachapelle, Dean of the Medical Faculty of Laval. We very gladly give publicity to what Dr. Lachapelle has to say. It will appear from his statement that, so far as Laval is concerned, the Carnegie report must be taken with more than the usual grain of salt.

We wish the truth to be brought out in all these matters, and, if the Carnegie report has done any injustice to any of our medical colleges, we wish to do what we can to rectify that injustice.

We have gone through the announcement of the Laval University, and find that the statements of Dr. Lachapelle are well sustained. There are 21 professors and 32 demonstrators and instructors. From the announcement for 1910-11 we translate the following statement: "The Faculty of Medicine has in the University building an amphitheatre, a hall for dissections, and four laboratories for chemistry, histology, bacteriology and medical electricity."

The fees are as follows: For annual registration, \$5; the entire course of annual lectures, \$100; hospital ticket, yearly, \$8; maternity, \$8; M.D., \$20. There are fees also for occasional students and for those who take only some subjects. It may be assumed that each student pays annually about \$125 in fees. There are 225 students recorded as in attendance. This would yield a revenue of some \$28,000 from fees. A grant from the Government of Quebec brings the income up to \$30,000.

Most of this income goes into the working of the college, so that the professors do not receive much for their services to medical education.

When Dr. Lachapelle speaks of the income of the University of Toronto, it will at once be apparent that this does not go to the medical department. Though the medical faculty of the University does benefit by its connection with the state, much of its income is from fees.

We are sure Dr. Lachapelle's letter will be read with interest.

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#### BILL REGARDING OPIUM AND OTHER DRUGS.

We give in another part of this issue the text of the bill dealing with opium, morphine, and cocaine.

That it will prove beneficial there can be no doubt. There cannot be too many restrictions placed on the sale of these drugs.

We have read the bill with care, and do not feel quite sure how far it will restrain the sale of these drugs in patent and proprietary medicines. It might be the section 5 would cover this aspect of the sale of these drugs.

The words in section 5, "and any druggist who gives, sells or furnishes any drug except upon a written order or prescription signed by a duly authorized and practising physician, veterinary surgeon or dentist, or who, without the authority of the prescribing physician, veterinary surgeon or dentist, uses any prescription to sell any drug on more than one occasion, etc.," may apply to the supplying of these drugs to manufacturers of patent or proprietary medicines.

These words would also seem to restrain the druggist from putting up any mixture of his own for sale over the counter with any of these drugs in it. It would appear that the druggist may only sell these drugs on the order of a physician, veterinary surgeon, or dentist, and then only once, unless authorized to sell it again to the same person.

We hope this interpretation is the true one for this section. It will avail little to place a bill on the statute book if patent and proprietary mixtures can be placed on the market containing these ingredients.



## THE INFLUENCE OF PARENTAL ALCOHOLISM.

This question has been argued with much ability and energy in Britain for some time. The views of Karl Pearson and Miss Elderton have been subjected to very keen criticism by Miss Sturge, Sir Victor Horsley, Dr. T. B. Hyslop, and others.

Miss Sturge and Sir Victor Horsley have at great length shown the fallacies in the arguments and statistics of Miss Elderton and Karl Pearson. We think the victory clearly lies with the former.

Dr. T. B. Hyslop, in a very able summary of the arguments, concludes somewhat as follows:

It has been shown by experiment that the young of animals that have been treated by alcohol are weaker than in the case of those not so treated.

Epilepsy, some forms of insanity, mental enfeeblement, deaf-mutism, stunted growth, are apt to be intensified in the offspring and to appear at earlier ages when the parents have been alcoholics.

Parental alcoholism does appear to accentuate the downward trend of inherited psychoneurosis. The tendency is for the offspring to become alcoholic or degenerate at earlier ages.

The psychoneuroses which would tend to die out with the influence of intermarriage and new family tendencies so introduced, become stronger, and tend to destroy the family through the influence of parental alcoholism.

With these general conclusions most thoughtful persons will agree. Parental alcoholism reduces the health and vigor of the parent, impairs wage-earning capacity, causes poverty in the home, surrounds the child with bad environments, furnishes the child with vitiated blood in utero and bad milk after birth. There is no use, in face of such facts, to appeal to outworn statistics.

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### IS STERILIZATION OF THE HABITUAL CRIMINAL JUSTIFIABLE?

“Charles Edward Nammack, New York, thinks that if sterilization for criminals is to become general it must be voluntarily submitted to. As a punishment it is barbarous, degrading, and its supposed benefits will not be realized, since the mental condition of the criminal will be bad, and he will have a thirst for vengeance. He will still be in a position to have connection, while he cannot procreate. The experiment has been made by one state. The author states that transmission of a criminal brain to the descendants of the criminal is impossible, since only physical abnor-

malities, susceptibility to certain diseases, and defects of development are transmissible, mental and moral defects being only acquired. Crime and criminality are acquired, the result of environment and parental unfitness. Mutilation of the criminal is characterized as inefficient and absurd as a preventive of crime. Ethically and morally it is unjustifiable. Lack of self-control and of fixed purpose are the causes of crime, and they can be obviated by discipline. The probation system, parole, and reformatories are the best remedies.—*Medical Record*, February 11, 1911."

The foregoing is the official synopsis of Dr. Nammack's article as sent out by the *Medical Record*. From some of its teachings we wish to dissent.

With regard to the sterilization of criminals it is of the utmost advantage that they be deprived of the power to procreate, though not of the power for sexual connection. The evil in the criminal will die with him.

With regard to the transmission of the criminal brain, we differ from Dr. Nammack. We do hold that a low grade of brain with criminal tendencies may be transmitted. We think that every medical practitioner can satisfy himself on this point from his own observation. "Like father, like son," was not spoken for naught. We think it is wrong to state that mental and moral defects are "only acquired."

When Dr. Nammack states that "lack of self-control and of fixed purpose are the causes of crime, and they can be obviated by discipline," we must protest. It is a matter of experience that no possible amount of discipline will prevent some from becoming criminals. They are criminals by birth.

It is quite true that a man of bad mental and moral proclivities may marry a woman of much higher grade. There is the possibility of improvement by her share in the heredity of their children, but there is also the terrible possibility that his influence on the offspring may seriously impair them. Why should such chances be taken?

We hold that the state should do all in its power to prevent criminals, the weak-minded, those with insane tendencies, the epileptic, etc., from marrying. In other words, sow as few bad weeds as possible in the human wheat field.

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#### THE ONTARIO MEDICAL ASSOCIATION.

This association meets this year in Niagara Falls, on May 30, 31, and June 1.

In another portion of this issue we publish the advance programme.

We urge upon the profession of this province to attend the meeting and make the same a great success.

Whatever association may be neglected by the members of the Ontario profession, the Ontario Medical Association must not be that one.

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#### AN INTERESTING DECISION.

Some time ago an action was brought by the Royal Dental College against Messrs. F. W. Gordon and W. J. Bushnell because, as qualified dentists, they had engaged to work for one J. E. Henry, who is not a qualified dentist.

Messrs. Gordon and Bushnell appealed against the action of the dental college for an order restraining the college from penalizing them for engaging with Mr. Henry.

The Court of Appeal has dismissed the action of Messrs. Gordon and Bushnell. The college may, therefore, take action against them.

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#### THE CANADA MEDICAL ACT.

The amendments to the Roddick bill were placed in the hands of Dr. J. B. Black, M.P. for Hants, N.S. These amendments had passed the committee without change. Dr. Neily, one of the members of the House of Commons from a constituency in Saskatchewan, strongly opposed the clause referring to university representation. The committee of parliament adjourned to give Dr. Neily time to communicate with the doctors of his province. In due course he received a telegram from Dr. W. Thomson, president of the Medical Association of the province, to the effect that no surrender was to be made to the universities. We urge that this opposition be withdrawn, and that the medical men of Saskatchewan will not stand in the way of the bill becoming law.

There can be objection to the medical colleges having representation on the Dominion Medical Council. It should be made clear that no medical college or university would have such representation if not engaged in actual teaching. It should also be made plain that if any medical college comes into existence after the passing of the Act it would be entitled to representation. Should this be done, then Saskatchewan would have no cause for complaint, as any medical college that might come into existence in that province would then have representation.

The bill provides for three members of the council appointed by the Government, three elected by the homœopathic practitioners, two elected from each of the nine provinces. This would make twenty-four, as against seven from the universities. In this arrangement there need be no fear, as the eighteen elected by the nine provinces would be a majority.

## ORIGINAL CONTRIBUTIONS.

## THE ONTOGENESIS OF PNEUMONIA, HISTORICALLY CONSIDERED.\*

By J. H. ELLIOTT, M.B.,

M.D. in Medicine and Clinical Medicine, University of Toronto; Senior Assistant Physician, St. Michael's Hospital.

PNEUMONIA is by no means a modern disease. That it was well known to the ancients the writings of Hippocrates and others bear witness. By these writers it was confounded with pleuritis and other acute thoracic diseases, as reference to their works will show. Celsus refers to the spitting of blood and phlegm as one of the symptoms of severe pleurisy. We find this attempt at differentiation down to the time of Sydenham, when it was recognized that no real distinction could be made and Sydenham's view was generally accepted.

"Having thoroughly considered all the various phenomena of a pleurisy, I conceive it to be only a fever occasioned by a peculiar inflammation of the blood, whereby nature throws off the peccant matter upon the pleura, and sometimes upon the lungs, whence a peripneumony arises; which, in my opinion, only differs from a pleurisy in degree and in respect of the great violence, and the larger extent of the same cause."†

Wallis, in his edition of Sydenham, writes: "It has been the custom of almost all authors, when treating of inflammations of the internal parts of the chest, to make a distinction betwixt pleurisy and peripneumony—it is seldom found but these two affections are united in the same disease. Besides, they can scarce ever be distinguished by the symptoms, and to discriminate them would be of little use in practice, inasmuch as they require precisely similar methods of cure."

From Sydenham to Laennec peripneumony was the term applied to the more severe of the acute diseases of the chest, and pleurisy to the less severe.

The diagnosis of pneumonia as we recognize it to-day was made possible by the discoveries of Auenbrugger and Laennec, and the physical signs of the disease were clearly pointed out by Laennec. Later the minute anatomy of pneumonia was first described by Rokitansky, who differentiated the lobar and lobular varieties. Laennec gives to Pinel the priority of restricting the term pleurisy to inflammation of the pleura. Previously it had been used loosely to signify a pain in the side, particularly those which are continued and accompanied by an acute fever.

That the exudate in pneumonia was intravesicular and not interstitial was pointed out by Addison. The former belief that the disease was a

\* An address to the Academy of Medicine, Toronto, February 14th, 1911.

† The works of Thomas Sydenham, notes by Wallis. London, 1878.

local one with general symptoms is no longer held, but we now recognize it as a general disease, with only local manifestations in the lung.

And more recent research leads us to believe that it should be classed among the acute infections; that it is in all cases a microbic disease, yet not always due to the same organism.

As in different periods the conception of the disease has varied so has the treatment varied, the pendulum of medical opinion swinging widely.

Hippocrates made but little difference in the details of his treatment of peripneumony and pleuritic affections. For severe pain passing up to the shoulder or arm, he bled early and boldly, even to the extent of syncope if the pain was acute. If confined to the lower part of chest and abdomen he purged gently, withholding food during the purging, and relieved the pain with fomentations, cerates, or linseed poultice. Cupping and the actual cautery are mentioned as useful in certain conditions.

Mild expectorants are advised, particularly after the seventh day. His directions as to diet are very full, generally giving but little food, and that entirely liquid during the fever, and feeding very carefully during convalescence, gradually changing to soft food and then to full diet. Fatty and saline foods are advised, and barley water is perhaps the principal article of food at first; later, wine and honey are added.

The treatment advised by Celsus was as follows:\*

"It is right, if the powers are sufficiently strong, to let blood; but if less, to apply to the precordia cupping glasses without the scarificator; friction on the shoulders, on the arms, feet, and legs, gently over the lungs; and to do that twice daily. As pertains to food, there is need neither of salt, nor sharp nor bitter foods, nor those binding the bowels, but a little lighter food; on the first days gruel is to be given of ptisan, or of maize, or of rice; with this a sorbile egg, pine nuts, bread out of honey, or washed maize out of hydromel; then, for drink, not only pure water, but also luke-warm hydromel, or, if it is summer, also cold. If the disease is increasing, it is sufficient to give these every other day, while it remains in the increase, he should abstain, as much as circumstances allow, from all things except luke-warm water. If the powers fail they are to be assisted by hydromel.

"Against pain warm fomentations are to be applied. Salt, well bruised, mixed with cerate, is serviceable, because it erodes the skin slightly and draws thither the impetus of matter by which the lungs are disordered. A plaster made from those things which draw matter is useful. Nor is it improper while the disease oppresses to keep the patient with closed windows; when it is lessened a little to admit the air three or four times daily, the windows being open a little. Then, in recovery, to abstain from wine for several days; to use gestation, friction, to add to

\* De re Medica, Steggal's translation. London, 1837.

gruels, and the former foods, of greens, leeks, of flesh, heels and tops of pettitoes and little fishes, so that for a time nothing but what is soft and mild be taken."

For the pain of pleurisy incision of the skin and cupping are advised; also an application of mustard out of vinegar. In addition, "it is right to surround the side with a roll of sulphurated wool; then, when inflammation has abated a little, to use dry and hot fomentations."

The treatment outlined by Celsus probably is a good description of that generally used in his time. He is recognized as a compiler rather than as an observer.

Paulus Aegineta defines peripneumonia as "an inflammation of the lungs and supervening for the most part, upon violent catarrhs, cynanche, asthma, pleurisies, or other complaints," but being sometimes the original affection. As do the other early writers, he confuses various inflammatory diseases of the chest.

His treatment follows: "If the peripneumonia was the original affection, and the strength permit, we must open a vein; or if not, we may cup, proportioning the evacuation of the blood to the powers of the patient. Let draughts of the juice of ptisan, or of chondrus, with honey, be taken, or four bitter almonds with semilago, or chondrus having some sweet potion mixed with it, such as hydromel, apomel, or hydro-rosatum. Fresh butter to the extent of three spoonsful is proper also. The patient must also drink the propoma of the decoction of figs with hyssop, or of iris boiled in honied water, or of powdered iris, to the amount of two spoonsfuls sprinkled upon honied water. This also evacuates downwards. To keep up the strength he should be made to drink frequently of honied water alone, and with pine nuts and the seed of cucumbers. And cupping instruments and the cerate of privet, having some iris sprinkled upon it; or the cerate of the oil of rue and dried iris, or that made of wax and rosin, marrow, butter, hyssop, dried iris, and nard ointment may be applied to the whole chest and side."\*

Aretæus gives a minute account of the disease. He remarks that as the lungs have but small nerves there is little pain unless the investing membrane be affected. His directions for treatment include copious bleeding (avoiding deliquium), purging, attenuant and diluent drinks, rubefacients containing mustard, to the chest, alkaline substances, such as soda given in the decoction of hyssop; and, when the fever has subsided, to allow wine devoid of astringency.

Aetius and Alexander Trallianus, physicians of great repute in the sixth century, follow Aretæus closely in description and in treatment.

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\* The Seven Books of Paulus Aegineta: translated by F. Adams, London. The Sydenham Society, 1844.

The Arabian physicians Rhazes and Avicenna, who flourished in the ninth and tenth centuries, treat the disease like the Greeks.

Avicenna was perhaps the first to state that sanguineous expectoration is met with only in pneumonic fever.

The Alexandrian physicians of the twelfth century add practically nothing that is new, but quotes approvingly from Rhazes.

Down to the time of Sydenham (1624-1689) few new observations were made, and the teachings of the Greek and Arabian physicians were more or less closely followed.

Sydenham added to his knowledge of Hippocrates the results of his own experience and observation, and cool, clean, almost unprejudiced by the observations of others, he opened a new era in medicine. His aim was to aid the forces of nature, and this is well shown in his careful instructions as to diet and the general care of the patient.

Sydenham's treatment is best given in his own words, which follow his discussion of the cause and phenomena of pleurisy and peripneumony. (I have noted earlier that he felt that these could not be differentiated.)

"In order, therefore, to cure this disease, I have the following ends in view: (1) To check the inflammation of the blood; and (2) to make a revulsion of the inflamed particles fixed upon the pleura, by proper evacuation. Depending therefore chiefly on bleeding, as soon as I am called in I order about ten ounces of blood to be drawn from the arm of the affected side, and the following draught to be taken immediately after the operation.

"Take of the distilled water of red poppies four ounces; the salt prunella, one dram; syrup of violets, one ounce. Mix them together for a draught.

"At the same time I prescribe the following emulsion: Take blanched almonds, seven; the seed of melons and pumpkins, of each half an ounce; the seeds of white poppies, two drams. Beat them together in a marble mortar, then pour in by degrees a pint and a half of barley water; mix them well, and, when strained, add two drams of rose water and half an ounce of white sugar. Let four ounces be taken every fourth hour.

"I also ordered pectorals to be taken frequently, e.g.: Take of the commoner pectoral decoction, a quart; syrup of violets and maidenhair, of each one ounce and a half. Mix them together for an appozem, of which let half a pint be taken three times a day. Take of fresh oil of almonds, two ounces; of maidenhair and violets, of each an ounce; white sugar, half a dram. Mix them together and make a linctus according to rules of art. A small quantity of this is to be swallowed leisurely, often in a day. Fresh oil of sweet almonds alone, or linseed oil, is also frequently used with great advantage.

"As to diet, I forbid all flesh meats and the smallest flesh broths, and advise the patient to sup barley broth, water gruel, and panada, and to drink a ptisan made of pearl barley, sorrel and liquorice roots, etc., boiled in water, and sometimes small beer. And I also prescribed the following liniment:

"Take of oil of sweet almonds, two ounces; pomatum and ointment of marshmallows, of each an ounce. Mix together for a liniment, with which let the side be annointed, morning and night, applying a cabbage leaf thereto.

"I direct the above-mentioned remedies to be continued the distemper throughout.

"On the same day (the first of my attendance), if the pain be very acute, I order as much blood to be again taken away; or else the next day, and so the third day; and if the pain and other symptoms rage severely I bleed in this manner four days running. But if (1) the disease be less violent and dangerous, and therefore allows me to proceed in a gentler manner; or if (2) the patient be too weak to bear repeated bleeding at such short intervals, then, after bleeding twice, interpose a day or two between every bleeding afterwards. I have seldom known a confirmed pleurisy cured in grown persons without the loss of about forty ounces of blood. In children, however, it is generally sufficient to bleed once or twice.

"I either refrain from clysters entirely, or order only simple ones of milk and sugar.

"To prevent the patient being overheated during the continuance of the distemper, I allow him to sit up a few hours every day, as his strength will permit, which, indeed, is of such moment here that if he be kept always in bed neither the plentiful evacuations of blood nor the most cooling remedies will sometimes at all avail in conquering the symptoms specified.

"Immediately after the last bleeding, and sometimes before, all the symptoms abate, and the patient soon recovers his former strength, when it is proper to give some gentle purgative, and he should be debarred for some days longer from gross foods, and all kinds of spirituous liquors."

Richard Morton (1635-1698), one of the first English authors to lay stress on the contagiousness of phthisis, was an ardent opponent of Sydenham, and highly extolled a heating system of treatment, by which he cured the sick with as great success as did Sydenham with his anti-phlogistic methods.

About the same time (1689) Gideon Harvey published a work on "The Art of Curing Diseases by Expectation."

The expectant method became later a recognized treatment, though not generally accepted. Harvey is notable as the writer who published



scathing, as well as satirical, articles against the physicians of the day. In one he divides them into six classes—ferrea, asinaria, jesuitica, aquaria, lanitaria, and stercoraria—according as their favorite systems of treatment were the administration of iron, asses' milk, cinchona, mineral waters, venesection, or purgatives; or, again, designating them "dung-doctors, who drive out diseases through the anus."

Cullen (1712-1790), in his "Practice of Physic," advises that bleeding be performed in the arm of the affected side, and that it should be as large as the strength of the patient will permit, staying the procedure if the pain and dyspnea are relieved, otherwise continuing to the onset of syncope. Repeated venesection he found beneficial, and abstracted usually four to five pounds in the course of two or three days. Should it be deemed unsafe to abstract more blood, then in case the pain is unrelieved scarification and cupping are to be done. He advised the use of cooling laxatives, and kept the belly open by frequent emollient clysters."

Laennec recognized that pneumonia frequently terminated favorably by crisis when untreated, and even when repeated venesections had been employed without benefit. He usually advised moderate bleeding (24 to 36 ounces) at the outset, but did not urge repeated bleedings, as was the practice in England and in Italy. Venesection was to be avoided if both heart and pulse were weak, also in old persons of a cachectic habit and in patients recovering from other illness.

The extent to which blood-letting was carried is astounding. Forbes, in his fourth English edition (1834) of Laennec, remarks that the amount mentioned by Laennec may be detracted twice or even thrice within twenty-four hours in the beginning of the disease, not only with safety, but with unquestionable benefit; and that it is only in the more advanced stages of the disease that greater caution is necessary.

Andral says that the first bleeding should be from 16 to 20 ounces, and that the operation may be repeated twice or even thrice within the first twenty-four hours.

Chomel says 12 to 16 ounces, repeated within a few hours to the third time on the same day. Renauldin recommended bleedings of two to three pounds, repeated every twelve hours.

In the *Edinburgh Medical Journal* (vol. vii.) we find record of fever being treated in seamen by the abstraction of 50, 60 or 70 ounces of blood at the first bleeding, up to 100 ounces within first twelve hours, and upwards of 250 ounces in the course of three or four days.

Forbes relates one case where a man was bled to 84 ounces at one bleeding in an attack of fever, without suffering syncope, or any ill-effect except great disorder of the circulation for some hours afterwards.

The Italians at the beginning of the nineteenth century were also free letters of blood. Acerbi, in his work published in Milan, 1819, states\* that of one hundred and forty-two cases treated by him, more than thirty were bled from ten to twenty times, each bleeding being twelve ounces; and that the usual practice was to bleed night and morning, so that in the course of eight or ten days from fifteen to twenty pounds of blood were taken away.

Up to the close of the eighteenth century much importance was placed upon the particular vein to be opened, the preference being given to that of the affected side.

As late as 1840 we find Grisolle† taking objection to the free bleeding practiced by M. Bouillaud and arguing that his (Bouillaud's) series of cases bled to a mean amount of four pounds five ounces, showed no better results than Grisolle's, with an abstraction of a mean amount of two pounds seven ounces. And as late as 1871 we find Walshe‡ unable to get away from the influence of medical opinion. He was evidently satisfied that bleeding was but rarely useful, yet apparently did not dare to come out boldly. He took the middle way: "For my own part, while formerly often recommending abstraction of blood, in adult sthenic cases, to the amount of eight or ten ounces, with occasional re-venesection to the amount of six or eight, I have within the last few years been even more sober than this in the use of the lancet, a single bleeding of six or eight ounces appearing to me sufficient. But I desire it to be understood I by no means deny that larger abstractions of blood might not be beneficial in the robust and stalwart inhabitants of the rural districts. My sphere of practice has been too purely metropolitan to warrant me in dogmatizing concerning the country."

"Why has the practice fallen into disrepute? We are simply in a period of reaction from the excesses of the Sangrado school. We have learned from our predecessors the evils of *overbleeding*—and seem, in my opinion, very much disposed at the present day to learn from ourselves the evils of *under-bleeding*."

*Derivatives.*—At the close of the eighteenth and beginning of the nineteenth centuries most physicians considered blisters as being, after venesection, the most efficacious remedy in pneumonia. They were not applied, in the first instance, to the chest, but to the legs, thighs, or inside of the arms. When they failed to act as derivatives, they were supposed to act beneficially by exciting, temporarily, the powers of the system, thereby rendering admissible further bleedings. Sinapisms, too, were supposed to act in the same way, but in a less degree.

\* Forbes, Laennec, Fourth English Edition, 1834, footnote, page 224.

† *Traité pratique de la Pneumonie*, Paris, 1841.

‡ *Diseases of the Lungs*, Fourth Edition, London, 1871.

Laennec considered blisters and similar applications injurious when applied to the chest during the acute stage, but recommended them in delayed resolution.

*Alkalies and Attenuants.*—The alkalies, e.g., subcarbonate of soda, potassium or ammonia, soap, the sulphates of soda and potassium were given by the ancients to render the blood less plastic. Mascagni, in the latter part of the eighteenth century, revived this treatment in Italy, partly from notions regarding the viscosity of the blood, partly from observations on the solvent effect of alkalis in gravel, and from observations on the softening of hepaticized portions of lung when placed in such solutions. One to eight drams of potassium carbonate were given in half a pint of water daily.

Darwin criticized this treatment, and asked whether neutral salts might not augment the cough by their stimulus, as they increase the heat of urine in gonorrhœa.\*

Laennec considered this treatment of little use, but occasionally prescribed the salts toward the termination of the disease, or when becoming chronic.

*Purgatives and Emetics.*—These were used freely with the view of lessening the congestion within the chest, or from the inflammation being complicated with bilious disorder. Corvisart used them constantly in conjunction with blood-letting in the beginning of the disease.

*Tonics.*—Wine and bark were frequently prescribed. Laennec considered cinchona the best remedy when gangrene of the lungs developed, giving an ounce daily. In several cases when the acute stage had begun to subside he continued the use of the sulphate of quinine for more than a month, to the extent of eighteen grains in the twenty-four hours.

*Calomel and Opium.*—These drugs, separately or combined, were extensively used in England, and were considered powerful auxiliaries of the antiphlogistic treatment. They were probably first recommended by Dr. Robert Hamilton in 1785.† His practice was after bleeding and opening the bowels, to give "a composition consisting of from five to one grain of calomel and from one to one-fourth grain of opium every six, eight, or twelve hours.

Dr. Armstrong‡ expresses the opinion that Hamilton's precursory depletion is too slight, and the doses of calomel too small or too seldom repeated.

Williams§ stated that the efficacy of this combination depended in a great measure on its being given to such an extent as to affect the gums.

\* Zoonomia, Vol. II., p. 314.

† Medical Commentaries, Vol. IX., p. 199.

‡ On Typhus, 2nd edition, p. 244.

§ Cyc. of Pract. Med., Vol. III., p. 442.

*Tartar Emetic in Large Doses.*—Rasori, in Italy, and Laennec, in France, strongly advocated the use of this drug. Their dosage seems to us to be large, but it was slight compared to the method of Riverius and others in the seventeenth and early part of the eighteenth century, who vomited their pneumonic patients with it every day or every second day.

Laennec, after bleeding, gave one grain well diluted every second hour for six times. In some cases the dose was two or two and one-half grains. This would usually cause his patients to vomit twice or thrice and have five or six stools the first day. If this continued, the symptoms were relieved by two ounces of syrup of poppies given in each twenty-four hours; on the following day nine grains of the salt were usually given, toleration established, and the remedy was continued until complete resolution was established.

Rasori\* seldom gave less than twelve grains during the day, and as many during the night. If the disease was well advanced he began with twenty to thirty grains, increasing the dose daily until it amounted to a drachm, or even several drachms, in the course of twenty-four hours.

*Regimen in Pneumonia.*—Laennec's practice was to debar the patient during the acute stage from every kind of aliment except sugar and the mucilaginous matters which entered into the composition of his drinks, to feed carefully during convalescence remembering that a sick man may die of starvation as well as a healthy one. He avoided great heat in the sick room, insisted on proper ventilation of the chamber, and avoided heavy covers on the patient.

*Chloroform Inhalations.*—About 1850 Varentrapp, Wucherer, and others employed chloroform, having the patient inhale 60 minims placed on cotton, for ten or 15 minutes, and the dose repeated every two to four hours, avoiding unconsciousness. They reported about one death in twenty-five, and by other methods one in seven. They did not, however, include severe cases.

The heroic treatment of the disease by blood-letting, mercury, tartar emetic, received little check until the results of Skoda and the homeopathic hospital in Vienna became known. Dr. G. W. Balfour† and Sir John Forbes, through their communications, reported this work in Britain. Here was shown results far better than those published by the men who were using the drastic treatment then in vogue. Much comment was made, so that the profession became wide awake to the situation which had to be faced. Either there was some great virtue in the little granules and infinitesimal doses given by the homeopathic physicians, or by giving the patient nothing the proportion of recoveries was much increased. It was a difficult dilemma.

\* Archives General de Médecin, 1824.

† British and Foreign Med. Review, Oct. 1846, p. 591.

About the same time Hughes Bennet placed before the profession his remarkable results attained through simple measures, the aim of which was to assist nature.

Gradually the profession began to realize that the course of the disease was but little influenced by medicine, and that a careful regimen was most important. The belief in drug-giving died hard—in fact, there has always been a large class who believed that the disease could be cut short. Walshe proved to himself that treatment was beneficial, in that of the patients seen early in the attack a greater proportion recovered than of those seen when its course was more advanced. "There are periods of life at which it is next to impossible to save; there are periods of life at which it is not easy with common prudence to lose a sufferer from idiopathic and sthenic pneumonia"; and, dealing with Skoda's results, he says: "It is a disease which may, and actually has been, therapeutically played with—and this with seeming impunity to the sufferers when they had youth on their side. We have just seen the extent to which a series of Skoda's patients escaped death by being left to the devices of Nature."\*

I need only mention how in the past few years a host of vaunted specifics have been heralded through the medical press. Flint once claimed that quinine in 20 to 40-grain doses would abort pneumonia. Schwartz claimed that iodine was a specific, and at different times veratrum viride, carbonate of ammonia, ergot, salicylates, soda benzoate, creosote carbonate, and other drugs have claimed this distinction. To-day the vaccines and serums are shown by some to cut short pneumonia or render its course more favorable.

The literature of pneumonia offers proof (?) of many of these contentions, e.g., Louis shows that those bled within the first four days recover four or five days sooner than those bled at a more advanced period, and Jackson, of Boston, proved (?) that by bleeding on the first day the mean duration, in a mass of cases at the Massachusetts Hospital, was lowered from 14.6 to 11 days.†

Before we condemn the public for their great faith in a well-advertised patent medicine, let us remember the attitude of the profession in general toward any highly-lauded new treatment. "At first it seems to be wonderfully effective; then, as cooler and conservative men report, it falls into disrepute and is soon forgotten.‡ The generally accepted treatment of to-day I will not now discuss.

What have been the results of the various methods in use at different periods. The statistical method of enquiry in medicine began with Louis. Before his time we have only the expressed personal opinions of various

\* Diseases of the Lungs, 5th edition, p. 374.

† Louis on Blood Letting, Putnam's American Edition, Boston, 1886.

‡ Conley—St. Paul Med. Jour., Vol. VI., p. 690.

writers. Perhaps many of the figures presented since Louis offer little else, so often are they offered in proof of an opinion, instead of being the source of opinion.

Hippocrates and the ancient writers considered the disease a formidable one, with high mortality. Sydenham looked upon it as more dangerous than most other fevers, but easily conquered by proper treatment.

When we begin to delve into the statistics of various methods of treatment we are at once confronted with the rather remarkable statements made by the partisans of any special method. What can one desire more than the results of Laennec.\* "Of 57 cases treated by the tartar emetic only two individuals, both upwards of 70, died of this disease, complicated with cerebral congestion; that is a little less than one in twenty-eight. In private practice I do not remember a single case which proved fatal under the use of the emetic tartar, except that of a plethoric subject, aged 72."

Rasori (1808-10) treated 832 cases, of which 173 died, 22 per cent. in the civil hospital and 14 per cent. in the military.

*Results of Treatment by Large Bleedings.*—Under this heading Hughes Bennett reports 648 cases treated in the Edinburgh Royal Infirmary, of which 222 died, about 1 in 3. Louis reported that of those bled early 1 in 7 died; of those bled late 1 in 3 died. Bouilland, who bled repeatedly, reported a death rate of 1 in 8. Grisolle, who bled only in the early stage, a rate of 1 in 10. Dietl treated 85 cases by large bleedings, with death rate of 1 in 5. The British Army reports for 1853 showed a rate of 1 in 13 (young and vigorous subjects bled early).

*By Tartar Emetic.*—Rasori, in Milan, treated 648 cases, with 143 deaths, or 1 in 4½. Dietl treated 106 cases, with 22 deaths, or 1 in 5.2.

*By Diet and Regimen, with Little Drugs.*—Dietl reported 189 cases, with 14 deaths, or 1 in 13½.

Bennett reported 1 death in 32 cases, and in 105 uncomplicated cases no deaths.

Bennett's results had a great influence upon treatment in England and America as well as through Europe. He taught that acute pneumonia, uncomplicated, is not a fatal disease if the strength be supported and there be no complication; that the numerous remedies given, when not injurious, are for the most part inert, and exert no influence on the progress of the disease.

Wells, who has made an exhaustive study of the prevalence, geography, epidemics, mortality of pneumonia,† and has tabulated some 500,000 cases, considers there has been no lessening of the death rate, though recognizing the increased occurrence of the disease. He places

\* Fourth English Edition, 1835, p. 235.

† *Journal Am. Med. Assn.*, 1889.

the mortality at about 20 per cent, and is of the opinion that this has been the general average for a long period of years.

Townsend and Cooledge\* analyzed 1,000 consecutive cases of pneumonia treated in the Massachusetts General Hospital from 1822 to 1889. Excluding cases in children and in the aged, and all with complications, the results were practically the same in each decade, though the period covered many changes in the accepted treatment—blood-letting and antiphlogistic measures, antimony and emetics, calomel and purgatives, opium, the alkalies, and various drugs.

There can be little doubt that, with all our improved methods of research and, we believe, better methods of treatment, pneumonia is rapidly increasing, and that the death rate is in no wise reduced.

611 Spadina Ave.

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#### A REPORT ON THE COMPARISON OF THE ROUTINE, ANTI-FORMIN, AND DOPPEL METHOD OF ELLERMANN AND ERLANDSEN METHODS FOR THE DETECTION OF TUBERCLE BACILLI IN SPUTUM, ETC.

By W. HARPER NELSON, M.D., Toronto General Hospital.

THOSE who have had experience in determining the presence of tubercle bacilli in sputum, pus, and serous fluids, know the great difficulty in finding even a few bacilli in cases, which clinically, are tubercular. The ordinary routine technique of staining sputa—viz., the Ziehl-Neelsen carbol fuchsin method has proven valuable when moderate or large numbers of bacilli are present. Oftentimes, however, sputum examinations thus carried out are of doubtful aid in the proper study of the case in question, on account of the difficulty attending the customary search for the organism. The sputum may be so stringy and so mucoid, that the procural of suitable particles is difficult; the typical bacilli-nests may be so hidden in a thick clumpy mass that their detection is impossible; but the main difficulty is that there may be only a few scattered organisms present in the whole sample. It is thus evident that the probability of a platinum loop withdrawn from such sputa, containing any bacilli, is very remote. Still, in cases of tuberculosis in which the sputum contains fairly moderate numbers of bacilli, the ordinary method is productive of as good results as any, but in cases in which one suspects but scattered bacilli it cannot be relied upon.

For some years the aim of bacteriologists has been to convert the sputum into a homogenous mass, of fluid consistency, from which the organisms might be thrown down "en masse." To this end there have

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\* Transactions American Climatological Association, vi. 22-49.

been recently devised several methods of digestion and sedimentation with the view of concentrating the tubercle bacilli in the material to be examined.

The Antiformin method, which was introduced in 1908 by Uhlenhuth and Xylander, is now largely used in sanatoria and tuberculosis clinics. The investigations of these two men, and their technique, were published in the *Kaiserliche Gesundheitsamt* in Berlin in the same year, and since that time it has come into prominence in bacteriological and hygienic work.

Antiformin is a patented name, but is said to be nothing more than eau de javelle plus sodium hydroxide. The method of preparation is as follows:—150 grammes of calcium hypochlorite are thoroughly triturated with 200 ccm. of water, added gradually until a uniform mixture results. After standing a short while to allow the heavier particles to subside, the supernatant fluid is filtered off; the residue treated with 200 ccm. of water and the whole is transferred to the filter, and when the liquid has filtered off, the residue is washed with 100 ccm. of water.

150 grammes of sodium carbonate are dissolved in hot water and added to the above obtained filtrate. The mixture is thoroughly stirred, and if it should become gelatinous it is warmed until the contents become liquified. The whole is transferred to a new filter, and when the fluid has filtered off, the residue is washed with enough water to make the product weight (measure is accurate enough) 1,000 grammes. Thirty grammes of sodium hydroxide are now added, and the mixture kept in brown bottles with rubber stoppers, and protected from the light.

Perhaps a simpler method is as follows:

Equal parts of liquor sodæ chlorinatæ (B.P.) and a 15 per cent. aqueous solution of caustic soda. The liquor sodæ chlorinatæ is prepared in the following manner:

Sodium carbonate .....	600 parts
Chlorinated lime .....	400 "
Aqua distilled .....	4,000 "

The sodium carbonate is dissolved in 1,000 ccm. of the distilled water. The chlorinated lime thoroughly triturated in the remainder of the water. Each is filtered, then mixed and filtered again.

The method of procedure is simple, and consists in: To 10 ccm. of sputum 2.5 ccm. of Antiformin are added, thus giving a strength of 20 per cent. Antiformin. Where the sputum is thick and tenacious, or not of sufficient quantity, a smaller amount is diluted to 10 ccm. with distilled water, thus keeping the strength of the Antiformin constant. Ordinary sterile centrifuge tubes are well adapted to contain this Antiformin-sputum mixture. They are corked or plugged with cotton, well shaken,



and allowed to stand for twenty-four hours at room temperature, after which time the tube is again well shaken and thoroughly centrifugalized. The supernatant fluid is poured off, the tube filled with normal sodium chloride solution, again corked, shaken, and centrifugalized. The washing is carried out in this way two or three times, after which the sediment is smeared on a glass slide with a platinum loop, dried, fixed, and stained by the ordinary Ziehl-Neelsen method.

Of the more recent methods the Doppel method of Ellermann and Erlandsen promises to be the best. It has not been so extensively used and applied as the Antiformin method, but Jorgensen and Hertzfeld, whose communications from Copenhagen and Berlin appeared simultaneously in *Zeitschrift für Hygienische und Infectious-Krankheiten*, 1910, lxvi., pp. 315 and 336, claim that it surpasses all other digestion-sedimentation methods tried, including the Antiformin; and their conclusion was that from two to fifteen times as many more tubercle bacilli were found by it than by the Antiformin method.

Its composition and the method of procedure as published in an abstract from the original, and which appeared in the *Journal of Medical Sciences*, November, 1910, is very simple, even more so than the Antiformin method. It is as follows:

1. The sputum is put into a glass tube or small beaker and shaken with one-half its volume of a 0.6 per cent. aqueous solution of sodium carbonate, corked with a new, clean cork, or with cotton, and placed in an incubator for twenty-four hours.
2. The supernatant fluid is poured off, the sediment centrifuged, and the remaining supernatant fluid also drawn off.
3. To the fluid sediment from two to four volumes of a 0.25 per cent. aqueous solution of sodium hydrate is added, and the mixture heated to boiling while stirring.
4. The sediment is again centrifugalized, the supernatant fluid poured off, and smears made from the sediment in the ordinary way.

During the last four weeks I have examined the sputa of cases in the Toronto General Hospital by the three above described methods. In all three have been examined the sputa from fourteen cases. As this series is very small, one is hardly justified in drawing conclusions.

With the ordinary Ziehl-Neelsen method tubercle bacilli were found in six cases. In five of these several bacilli to the field were observed in from two to three minutes. In the other case four bacilli in all were found in eighteen minutes.

I found, with the Antiformin method, tubercle bacilli in the same six cases but present, in the majority, in large numbers. As a rule, three or four times as many bacilli were found in the same length of time by this method as by the former, in one case, however, fewer were found.

This may have been due to some error in technique, for the results of Robert C. Patterson, M.D., who conducted a series of investigations at the Saranac Laboratory, and which appeared in the *Journal of Medical Research*, 1910, xxii., pp. 315-321, and those of Laurason Brown, M.D., and Daniel Smith, which were published on pages 517-527 of the same number, were very satisfactory, and compared favorably with the original observations. The latter two men, working in conjunction, found that tubercle bacilli could be cultivated in pure cultures directly from the sputum treated by the Antiformin method.

By the Doppel method of Ellerman and Erlandsen tubercle bacilli were found in seven out of the fourteen cases. In all of these the organisms were present in much larger numbers than by either of the other two methods. In the case previously mentioned, where four tubercle bacilli only were found in eighteen minutes by the Antiformin method, the same sputum examined by the Doppel method showed six bacilli in twenty seconds. In the seventh case it was possible, by this method, to determine bacilli which could not be detected by either of the other two methods. It was found that by this method there was an increase of about 8 per cent. in the number of bacilli found above that by the Antiformin method. Tubercle bacilli were also demonstrated by this method in pus aspirated from a tubercular knee when each of the other methods failed to reveal any organism.

If one might venture to draw conclusions from such a small series of observations, it could be said that the Doppel method of Ellermann and Erlandsen surpasses either of the other two, because:

1. By it tubercle bacilli can be determined in sputum or pus when each of the other methods fail.
2. It renders the sputum more homogenous than does the Antiformin method, and destroys, to better advantage, the secondary organisms, thereby enabling the tubercle bacilli to be more easily cultivated.
3. It is less expensive and easier to make than Antiformin. The technique is also somewhat simpler, although much similar.
4. Tubercle bacilli, after being treated by this method, appear to take on the acid-staining much better.

Toronto General Hospital, Dec. 27, 1910.

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Please remember the meeting of the Ontario Medical Association, on 30, 31 May and June 1.

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## BRAIN TUMORS AND THEIR SURGICAL TREATMENT.\*

By HARVEY CUSHING, M.D., Assistant Professor of Surgery, Johns Hopkins University.

DR. CUSHING opened his address by contending that a very careful study should be made of all cases of brain tumors throughout their clinical course, their operative period, and in the post-mortem room in such cases as did not recover. These investigations should be made by the same persons all the way through. The surgeons and physicians who study the course of the cases should follow them through the operation and see and study the post-mortem findings. In this way much better results can be obtained, and a more continuous line of thought maintained. The etiology, the clinical course, the localizing value of symptoms, the surgical procedures required, and the nature of the tumors became much better revealed when this method was adopted.

He then went on to state that for the purposes of this address he had a record of 200 cases, extending over a period of twenty years. Tumors of the brain are more common than has generally been held. In many instances they are of very slow growth, and the brain becomes accustomed to their presence. On this slow growth sudden symptoms may appear; as, for instance, there may be a hæmorrhage from some of the vessels in or around the tumor, or there may be an inflammation in the tumor area. These conditions are capable of causing sudden exaggeration of symptoms or a new set of symptoms.

These cases are frequently erroneously diagnosed. They are too often diagnosed in their early period as instances of neurosis or psycho-neurosis. Then, many are set down as due to syphilis, though not of this character. More are lost in futile treatment. Vascular tumors or vascular changes around them must always be looked for. Arterio-sclerosis is sometimes found along with tumors of the brain, and this factor may lead to confusion, and induce one to regard the symptoms as possibly due to this condition.

Marked reflex stomach and reflex ocular symptoms may be present, and mental symptoms when the pressure is on the frontal lobes.

The following questions may be taken up in order:

1. What the tumor does.
2. What the tumor is.
3. What can we do for them?

1. As to what the tumor does may be answered variously according to its location, size and rapidity of growth. It (*a*) may be latent so far as symptoms are concerned; (*b*) there may be general pressure symptoms; (*c*) then there are local symptoms in the brain; (*d*) the usual classical cases, with pressure symptoms and focal symptoms.

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\* Abstract of his address at the Academy of Medicine, Toronto, 7th February, 1911.

Pressive symptoms are due to stasis in the circulation, venous stasis, and disturbances in the cerebro-spinal fluid. There is a stasis in this fluid. Channels it flows in become acclused, and there is an accumulation in certain parts. There is sometimes marked displacement of different parts of the brain. The sutures in young persons may be separated, owing to pressure within the head. There may be a crowding of cerebro-spinal fluid into the sheaths of the optic nerves. This gives rise to destruction of the nerves and loss of vision. This fluid pressure may extend into the retina, causing choked disc.

Headache is often a marked symptom of tumor of the brain. It is usually caused by fluid pressure, and this may in the meninges, and sometimes from a meningitis, form the tumor.

Color inversion or color interlacing is a very interesting symptom. It may appear early in the disease. The various color fields interlace. The blue or wide field interlaces with the other color fields. This affects the blue field first. In cases of hemiopsia there is the same tendency to interlacing of the fields. When the pressure is relieved by operation the fields again return to their normal condition, or nearly so, showing that this symptom was functional rather than destructive.

In some cases the moulding of the brain and its dislocation may be very great. The tumor, when removed, may leave a large cavity.

When there is pressure on the cerebellum there may be damage to the sixth, seventh, and eighth nerves. When the pressure occludes the opening for the cerebro-spinal fluid it accumulates in the ventricles, and squeezes the brain through any available opening. This gives rise to herniation of the brain. The cerebellum may be forced through the foramen magnum. This pressure may shut off the circulation.

When the fluid pressure in the third ventricle rises the stalk of the hypophysis cerebri is affected. This interferes with the passage of fluid from the pituitary gland through its stalk to the third ventricle and into the general circulation. The growth of the person is affected, and there is a marked tendency to become obese. The patient becomes very tolerant of carbohydrates. The temporal veins in these cases are usually markedly enlarged.

A case was cited of a blow on the head which was followed by focal epilepsy. There was no headache, but the color interlacing was present. On operation a tumor was found, and the patient made a good recovery.

Gliomata are the most common form of cerebral tumor. They may be encapsulated, or they may infiltrate into the brain substance. When encapsulated they may break through the capsule and then infiltrate. When they are encapsulated they are favorable for operation. Sometimes they become cystic, and the cyst may be removed.

Many tumors cannot be localized, and these are the most favorable for operation, because they lie in some silent area of the brain. They give rise only to pressure symptoms. If they can be reached they can be attacked with considerable freedom on the part of the brain they are in being less important than some other parts.

The subtemporal region is a favorable area for operation, as this reaches a comparatively silent portion of the brain. The incision by some is made to include the origin of the temporal muscle. There need not be a large area of the scalp shaved. This is of importance in the case of women. This preparation should be done at the time the operation is going to be performed and not the night before. Dr. Cushing adopts a nearly vertical incision, running downwards from a point above the ear to one slightly in front of the ear. The scalp and muscle is retracted and the bone reached. When the temporal region of the brain is exposed a tumor may be localized that could not prior to the opening.

Sometimes syphilomata are very resistant of specific treatment, and may call for removal by surgical means.

In cases of high cerebral tension when the dura is opened the brain protrudes. The subtemporal method overcomes this to a great extent. The dura is opened so as to be replaced again and carefully closed. The bone flap is put back into its original position so as to obviate cerebral hernia. The brain should not be opened over an important region, as the protrusion may do much damage. Always decompress over a silent area.

We cannot give rise to over activity of the pituitary gland by experiment. The gland, however, can be removed and note what takes place. When this is done there is lost testicular activity and arrested growth. When this is done in a young dog the animal retains the infantile type.

If the brain tumor should irritate and stimulate the pituitary gland gigantism is the result. If, on the other hand, the pressure causes loss of function in the gland there is infantilism, arrested growth, and obesity. In these cases the hypopituitarism causes drowsiness in addition to the foregoing. The condition of adiposa dolorosa is caused by loss of function in this gland. They may never menstruate or have sexual desire.

The lecturer gave a series of illustrations of the various hypertrophies from over-action of the pituitary gland, and also of cases of arrested growth with abnormal folliness from its destruction by the pressure of tumors.

Attention was directed to the interrelationship between such glands as the pituitary and the thyroid. When one became affected the others were changed in functional activity.

He closed with a feeling reference to the excellent members of the Johns Hopkins staff that came from Toronto, such as Osler, Barker, and Cullen. Some of their best nurses had also come from Toronto.

## ON THE USE OF RADIUM IN EYE DISEASES.

By G. STERLING RYERSON, M.D.C.M., L.R.C.S. Edin., Professor of Ophthalmology and Otology in the University of Toronto Medical Faculty.

WE owe the introduction of radium in the treatment of eye diseases to Dr. Mackenzie Davidson (1), in London, Professor Bayet, in Brussels, and Drs. Octave Claude and Darier, in Paris. Dr. Davidson said at the meeting of the British Medical Association in London in July, 1910: "But, if radium has not so far fulfilled all the hopes which were entertained of it, it has, at any rate, accomplished something, and it is encouraging to turn for a moment to a new field of experiment in which it has yielded good and definite results—namely, in certain diseases of the eye."

The diseases of the eye to which radium can be successfully applied are external—the eyelids, cornea, and conjunctiva. It has been tried in chronic glaucoma, but the results were not such as to encourage the observers to persevere with the treatment.

Before passing to treatment of certain eye diseases I would like to say a few words about the methods of application.

Radium may be applied either directly to the eye "naked," as it is called, or by some method of filtration. In applying it "naked" the powerful caustic effect should be borne in mind, and also that the ill-effects only manifest themselves after an interval of two weeks or more, when serious sloughing may take place. In my opinion, in all cases, except epithelioma, the rays should be filtered through lead, tin, or aluminum. The eye should be cocainized, the apparatus being held in contact for ten to fifteen minutes and not more. The application may be repeated daily. The applicator, which I show, contains four milligrammes of pure radium, mixed with bromide of barium, and spread on the flat surface, and covered with a waterproof varnish. In ulcers of the cornea I have found the round applicator of much use. It is primarily intended for nose and throat work, and contains three milligrammes of radium bromide. When a tube is used it should be covered with lead foil and thin rubber tissue. For external application a disk or square is used of various sizes. The square shown contains four milligrammes of radium bromide, diluted with barium bromide, and covered with impermeable varnish. When applied to the lids for epithelioma or rodent ulcer the applications should be of one hour each, and the alpha rays should be screened off with lead filters. I have seen no ill-effects from its use, but several times patients have said that they saw sparks. I presume it excited the phosphenes.

Some patients complain of a little pain after its use, and in almost all there is increased vascularity and irritability for a time. The anesthetic effect is generally noticeable, the application being followed by a relief of pain.

*Eyelids.*—The diseases for which I have used radium or have seen it used, on this part have been rodent ulcers, angiomas, and epitheliomas. The following is a short history of one of these cases: A gentleman aged 60 was referred to me by Dr. Langstaff, of Richmond Hill. He had a large rodent ulcer of twelve years' duration, occupying the inner angle of the left eye, the eyelids, and extending down the nose for about two inches. There is almost complete destruction of the lachrymal sac. This gentleman has had forty-four hours of treatment, extending over three months, half an hour to one hour, at intervals of a week or two weeks, with the result that the part is covered for the most part with a smooth, fine scar. There is still a little ulceration of the lower part of the nose, but is healing rapidly. I saw at the Institute of Radium and at Dr. Massoitti's clinic in Paris several cases of epithelioma of the lids, in one of which there had been a return to a slight extent after a period of three years.

R. Abbe (7) records the following remarkable case of sarcoma of the eyelid:

"A man of 45 had a growth for a year so as to involve two-thirds of the lid. It grew equally on the mucous membrane, on the eye, and on the skin, so as to form a mass in which all semblance of the lid and lashes was lost. It resisted Roentgen ray application and all other treatment by ophthalmologists. A section was taken from its centre and showed small cell sarcoma. The patient was offered to me to try radium before excision of the lid. I laid strong radium in glass tubes upon it four times during one week, protecting the eyeball by a thin lead shield. Then I waited. Week by week it melted away. In eight weeks it was absolutely gone. Five years have gone by, and not a trace of it has recurred. Nothing so nearly resembling the marvellous has ever been my fortune in surgical work. I will conclude by quoting still another case from Abbe. The subject was a middle-aged lawyer, who for two years had been developing a parotid mixed sarcoma, of which I took a photograph before treatment, as well as plastic impressions. The rapid improvement shown was due to the insertion of a strong radium tube several times, for two hours each, buried in the tumour after pieces had been punched out for microscopic study."

*Eyebrow.*—The following case of sarcoma of the eyebrow is an example of the rapid disappearance of sarcoma under the influence of radium. A lady, aged 69, was referred to me by Dr. Perfect, of West Toronto, on Sept. 26, 1910. She had a tumor in the right eyebrow about the supraorbital notch, measuring  $2\frac{1}{2}$  cm. by  $1\frac{1}{2}$  cm., oval in form, firm and elastic to the touch. Dr. Perfect informed me that he had removed the growth three weeks previously and had submitted it to Dr. Archibald for examination, who had reported that it was a small-celled sarcoma.

Within three weeks it had recurred larger than ever, and was growing rapidly. I applied a plaque of 4 milligrammes of radium for one hour daily for 11 days, when the tumor gradually disappeared, and has not up to the present writing shown any signs of returning. To render the cure permanent she has had two further treatments of one hour each, at intervals of four weeks.

*Conjunctiva Trachoma.*—This intractable disease seems to give very encouraging results with the radium treatment in the hands of Mackenzie Davidson, Darier, Lawson, Selenkowski, and others. Let me quote Selenkowski's observations (3). He treated 23 patients (44 eyes). In nearly all of the cases the upper and lower lids showed formation of granules, with diffuse infiltration. He first employed one milligramme and later one centigramme of radium bromide. After two or three sittings the granules became flattened, but the epithelium remained intact. In the following sittings the number of granules diminished considerably. The treatment was continued until the conjunctiva became perfectly smooth. Every eye was exposed to the influence of radium from 15 to 100 minutes. In no case were any scars seen; in some cases there was hyperemia. The deeper parts of the eye showed no reaction whatever. No other remedies were used during the treatment. Dinger (4), of Amsterdam, treated sixteen cases; of them seven were cured. Old cases complicated with pannus, yielded slowly, but the granulations and pannus gradually disappeared, and the patients were able to resume work. The cure was more rapid and less painful, and therefore preferable to caustics.

Pterygium has been treated with radium. The results hitherto obtained are encouraging; about one-half the cases were cured.

*Spring Catarrh.*—This is notoriously one of the diseases of the eye which has resisted all treatment. Here and there a good result has been obtained by diverse methods, but nothing certain has been accomplished until the advent of the radium treatment. Dawson Turner (5) publishes five successful cases, the first of which was cured five years ago, and there has been no return. Let me cite one of them: It is that of a boy; aged 6, both of whose lids were covered with typical granulations and irregular pavement-like blocks. The disease had lasted for some months. Ten milligrammes of pure radium bromide was used for ten minutes daily. Three or four weeks elapsed before any marked improvement appeared; then it was slow and steady. In two months the treated eye showed great improvement, only one nodule being left, and in six weeks longer was entirely well, when the treatment of the other eye was begun. Mackenzie Davidson also reports successful cases.

*Cornea.*—Lawson and Davidson (2) publish 17 cases of corneal ulceration treated by radium, 16 of which were cured. Three were



hypopion ulcers, one a dendritic ulcer, four vascular, two herpetic, one Moorens, and two traumatic. The failure was in a case of deeply infiltrating yellow ulcer, complicated with inflammation of the lids. They report seven cases of interstitial keratitis; five improved, two doubtful. Four cases of opacities of the cornea, results uncertain. They say: "It is certain that if any success is to follow the treatment of corneal scars by radium, the exposures must be continued over a long period of time, and the dosage must be fairly large."

I have treated three cases of corneal ulcer with marked success—one a recurrent vascular ulcer, one extensive sloughing indolent ulcer, and one infiltrating deep ulcer, which had resisted all other means of treatment.

*Iris.*—I have recently read of the successful treatment of tuberculosis of the iris, but I am unable to locate the article and give my authority for the statements. The treatment consisted in the injection of radium emanation into the anterior chamber.

*Uveitis.*—C. H. Williams states that he has been able to relieve pain and cause the absorption of inflammatory products in chronic uveitis (6).

*Fundus.*—It seems to me that there are two classes of cases with which no one has as yet experimented, and which resist all known means of cure. I mean opacities of the lens and of the vitreous. There is a form of lentocular opacity which is characterized by minute opacities, which remain stationary over a very long period of time. I have one now under observations which I first saw eight years ago. It remains practically unchanged. The patient can find her way about, but cannot read. I am endeavoring to get the patient to consent to a trial of this method, but she is timid about it.

I think I have said enough to show that in radium we have a powerful new aid to the therapeutics of the eye. In the cases of rodent ulcer and epithelioma of the lids, angioma, trachoma, spring catarrh, and in certain ulcers of the cornea we can safely say that definite results have been obtained.

In conclusion, I can say, without exaggeration, that radium has made good. As is the case with all new methods of treatment, too much has been expected of it, and the impossible has been attempted. True carcinoma is still outside the possibilities of cure, while sarcoma, if superficially situated and of recent growth, will rapidly melt away.

66 College St.

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### GERMAN PHYSICIANS IN 1910.

According to the medical directory (Reichsmedizinalkalender), published by Professor Schwalbe, the number of physicians in Germany last year was 32,294. As according to official statistics Germany has a population of 64,775,000, there are 5.01 physicians to 10,000 inhabitants. The number has increased by 480 over the previous year, and the increase in the number of physicians slightly exceeds the increase in population. That in the next few years a relative increase is to be expected is shown by the fact that the number of medical students has rapidly risen. In the summer of 1905, 6,032; 1906, 6,570; 1907, 7,574; 1908, 8,250; 1909, 9,239; 1910, 11,125. Foreign students are included in these figures, and their number has also slowly risen. Also the number of physicians licensed in the last three years has increased. In 1906-07 it was the lowest, 553; the following year it had grown to 829, and in 1908-09 942 physicians were licensed (*approbiert*). As usual, the increase in physicians is most notable in the large cities. Relatively to the population, however, the number of physicians in the large cities has receded somewhat.

The number of licensed women physicians in Germany has undergone a remarkable relative increase. In 1908 there were only 55, in 1909 69, while at present there are 102; in Berlin alone there are now 32. The number of women medical students has also remarkably increased. In the winter of 1909-10 there were 371, in the summer of 1910 512, including the foreigners. The number of specialists is still increasing. In 1906, 6,952—20.2 per cent. of all physicians; in 1910, 7,272—22.40 per cent. The most of these are gynecologists, principally in the large cities; in the second place come the oculists, and, third, specialists in ear, nose and throat. The largest percentage of specialists, is found, as in former years, in Dresden, 44.2 per cent. The following have over 40 per cent.: Stuttgart, Leipsic, Frankfort a. M., Plauen and Nuremberg; Greater Berlin has only 32.8 per cent. The smallest percentage—18.5 per cent.—is found in Kiel.—*Jour. A. M. A.*, 21 January.

## CURRENT MEDICAL LITERATURE.

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MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.

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REFLEX DISTURBANCES.

In the *Boston Medical and Surgical Journal* for 2nd February, 1911, there appeared several articles dealing with the important topic of the reflexes. We are giving our readers an epitome of these papers.—Eds. CANADA LANCET.

## I. REFLEXES IN SURGICAL DIAGNOSIS.

Dr. Robert T. Morris deals with this aspect of the question. He has met with cases that had been diagnosed as ulcer of the stomach, whereas the real disease was gallstones, bile tract adhesions, chronic trouble in the appendix, early pregnancy, eye strain affecting the stomach, psychosis and psychoneurosis with gastric manifestations.

In the cases of the uterus one meets with many reflex conditions. Some instances of flexions are due reflex spasm which belongs to the neurotic habit. A considerable number of uterine flexions are spasmodic, and dependent upon some peripheral irritation at a distance.

Pains and neuralgia may be due to disease in other parts. Lumbago and neuralgia of the seratic nerve may be caused by an enlarged prostate, distended seminal vesicles, pelvic disease. A case of intense trigeminal neuralgia is mentioned that had resisted treatment, in which an ovarian cyst was found and removed, curing the neuralgia. A case of severe neuralgia of the inferior dental nerve was cured by proper glasses that relieved the ocular muscles.

Dr. Morris thinks that to be a good diagnostician one must do as the editor does—collect material from all sources and then cull out what is of value. The entire body must be interrogated to find out the real cause of pain and of the many reflex troubles.

## 2. DISTURBANCES DEPENDANT ON EYE-STRAIN.

This subject is discussed by Dr. Elice M. Alger, of the Post-graduate Medical School. For proper vision the retinae must be duly sensitive to light. The refraction of the media must be so as to produce a clear image of the object, and these images must fall upon corresponding portions of the retinae. Then these must be harmonized by the brain centres. In this work there are fourteen separate muscles engaged. There are also four of the twelve cranial nerves devoted to visual duties. There are here many possibilities for eye-strain.

Some persons differ widely from each other in their power to adjust the range of the eyes, though of the same age and with good vision. Then, again, persons may have good vision, but not good endurance in their eyes, and they will suffer from eye-strain on doing some hard eye-work. In some instances there may be hyperopia, astigmatism, or latent squint, but the person can compensate easily these defects, and no eye-strain results. If this compensation requires undue effort much harm may follow.

It may be laid down as rules that each case must be considered on its own merits. In the next place the strain is not due to the optical defects, but to the muscular effort to overcome these. Eye-strain is more frequent in persons of good vision than with poor, as in the former they make the effort to see well. This is particularly the case with persons with a good and a bad eye. It is the good eye that is being strained, and is the one that must receive attention.

There are three types of fatigue symptoms—the muscular, the nervous, and the psychic. The muscular symptoms are the most frequent. The ciliary muscle, when fatigued, over-contracts and over-relaxes. This causes the vision at one instant to be clear and the next to be blurred. Fatigue of an extrinsic muscle may cause diplopia and pain in the eye. This fatigue and pain may be reflected along the sensory nerves, and cause sleepiness, depression, headache, or neuralgia. Other nerve centres are stimulated, and other muscles come into action. This increases the fatigue. In time there is marked reaction to this effort, and the sufferer may be completely unfitted for any task.

The psychic effects of astigmatism are very far-reaching. Instead of reading by words or phrases, he has to read by letters. He has to pay so much attention to form that loses the meaning. Objects are seen distorted, and a rapid series of judgments are required to correct impressions. This leads to fatigue, and, in the case of the child, causes irritability and backwardness at school.

Eye-strain will cause wrinkles and screwing of the muscles. It is a very common cause of chronic headache. Migranic can be caused by eye-strain, though this is not the sole cause for all cases. Eye-strain, in giving rise to fatigue of the muscles and brain, is a factor in some cases of neurasthenia. In anyone of unstable nervous system and also the victim of eye-strain, the results of this latter may be very disastrous. There is no doubt but that judicious treatment of the eyes will relieve many neurasthenics of many of their symptoms.

Persons from 30 to 50 often complain of headaches, nervousness, fatigue, etc. In these the eyes should always be carefully examined. Conditions may be found in them that explain the symptoms without falling back upon such theories as the change of life, uric acid in the blood,

auto-intoxication from some cause, and so on. These eye-reflexes may cause much disturbance in the stomach and bowels. It will thus be seen that the evil effects of eye-strain are far-reaching, and call for the utmost care in diagnosis and treatment.

### 3. REFLEXES AND REFLEX NEUROSES FROM THE UPPER AIR TRACT.

Dr. W. Sohler Bryant, of New York, takes up this aspect of the study of reflexes. Normal automatic reaction to stimulation constitutes a reflex, whilst the abnormal automatic reaction constitutes a reflex neurosis, i.e., pathological reflex.

"More than two hundred and forty-seven different reflexes and reflex neurotic symptoms have been recorded as emanating from some part of the upper air tract, which includes forty-one distinct anatomical structures."

The reflex neurosis is the result of a diseased condition of one or more parts of the nerve structures through which the stimulus passes. Reflex neurosis may be divided into two large groups—simple and complex.

1. Simple, which includes all forms of exaggerated reaction to normal or non-pathological stimulation.

"The distinguishing characteristic of this group is the hyperesthetic condition of the part stimulated, or the abnormally intense reaction to a normal stimulus."

2. "Complex reflex neurosis includes all those symptoms produced by abnormal stimuli, by hyperesthesia of the nerve endings and by disease of the nerve tract and nerve centres through which the stimulation passes. A neurosis may be produced by any one or all of these conditions in combination."

*Etiology.*—Those of group 1 (simple reflex neurosis) are produced by repeated or prolonged stimulation, carried to a point of nervous exhaustion and caused hyperesthesia.

Complex reflex neuroses (those of group 2), depend upon structural and peripheral changes which cause an abnormal degree of nerve stimulation.

*Diagnosis.*—Simple reflex neurosis can be diagnosed by producing a paroxysm, which is done by carefully stimulating every suspected hyper-sensitive part with a cotton application until the active one is discovered and the reflex produced. If this method be unsuccessful a negative one may be employed. Cocainization of hyperesthetic areas during a reflex paroxysm will render the nerve endings less sensitive, the paroxysm will cease, and a diagnosis will be established.

In the second group a paroxysm cannot be induced experimentally, as a rule. If cocainization of the hyperesthetic areas arrest the paroxysm

the origin of the attack is established. If this be unsuccessful it will only be possible to arrive at a diagnosis through the treatment of local abnormalities.

"The differential diagnosis between reflex neurosis and toxic effects from infections of the upper air tract is sometimes extremely difficult to determine because of the similarity in the character of the irritations. By removing the peripheral irritation the seat of infection may also be removed."

*Treatment.*—Elimination of the peripheral exciting cause, i.e., the hyperesthetic area, is the first consideration in treatment. It is always possible to remove the peripheral factor. In acute conditions the hyperesthesia yields to soothing, depletent applications. In chronic conditions resection is preferable to cauterization because the good effects by the first method are more apt to be permanent.

*Prognosis.*—This is good for permanent relief from attacks when the peripheral factor has been removed.

The nerve supply to the nose and upper air tract is largely sympathetic. The writer of the paper calls the nose the peripheral organ of the sympathetic nervous system.

Digestive and metabolic disturbances from improper diet have an intense influence upon the nose. "Sudden changes from hot and dry to cold, damp air and back again leave their ill-effects upon the nose. The infected dust, poisonous gases, and the smoke of civilized communities are factors that ceaselessly exert a baneful influence upon the nasal mucosa. Mental strain and emotional excitement affect the nose unfavorably. Eye-strain as a cause of reflex neuroses takes a secondary place in comparison with nose strain. The first is intermittent and voluntary; the latter is constant and involuntary."

#### 4. REFLEX DISTURBANCES REFERABLE TO THE EAR.

John Randolph Page, New York, is the author of this paper. He here considers only the disturbances which are of more or less general interest and practical value.

Neuralgias and coughs which irritate the trifacial and Arnold's branch of the vagus, may cause reflex disturbances.

Intractable coughs, particularly in children, and neuralgias which have resisted prolonged treatment, may be relieved by removing a plug of inspissated wax from the external auditory canal.

Disturbances as the result of the middle ear affections are much more involved. Reflex psychoses and neuroses are met with. Headache and mental depression are often due to a slight catarrh of the middle ear and Eustachian tube, whilst in rare cases suicidal mania and profound melancholia may be met with.

Pain in acute middle ear inflammations is referred more to the temporal region and the side of the head than to the ear itself. Pain may be referred to the teeth, while occasionally the condition may cause intense facial neuralgia, which may be followed by temporary facial paralysis.

With these neuralgias the author mentions herpes oticus, which may be occasionally met with.

With regard to the reflex disturbances caused by irritation of the internal ear, the author states that every symptom of seasickness in its severest form can be produced by irritation of the normal labyrinth. The irritation causes a movement of endolymph in the semicircular canals, which cause a corresponding movement of the eyes, the surrounding objects appearing to swim in the direction of the endolymph movement, and in an effort to overcome the vertigo produced the eyes fix themselves on the object as it passes, and when their limit of movement is reached in that direction they snap back and endeavor to fix themselves again. This movement of the eyes is termed vestibular nystagmus.

A movement of endolymph is produced by the application of cold water to a normal ear. If the irrigation is prolonged, dizziness, nausea, and vomiting, with profound prostration, develops, with the movement of the eyes to the opposite side. The same symptoms appear when hot water is used, except that the nystagmus is then towards the side irrigated.

When the water has been in contact with the drum membrane for five or more minutes without the occurrence of any reaction, the labyrinth may be considered functionless. When the drum membrane is perforated or absent the reaction occurs more rapidly.

##### 5. WHAT IS THE MEANING OF REFLEX?

Dr. Edward D. Fisher, professor of nervous and mental diseases of the University and Bellevue Hospital Medical College, lays down the general rule that "all action is reflex." This includes breathing, swallowing, etc. Even actions originating in the brain are of this nature, as they depend upon primary reflex action. The child first acts in a reflex way, as the brain at first is a blank.

In all reflex action the mechanism is the same, namely, an afferent sensory impulse, a receptive centre, and an efferent motor impulse. In the mammalia the sensory impulses and their influence on the centres become registered as memories, and are automatic processes. The influence of the sympathetic nerve system is but little known as yet. All reflexes must pass through the primary condition of sensory impulse, centre and motor impulse.

Many sensory impulses become automatic, and are referred without arousing consciousness. In this way a person may sneeze and not remem-

ber it. A decapitated dog may move his hind leg to put away something that is irritating his abdomen. Many of the disturbances of the eye, ear, and abdomen, that are called reflex, are not truly reflex, but referred conditions. In disease of one organ the vitality of others may be lowered and functional disturbances arise in these as a consequence. This is seen in the general treatment necessary of so many persons who have some form of eye, ear, nose or other disease.

When we don't know the cause of the condition we should admit this, and not call it "reflex." In conclusion, the writer advocates "a careful examination of every case, looking for what are evident symptoms of varied types, not a single reflex condition."

#### 6. REFLEX SYMPTOMS AND DISEASE OF THE NERVOUS SYSTEM.

William M. Leszynsky, New York, takes up this subject. He states that the reflex theory of nervous disease is of very ancient origin. "It was based upon mistaken notions about reflex action, and has often been confounded with associated disturbances of sensation." Following the removal of adenoids, enlarged tonsils, correction of refractive errors, relief of phimosis by circumcision, the repair of the lacerated cervix and perineum, removal of diseased ovaries, etc., the nervous symptoms subside. It should be remembered "that a co-existing neurotic state is usually intensified and not produced by any of the above-mentioned derangements. While these or similar conditions may cause pain, spasm, convulsion or other distressing nervous symptoms, they have never been known to develop a constitutional neurosis such as neurasthenia, hysteria, hypochondriasis, epilepsy, or insanity."

It is our duty to make every reasonable effort to discover the cause of apparently inexplicable nervous phenomena.

The writer does not agree with Dr. G. T. Stevens as regards to chorea and epilepsy being the result of heterophoria, or unbalance of the ocular muscles. After two years' research and subsequent investigation he has reached the conclusion that "muscular anomalies producing latent deplopia and unconscious efforts to maintain, binocular single vision are undoubtedly a drain upon the nervous energy, often aggravating, if not producing many neurasthenic and psychasthenic phenomena; but I am yet to be convinced that such is the cause of chorea, epilepsy or any other disease of the nervous system."

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## SURGERY.

Under the charge of H. A. BEATTY, M.B., M.R.C.S., Eng., and A. H. PERFECT, M.D., C.M.,  
Surgeons to the Toronto Western Hospital.

## SALVARSAN (EHRlich, 606).

Dr. S. Pollitzer, in the *New York Medical Journal* for 4th February, discusses this subject, and records his own experience. In the first place there is ample reason to know that relapses may follow this method of treatment, but the extent of the permanent cures cannot be determined for several years. It is a remedy of very great value for the symptoms. Primary, secondary, and tertiary lesions are very promptly influenced by it. The spirochetes disappear from these, but in some cases, new syphilitic lesions spring up. These can be controlled by further injections.

Only rarely will the best action of mercury yield such a result. In the case of salvarsan this happy influence over the symptoms is almost constant. Another feature that is noticed is that after due first effects of the injection have passed off the patient experiences a marked feeling of wellbeing, and begins to gain in weight. The writer of the article admits that at times the remedy fails to control the symptoms. This is very rare, and has not been explained. It can then be said that "as a symptomatic remedy of extraordinary potency in syphilis salvarsan has won a secure place."

Does Salvarsan cure syphilis? This must be answered with an unqualified negative. "Salvarsan does not cure syphilis at a single dose." The percentage of recurrences cannot yet be ascertained. So far it appears to vary from about 15 per cent. to 30 per cent. in the lapse of about two to three months, according to different observers. Thus "the *therapia magna sterilisans* is still an unattained ideal."

Coming to syphilis in the stage of the primary sore the question is asked, Can the new remedy effect a radical cure? This must be answered negatively. There are cases now on record in which the remedy was employed according to the best methods in primary syphilis and relapses occurred.

When brought under the test of the Wassermann reaction, it must be admitted that in the majority of cases Salvarsan must be admitted to have fallen short of a complete cure. According to the most competent observers, the Wassermann test ultimately shows that there are still spirochetes in the body.

What explanation can be given of these recurrences? The author of the article suggests that there may be a second form or state of the organism. There may be a spore form over which Salvarsan has little or no power. The spirochete is destroyed by the remedy, but the resting

form of the organism is not, and, in due course, there is a recurrence of the symptoms of the disease. The clinical history of syphilis with late lesions containing a few spirochetes, would seem to bear out this view.

Subsequent injections of Salvarsan are as effective against these recurrences as was the first injection against the symptoms for which it was used. It was at first thought that the organism became resistant to further injections, but it has been found that such is not the case, and that the remedy is a symptomatic treatment for the recurrences.

Babies suffering from inherited syphilis may be treated with Salvarsan through their mothers. On the whole, it is better to treat them directly with minute doses of the remedy.

In the case of eye lesions the fear that Salvarsan would do harm in optic atrophy and retinitis seems to be unfounded. Many have employed the remedy in such cases with benefit. In iritis and muscular palsies from syphilis yield well to this treatment. Parenchymatous keratitis in inherited syphilis shows as a rule very great improvement if the process is recent.

In some cases of tabes the treatment has proved useful. This may be due to the fact that, along with the tabes, there may still be living spirochetes. In paresis the results have not been nearly so satisfactory. In a case of this disease advanced enough to be quite clear as to diagnosis there is little to be gained in its use.

It would appear that the treatment is fairly safe. It has now been employed in over 30,000 cases and with only a few deaths. Some of these were advanced cases, with severe degenerative changes. Some of these patients might have died from the lesions of syphilis even though no Salvarsan had been used. It does not appear to be injurious to the optic nerve, as is the case of atoxyl and arsacetin.

The author speaks favorably of the method of suspension of the remedy in liquid paraffin. This is especially convenient for ready use, and does not require the technique nor carry with it the dangers of intravenous injections.

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## GYNÆCOLOGY AND ABDOMINAL SURGERY.

Under the charge of S. M. HAY, M.D., C.M., Gynecologist to the Toronto Western Hospital, and Consulting Surgeon, Toronto Orthopedic Hospital.

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## THE INFLUENCE OF THE TRENDELENBURG POSITION ON THE QUANTITY OF URINE EXCRETED DURING ANESTHESIA.

J. Wesley Bovee, Washington (*American Journal of Medical Sciences*, January, 1911, states that in a series of sixteen patients, in whom

careful observations were made, it was found that the excretion of urine was markedly interfered with while the patient is in the Trendelenburg position. The diminution in quantity of urine was greater when chloroform was used as an anesthetic than ether. In the author's opinion, therefore, the Trendelenburg position introduces an element of danger in patients with renal insufficiency, cardiac and renal lesions.—*American Journal of Surgery*, February, 1911.

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### SURGERY OF THE OBESE.

Robert T. Morris, New York, in *Monthly Cyclopaedia and Medical Bulletin*, November, 1910, holds that in dealing with very fleshy patients it is necessary to give consideration to a few very important mechanical points. In making incisions through the adipose tissue it is essential to make very clean cuts, in order to cause as few fatty tabs and irregularities as possible. In hæmostasis it is well to avoid the use of artery forceps if we can, because artery forceps crush a certain amount of tissue which must be disposed of by the lymphatics, and the lymphatics of the adipose tissue are neither abundant nor active. If, instead of using artery forceps, we slip a ligature under each vessel by means of a needle, it lessens the amount of ragged tissue. When we have to tie a ligature through a mass of fat, the amount of fat included must be as small as will suffice, and the ligature must be drawn with an unusual degree of snugness, because the oil within the grasp of the ligature responds to the ordinary principle in hydrostatics, and slowly moves out of the way of the pressure. This may leave the ligature loose in an hour after it has been tied snugly enough to control hæmorrhage at the time of operation. Where we have to ligate a series of vessels lying near together, as in the fatty mesentery, in bowel work upon an obese patient, it is often best to run a continuous suture along the face of the cut mesentery with its opened vessels, and at each turn about the vessel take a half hitch with the suture. This step in technic saves considerable time, avoids much injury to fatty tissues, and disposes of the danger of loosening of the parts within the grasp of the suture material in an hour subsequent to operation.

During the entire time when we are at work with an obese patient, free oil is escaping, and the natural tendency would be to wipe this out along with blood and serum; but the adipose tissue must not be brushed, for gauze or sponge injures its texture and liberates still more oil. We have to depend upon the principle of filling the wound with salt solution and allowing the free oil to float to the surface, and then to float away in an excess of salt solution. This is a very important step in procedure.

In suturing the muscles of the obese we often observe the fatty degeneration of muscle structure, and suturing through such muscle liberates free fat. Make it a rule to suture muscle-sheaths of fibrous tissue as far as possible without carrying sutures into the muscle itself, if it can be avoided. Try to make incisions in the obese in such a way as to avoid muscle-belly suturing later.

It is in final closure of the wound that one's nicest mechanical sense is brought into play, and here we fortunately have a resource of remarkable importance, but one which is commonly overlooked. No sutures are to enter the fat. The muscles having been sutured beneath the adipose layer, the skin is next sutured, and before making the final knot the adipose wound margins are pressed firmly together between the hands, in order to express any air or fluid. The suture then being completed, atmospheric pressure holds the fatty walls together just as snugly as the wet leather disk of the boy is held to the stone, and we get a very much smoother line of union than was customary when the special suturing for these tissues was employed. If any extra supports are required for the walls of the wound, we place two squares of adhesive plaster at a safe distance from the margins of the wound line, and then lace these together through eyelet-holes made with a punch and eye-carrier. The catgut or silk lacing which actually touches the eyelets will not be aseptic, but with a little care the part lying next the wound may be kept safe. In order to allow the escape of any culture medium which may collect in the wound during the first twenty-four hours, I poke a tiny wick of gauze surrounded by gutta serena tissue into the wound at any convenient point, and this is removed on the following day. As a matter of fact, the extra support made of adhesive plaster need not be put on until two or three days after the operation, or at about the time when catgut sutures would begin to lose their hold. The ordinary snug bandage or binder will support the walls of the wound well enough until that time.

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### THE TREATMENT OF DYSMENORRHEA.

Detmold Drenkhahn, in *Zentralblatt für Gynäkologie*, November 19, 1910, says he has used the following simple treatment with uniform success for the relief of dysmenorrhœa: He injects 1-60 grain of atropin dissolved in a cubic centimeter of water into the cervix, and then introduces a dry tampon. If no instruments are at hand, a small cotton tampon moistened with a 1 per cent. solution of atropin and introduced to the posterior fornix acts equally well and promptly. He also claims that the same remedy will afford relief in mild acute or in chronic inflammatory affections of the uterus, making douches, sitzbaths, and tampons unnecessary.—*American Journal of Surgery*, January, 1911.

## OBSTETRICS AND DISEASES OF CHILDREN.

Under the charge of D. J. EVANS, M.D., C.M., Lecturer on Obstetrics, Medical Faculty  
McGill University, Montreal.

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PROCTOSCOPY AND SIGMOIDSCOPY IN INFANCY AS  
APPLIED TO INFECTIOUS DIARRHŒA.

Henry I. Bowditch, in *Archiv. of Ped.*, Jan., 1911, states that he employed a modification of Dr. Tuttle's six-inch pneumatic proctoscope. Usually its introduction was easy and rapid, and it gave a clear-lighted field, and, in the majority of cases, rendered inspection quite possible up to the lower end of the descending colon.

The child should be placed lying on an inclined plane, with the buttocks well elevated.

Only those cases were examined which had a history of blood in their stools. A number of cases were examined in normal conditions as control.

The author concludes from his work in this connection: (1) That cases of diarrhœa which have a history of blood in their stools, especially in young infants, show signs of inflammation throughout the sigmoid and rectum during the acute stage of the disease. (2) The mucous membrane is thickened and red. Follicles are somewhat prominent and ulcers of varying types are present. These lesions are affected in number and appearance, according to the virulence of the infection. (3) These lesions gradually become healed, leaving no signs nor evidence of scar tissue visible to local sigmoidal inspection during life. (4) Blood and normal intestinal mucous membrane may be present at least in the rectum in cases of sigmoidal diarrhœa.

The author's studies seem to indicate that irrigation of the bowel seems to effect very little improvement in the condition of the mucous membrane.

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PRODROMAL SYMPTOMS OF PUERPERAL AND POST  
OPERATIVE THROMBOSIS AND EMBOLISM.

Dr. Hans Michaelis, in *Münch. Med. Woch.*, Jan. 10, 1911, saw in the course of a year a relatively large proportion of cases of thrombosis and embolism.

Detail records are then given, with the temperature charts of eight cases.

The author dwells on the importance of the temperature, and insists that in recording it the thermometer should be left in the patient's mouth

for at least five minutes, though taking the temperature by the rectum is very much more satisfactory.

The author concludes his paper by stating that puerperal and post-operative thromboses and embolisms do not occur as lightning out of a clear heaven; there exists a premonitory symptom in the existence of subfebrile temperature. If this condition occurs, then one must recognize the possibility of thrombosis or embolism, and treat the case accordingly.

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## DIAGNOSIS OF PLEURITIC EFFUSIONS IN INFANCY.

D. J. Milton Miller, M.D., *Archiv. of Ped.*, Jan., 1911, gives his experience in 54 consecutive cases of pleural effusion in children under two years of age. Fifty-one, or 94 per cent., were purulent and but 3 serofibrinous. Under 6 months of age empyema is a very fatal disease. The importance of early diagnosis is very great. Pleurisy of either form is never primary. Pneumonia most commonly precedes the onset of pleurisy. Following the pneumonia after the crisis, the temperature may rise, again indicating the onset of pleurisy; but there are many cases where the temperature rises so slightly as to excite little attention, but the pulse remains unusually excellerated.

*Symptoms.*—The child usually looks ill, the complexion being sallow, and there is usually some dyspnoea, though in many cases there is no appreciable increase in the rate of respiration. Cough may not be present, though in many instances cough of an explosive nature is a marked symptom.

*Physical Signs.*—The usual signs of pleurisy in an adult are to be found in infants. Displacement of the heart's apex, as is the case in adults, is an important sign of effusion.

As a rule, on palpation no vocal vibrations can be detected, though they may be well marked or seemingly increased.

Flatness on percussion associated with an increased sense of resistance to the percussing finger are important signs. In eliciting dullness in infants percussion must be light, else the pulmonary resonance beneath will completely mask the diminution of resonance produced by the fluid.

The respiratory sounds are almost always bronchial in character, and are heard everywhere over the effused fluid. This character of the respiratory murmur in pleural effusions is frequently overlooked, and results in mistakes in diagnosis.

Rales, both friction and bronchial, may be heard over very large effusions, not only above, but, also, below the level of the fluid.

The diagnosis of localized interlobular and diaphragmatic effusions in infants is extremely puzzling, and, as a rule, can only be established by exploratory puncture. The latter procedure should never be withheld if, after careful and repeated examinations, the diagnosis is still in doubt. The needle used should always be short, stout, and of large calibre.

The author makes a strong point out of the variability of the physical signs from day to day. Such variability is never found in pneumonia.

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### CONGENITAL OBLITERATION OF THE BILE-DUCTS WITH HEPATIC CIRRHOSIS.

F. Parkes Weber and G. Dorner, in *Brit. Jour. Children's Diseases*, Jan., 1911, record an interesting case of congenital obliteration of the bile-ducts.

A female child, aged 4 months, was admitted to the hospital weighing  $11\frac{1}{4}$  pounds. Rather deeply jaundiced, with firm enlargement of both liver and spleen. All the time the child was under observation no bile entered the intestine, for the fæces were white and free from urobilin, whereas the urine always contained bile pigment. There was no evidence of syphilis. Pigmentation gradually increased. Effusion into the peritoneal cavity took place about six weeks before death, and the quantity varied from time to time. The child died in convulsions when a little over six months of age.

The liver was of a green color and finely cirrhotic. The gall bladder was found contracted and empty. The cystic duct, the distal part of the hepatic duct and the common bile-duct were represented by connective tissue cords. The proximal part of the hepatic duct and its right and left trunk were moderately dilated, and contained green inspissated bile. No other pathological conditions were found post-mortem.

Microscopically a uniform cirrhotic change of interlobular distribution, with considerable interlobular increase of biliary vessels, were found.

There was an increase in the fibrous supporting framework of the spleen.

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### MECHANICAL INJURIES OF THE HEAD IN INFANTS AND CHILDREN—THE NECESSITY FOR IMMEDIATE TREATMENT.

H. Illoway, M.D., reports a series of cases in which children have received severe blows upon the cranium, and discusses the effects of such injuries. Epilepsy, tubercular meningitis, and diabetes have been noted as following such injuries to the cranium in children.

The treatment the author suggests is rest in bed and calomel, the latter having an antiphlogistic action on the brain and its coverings. He administers the calomel in fairly large doses, two grains of calomel being given every three or four hours until the bowels are in free action. He has seen no evil effects produced, and is certain that several cases, as recorded in the paper, prove the quick and effective manner in which the calomel allays cortical irritation.

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### PROMPT DELIVERY IN ECLAMPSIA.

J. B. De Lee, Chicago (*Journal A. M. A.*, January 7), says there is no question as to the necessity of prompt delivery in eclampsia. The problem is in the method of accomplishing this. Before the seventh month the fetus always dies and craniotomy may be performed, but after viability an attempt must be made to save it. In a well-equipped hospital the matter is simple, as operative delivery can be brought about, but in a private home and when skilled assistance is lacking, less active surgical measures will have to be employed, together with medical treatment. Puncture of the membranes, use of the colpeurynter and, after almost complete dilatation, manual dilatation of the balance with episiotomy and forceps delivery or version, and extraction depending on the conditions. The state of the cervix is the all-governing condition so far as rapidity of delivery is concerned. If fully dilated, delivery may be safely effected by forceps if the head is engaged, and version and extraction if the head is movable. If the cervix is effaced but the os not sufficiently dilated, manual or mechanical dilatation is the best, and episiotomy to overcome the resistance of the peritoneum, followed by forceps delivery. The greatest discussion has arisen regarding the condition when the cervix is uneffaced and tightly closed, and De Lee gives his experience with each of the methods that have been employed. Manual dilatation is objectionable on account of the bruising and laceration attending it and the time that it requires. Only rarely are the parts so soft and dilatable as to allow safe delivery. Metreuryisis is the ideal method if no urgency exists, with soft cervix and large vagina. Its contraindications in eclampsia are, scars on the cervix, abnormal rigidity, complete closure of the cervix in a primipara, edema of the paracervical tissues, local infection, and great urgency. Rigid cervix is a frequent complication of eclampsia, as it occurs most often in primiparæ and women of advanced years. He denies the usefulness of instrumental dilatation in these cases, and considers the cervical incisions as contraindicated. They are also contra-



indicated if the child is large or presents abnormally. Vaginal Cesarean section has given the best results of any yet obtained, especially when performed immediately after the first convulsion. He refers to Dr. Fry's paper on the subject offered at the same symposium. Abdominal Cesarean section has not obtained the recognition it deserves in eclampsia in De Lee's opinion. It has been used mostly in the worst cases, and the maternal mortality has been high, but in some cases the vaginal section is impossible. He does not see the advantages in the extraperitoneal method, or considers them rather overdrawn. The resistance of the perineum is also to be considered, and, if episiotomy is employed, he recommends the mediolateral method. Special mention is made of decapsulation of the kidneys proposed by Edebohls. It is impossible, De Lee says, at the present time, to pass judgment on this procedure and also to advise nephrotomy in addition to decapsulation, as recommended by two German authors. It has not had a fair trial, since it has been used only in cases proving refractory to all other methods. Considering what we know of the causation of eclampsia, the operation is not rational, but it is perhaps as reasonable as any one of our other "specific" remedies. Early in his practice De Lee learned two facts—one that morphin given to eclamptics killed many of the babies and prolonged the post partum coma, and the other that chloroform is a very dangerous drug in eclampsia. He now restricts his use of anæsthetics and narcotics to an irreducible minimum. For the operative delivery he has used ether, but for Cesarean section he uses nitrous oxid and oxygen because the child is delivered so rapidly that the preliminary asyphixia is of no moment.

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## PERSONAL AND NEWS ITEMS.

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### ONTARIO.

In Toronto during January there were 112 cases of diphtheria, 331 of scarlet fever, and 11 of typhoid fever.

Dr. N. K. Wilson, son of Dr. W. J. Wilson, of Toronto, is in Edinburgh, taking a course of post-graduate work.

The Canadian Hospital Association will meet this year at Niagara Falls on 23rd and 24th of May.

Dr. C. J. O. Hastings and L. L. Palmer have been placed on the consulting staff of Grace Hospital.

Dr. H. B. Anderson has gone to Dr. Von Noorden's Clinic, in Vienna, for a few months.

Dr. B. L. Riordan, of Toronto, is recovering from an attack of typhoid fever.

Dr. Charles Sheard, jr., of Toronto, is doing post-graduate work in New York.

There was a small fire in the Brockville Hospital a short time ago. It arose from an overly-heated pipe, but no damage of moment was done.

Ottawa recently had a smallpox scare. Five cases occurred in the city, and the Medical Health Department advised general vaccination.

Rev. F. E. Oberlander, of Berlin, has announced his plans for raising money for a tuberculosis sanitarium for Waterloo County.

The late Mrs. Allworth, of Toronto, leaves \$100 to the Hospital for Sick Children and \$100 to the Halifax Asylum for the Blind.

Dr. E. G. Kidd has been appointed head of the anatomical department of Queen's Medical College.

On the latter part of January there were five cases of smallpox in the Swiss Cottage Hospital, Toronto. In spite of these oft-repeated warnings people still neglect to become vaccinated.

A very wide circle of medical men will be glad to learn that Dr. Adam H. Wright has been made chairman of the Ontario Provincial Board of Health.

The water supply in Toronto has been reported as much improved. The chloride treatment has been of much value, but when the water is turbid it should be boiled.

Dr. W. B. Kendall, of the Muskoka Cottage Sanatorium, has been granted leave of absence to go to Europe for the purpose of studying the best methods of treating tuberculosis.

Dr. J. T. Halliday, who held the position of medical officer to the Peterboro' Rangers for twenty years, was presented recently with a silver service on his retirement.

The following doctors have been appointed medical inspectors for the Toronto schools: Drs. Helen MacMurchy, Estella O. Smith, F. S. Minus, C. E. Hill, G. A. Winters, F. G. Munn, and R. R. Hopkins.

Two charitable societies of Toronto, namely, the Associated Charities and the Rosary Hall Association, have been incorporated into one organization, with power to receive by gift, devise, bequest, or purchase property or money for charitable purposes.

The Charlotte Eleanor Englehart Hospital at Petrolea was formally opened on 1st February. The hospital is a fine building, and enjoys a beautiful view of the surrounding country. The grounds and building were the gift of Mr. Englehart of the town.

Dr. W. A. R. Mitchell, late surgeon on the "Nimrod" with the Shackleton expedition to the South Pole, has accepted the position of

medical superintendent of the Neal Institute, 78 St. Alban's Street, Toronto.

In January the highest number of patients in the Toronto General Hospital was 372 on any one day, and the lowest was 331. The number admitted during January was 473, and those discharged was 431. There were 28 deaths.

An outbreak of smallpox has occurred at Maxville, Ont., where twelve cases have developed within a few days. Although there have been no deaths, a Maxville physician described the disease as being of a virulent type.

Dr. R. L. Island, of Rosemont, has sold his practise to Dr. Blair. He will spend the winter in Bermuda and then reside in Orangeville. He had been in practice in Rosemont for thirty years, and was presented by the citizens with an address and a gold-headed cane.

Dr. Fitzgerald, who was formerly on the staff of the Toronto Asylum and has spent a couple of years abroad, is at present in Toronto, but intends in a few months to go abroad again for further study and research work.

The Hamilton Board of Control gave Miss Jeannette Lewis liberty to proceed with the erection of the Hospital for Sick Children on the City Hospital Grounds. The hospital is to be turned over to the city free of debt.

Some difficulty has arisen in Hamilton over the erection of a hospital for sick children. Miss Lewis sought permission to erect such an institution on the grounds of the City Hospital. This has now been refused, and for the present the work will not go on.

Dr. Bruce Smith has urged the trustees of the Berlin and Waterloo Hospital to improve the operating room and erect an additional wing. Berlin will be asked for \$10,000, Waterloo for \$3,000, and the county for \$3,000. There is \$4,500 cash on hand.

The governors of the Hamilton City Hospital report that the cost of running the hospital last year was \$4,213. This is some \$500 less than for 1909. It is expected to spend about \$7,000 on improvements. Some medical practitioners are urging that the governors make an effort to secure a wing for the sick children.

The Humane Society of Toronto, at its recent annual meeting, appointed a committee on legislation to seek for such laws as would prevent docking horses, secure the destruction of mortally injured or diseased animals, and the proper treatment of animals and poultry on the trains. The committee consists of Mr. Justice Osler, Sir George Ross, Mr. D. L. McCarthy, and P. C. L. Harris.

The Associated Press despatches from Ottawa for 14th February stated there were 564 cases of typhoid fever in that city, and that during

the previous day 20 new cases had been reported. There were six deaths on 14th February. Such a condition should induce the citizens of Ottawa to take proper steps to secure pure water. It does not pay a city to sell bad water to its people.

The amount of money estimated by Dr. Charles J. Hastings, City Medical Health Officer, Toronto, as required for the Medical Health Department this year is \$159,362.28. The total expenditure last year was \$92,958.31. The total of \$159,362.28 is made up of the following items: Local Board of Health, \$88,496.87; ambulance, \$9,563.61; morgue, \$995.47; Isolation Hospital, \$48,458.36; smallpox and quarantine expenses, \$8,047.97; investigation of slums, \$800; spring cleaning appropriation, \$3,000.

Good progress is being made with the construction of the Smith's Falls General Hospital. The subscriptions, including the town grant of \$10,000, total \$22,512. Of this amount \$17,807 has been paid in to the board of governors. The new board is composed of the following persons: Rev. Dr. Stobo, Mayor Foster, F. Whitcomb, W. Park, P. S. Rombough, John Gile, Wilson Kilfoyle, R. G. Lucas, Rev. G. W. McKay, Rev. D. N. Coburn, Rev. C. R. F. Bliss, Rev. F. G. Lett, J. H. Stewart, J. E. Burns.

### QUEBEC.

The Notre Dame Hospital, Montreal, admitted 2,500 patients during 1910. Of these 104 died.

The Notre Dame Hospital, Montreal, won in an action brought by a patient who fell on the floor, sustaining a fracture of the arm.

The province of Quebec has passed a very stringent law regarding the sale of cocaine.

The annual dinner at McGill was a very successful event. Dr. R. Tait McKenzie, of the University of Pennsylvania, was the guest.

Dr. J. F. Rogers, of Montreal, after a trip through Europe, has returned to his work again.

Out of a record of 2,051 cases of typhoid fever in the Montreal General Hospital there were 93 instances of perforation.

A scholarship, known as the Dr. Arthur A. Browne Memorial, will be founded at McGill Medical College. Already \$10,000 has been secured.

Dr. Fred J. Tees has retired from the superintendency of the Montreal General Hospital, and has gone into private practice. Dr. George Shanks succeeds him.

The Quebec Government has agreed to pay the Hospital for the Insane at Verdun \$142 a year per patient. The agreement is to run for fifteen years.

Dr. Sproule, M.P., in the House of Commons, asked for the dismissal of the medical health officer of Quebec on account of the typhoid fever that had prevailed there.

Dr. J. E. Laberge has been appointed a member of the General Board of Health. He has filled the position of chief officer of the infectious disease department of the Montreal Board of Health.

Montreal has just had a smallpox fright. A man with the disease was sent to the Montreal Smallpox Hospital from Valleyfield. If people and municipalities would only learn the simple lesson that vaccination would prevent all this trouble, the country would have made a great step onwards in the matter of public health.

In a bill which is to be presented to the Legislature by Mr. Mousseau, of Soulanges, an endeavor will be made to place medical men in the Province of Quebec and other provinces of the Dominion on an equal footing, providing these provinces accept medical certificates issued in Quebec. Mr. Mousseau regards it as unfortunate that the physicians of Quebec and Ontario cannot agree upon reciprocity, and thinks his bill will be a step in this direction.

#### *MARITIME PROVINCES.*

There have been a number of cases of smallpox at Moncton, N.B. In the early part of February there were ten patients under isolation. The situation is rather serious. In St. Paul, Kent County, four houses are quarantined, and the churches and schools are closed. In spite of such lessons there are those who preach against vaccination.

#### *WESTERN PROVINCES.*

Scarlet fever has been very prevalent in Winnipeg, with a death rate of about 15 per cent.

The Government of British Columbia has given \$5,000 and the City of Victoria \$15,000 for an isolation hospital.

Smallpox has been prevalent in the Fraser River region, B.C. Dr. Fagan reports that the disease is now under control.

The faculty of the Medical College in Winnipeg has withdrawn its offer of turning over the college to the University of Manitoba.

Two years of McGill University may now be taken in Victoria and three years in Vancouver. At the present session there are 92 students from British Columbia attending McGill.

The Asylum for the Insane at Ponoka, Alta., will be ready in April. The patients in the asylum at Brandon from Alberta, numbering 150, will be removed to the new asylum.

Dr. Vrooman, lately superintendent of the Manitoba Tuberculosis Hospital, has been appointed to the superintendency of Tranquille Sanatorium, in British Columbia, Dr. R. W. Irving having resigned.

#### FROM ABROAD.

Sir Francis Fulton, who did so much valuable work on scientific subjects allied to medicine, died on 17th January, at the age of 89.

Henry Power, M.B., F.R.C.S., consulting ophthalmic surgeon to St. Bartholomew's Hospital, died recently, at the age of 82.

The French medical schools have decided upon a five years' course of study. This will likely induce other countries to follow suit.

In the United States 112,000 people die annually of tuberculosis and 75,000 of cancer. One out of every eight adult women will die of cancer.

The bubonic plague has been very severe around Mukden and Harbin. For a radius of one hundred miles around these places the disease has been raging. Several native and foreign doctors have died.

A vigorous effort is being made to raise \$300,000 for the purpose of establishing 60 milk depots for pure milk for children in the City of New York.

The tenth annual report of the New York State Hospital for the Cure of Crippled and Deformed Children has come to hand. The report shows that much good work has been done.

In statistical returns for the County of London, with a population of 4,833,938, the birth rate was 24.2, the marriage rate 15.8, and the death rate 14.5 for each 1,000.

In Japan to enter a medical college the student must have spent from 11 to 14 years in the elementary and secondary schools. The medical course is now one of four years.

Throughout Uganda, on the West Coast of Africa, it is claimed that 20,000 persons have died during the past five years of sleeping disease. The urgent problem is how to deal with the *glossina palpalis*, which spreads the disease by its bite.

Sir Oliver Lodge, in a recent address, pleads for more consideration for persons confined in prison. He said that there were real criminals in prison, but there were many who were only law-breakers, and that, too, in an inadvertent manner. There ought to be a wide distinction made. Criminality was a disease, partly physical and partly mental.

Dr. David L. Sohn, writing in *American Medicine*, contends that there should be schools for the education of consumptives. It is not possible to isolate all in sanatoria, and those who cannot be isolated ought to be taught in these schools how to get well and how to prevent infecting other people.

The California State Board of Health, at a recent meeting, adopted a resolution that physicians may report syphilis and gonorrhœa. Office numbers are to be used instead of the names of the patients. The attention of the citizens is to be called to the highly contagious nature of these diseases.

False statements on patent medicine labels has come before the United States Supreme Court. The District Court for Western Missouri decided the false claims as to curative qualities did not come within the Pure Food Law provided the label gave a true statement of constituents. This has been carried to the Supreme Court.

Scotland is awakening to the real danger of an epidemic of smallpox some day in the near future. In 1906 253 persons availed themselves of the conscientious objectors clause; in 1907 7,258 took advantage of this, and in 1908 no less than 15,846 escaped vaccination in this way. At this rate in a short time very few of the children will be protected.

At the Society of Physicians in Vienna Dr. Konigstein reported two cases of syphilis treated with 606. He said it was not the *magna sterilisans* that Prof. Ehrlich had hoped it would be. The eruption sometimes returned. It is a valuable remedy, however, and out of at least 40,000 injections in the hands of competent observers there has not been any fatal results. His impression was that it is less harmful than mercury.

Dr. W. W. Keen, of Philadelphia, the distinguished surgeon, was operated on some time ago for an abdominal tumor. When in Britain he consulted Dr. G. A. Gibson, Edinburgh, and Dr. W. Hale White and Mr. Mummery, of London, and Prof. Eiselsberg, of Vienna. The operation revealed the fact the tumor was due to a perforation of a diverticulum of the sigmoid surrounded by firm adhesions. Excellent progress has been made towards recovery.

In the Parliament of the South African Union a resolution was introduced by Dr. McNeillie, and ably supported by Drs. Methling, Hewat, Macaulay, Smartt, Watkins, and a number of lay members, that there be a health department. General Smuts, Minister of the Interior, said he would not consent to the various provinces having power to control health matters, but that he would create a health department for the entire Union.

During the years 1909 and 1910 the various medical councils for the provinces entering into the South African Union have been discussing ways and means of securing a medical act for the entire Union and covering the practice of medicine, dentistry, and pharmacy. A conference of delegates from all the councils met at Johannesburg and agreed upon the terms of a bill which is in the hands of the Minister of the Interior and will become law. South Africa will be thus ahead of Canada, and will set us a good example. The medical profession of Canada should learn the song called "Tullochgorum."

## BOOK REVIEWS.

## THE BRADSHAW LECTURE ON CANCER.

Delivered at the Royal College of Surgeons of England, on Wednesday, December 7th, 1910, by Sir Alfred Pearce Gould, K.C.V.O., M.S. Lond., F.R.C.S. Eng., Senior Surgeon to the Middlesex Hospital, Lond. : John Bale, Sons & Danielson, Ltd., Oxford House, 83-91 Great Titchfield Street, Oxford Street W. Price, 3s. 6d.

In the early part of this lecture the historical side of the question is considered and the experimental work that has been done on mice. This leads up to the real position taken by the distinguished lecturer. "Two discoveries have caused a great development in cancer research—the proof that cancer can be transferred from animal to animal, and the demonstration of the influence of radio-active bodies upon all growth."

"Cancer occurs in all races of men." It cannot, therefore, be due to climate, diet, occupation, soil or civilization, or to what may be called "environment." Certain occupations, however, do tend to cause it, such as chimney sweeping, working in tar and paraffin, and those engaged with X-ray machines. These are not the essential cause, however.

When we come to the experimental study, it is found that some examples of cancer will inoculate readily into one variety of mice, but not readily, if at all, into another variety. It has not yet been possible to find by statistics if one race of man is more prone to the disease than another. But we can go further and state that cancer is a disease that occurs in all vertebrate animals. It occurs in birds, reptiles, fishes, and mamalia. In all these it is the very same disease as occurs in man with the very same characteristics.

While cancer can be transferred from one animal to another of the same variety, it cannot be transferred to an animal of another species. This goes to show that each species has a cell characteristic that prevents its growing in the body of an animal of another species. This is a very important biological law, and goes to prove that cancer is not due to any form of infective parasite or organism. Another law that should be borne in mind is that no matter where a cancer arises, the metastatic appearances of it in any other part of the body will contain the same sort of epithelial cells as are found in the primary growth. The cancer will remain throughout all its metastases, of the squamous, columnar, or spheroidal epithelial type, as it was when it first commenced. "Cancer is specific in the physiological characters of its cells."

The lecturer then goes on to point out that the one essential feature of every cancer is the living cell. The cancer cell has great powers of independent growth and multiplication. When it dies the cancer ceases.



He lays down the following positions with regard to this cell: "It possesses a great power of continuous multiplication." "It retains the inherited limitations of type of the cells among which it first appears." "Cancer cells develop and differentiate but little and irregularly." The development of the cancer cell is neither purposeful nor effective." "Cancer cells exhibit periodicity in their growth."

The chemical characteristics of cancer is then taken up, and evidence submitted to show that there is a difference in intra-cellular composition of the cancer cell to the non-cancer cell of similar epithelial form and origin.

The lecturer takes up the causes of cancer. Under this head he discusses the influence of age, sex, chronic irritation, X-rays, and alcohol.

Self-cure may occur. This is emphasized and evidence given that it may take place in several ways. This may be brought about by the cancer cells losing their power of reproducing themselves, and by the power of the surrounding tissues to resist invasion by the cancer cell. "There is a cure of cancer apart from operative removal." The hope is expressed that when the full life-history and all the characteristics of the cancer cell is known we may be able "to prevent, to control, and to cure cancer."

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## GYNÆCOLOGY.

A Compend of Gynæcology. By William Hughes Wells, M.D., Associate in Obstetrics in the Jefferson Medical College; Assistant Obstetrician to the Jefferson Medical College Hospital; Fellow of the College of Physicians, Philadelphia, etc. Fourth edition, revised and enlarged, with 153 illustrations. Philadelphia: P. Blakiston's Son & Company, 1012 Walnut St. 1911. Price, \$1.00.

This is a very good little book. Like all the other volumes of this series, the statements are concise, but they are very clear and well put. The points on treatment are specially well given. We can recommend this little volume very highly. It is a good manual to refresh one's memory on the salient points. For the final student it will prove very useful as an aid to degree examinations.

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## THE PREPARATION 606.

The Actual State of the Question, December, 1910. By Drs. L. Bizard and L. Lesage. Vigot Brothers editors, 23 Place de l'École de Médecine. Paris. Vol. 8vo.; pages, 60; paper covers. Price, 30 cents.

The small brochure gives the constitution of 606, and its method of preparation. It then goes on to the mode of its employment. It gives

directions for the subcutaneous intra-muscular, and intra-venous injections. The clinical results are then carefully reviewed and the general reactions and accidents stated. The authors go to show that one injection cannot be regarded as a cure. It has very great power over the chancre and mucous patches. It is a valuable remedy, but not an absolute cure.

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## PEDIATRICS.

**Case Histories in Pediatrics.** A collection of Histories of Actual Patients Selected to illustrate the Diagnosis, Prognosis and Treatment of the most important Diseases of Infancy and Childhood. By John Larett Morse, A.M., M.D., Assistant Professor of Pediatrics, Harvard Medical School; Associate Visiting Physician at the Infants' Hospital and the Children's Hospital, Roston. Boston: W. M. Leonard, 1911. Price, \$3.00.

The author has based this book of 314 pages on one hundred typical cases in actual practice. These cases are grouped under the headings Gastro-intestinal Tract, Diseases of Nutrition, Infectious Diseases, Nose, Throat, Ear and Larynx, Diseases of Lungs and Bronchi, Diseases of the Heart, Diseases of Liver, Diseases of Kidneys, etc. In this way a very clear statement of the author's teachings are set forth. He takes up each case under history, physical examination, diagnosis, prognosis, and treatment. There is a very complete index to the book, which renders it useful for reference. There is a marked interest kept up throughout, and is such a book as one is sure to read. There is a vitality about it that makes one feel that when reading these pages he is in actual contact with the patient, and is seeing a sick child and is prescribing for its treatment. This will prove a most useful sort of book.

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## CANCER.

**The Cancer Problem.** A statistical study. By C. E. Green, F.R.S.E. Edinburgh: William Green & Sons, 1911.

The author of this little volume of 90 pages contends that histology has said its last word, and has thrown much light on the nature and diagnosis of cancer, but nothing on the etiology. The author turns to the statistical study of cancer, and finds that it is (1) much more prevalent in some districts than in others; (2) much more common in certain occupations, and (3) that these figures are fairly constant. The local distribution of cancer is very interesting. One place, in Nairn, Scotland, where the people follow pastoral pursuits, the mortality is 9.73 per cent., while in Glasgow it is only 2.98 per cent. This leads the author to con-

clude that cancer is due to some extrinsic influences acting on the individual. Mechanical irritation the author does not accept as having more than of a predisposing influence. He then refers to the chemical theory, and states that the cause must be sought in some biochemical state or of some parasitic nature. He refers to the influence of various organisms in causing cell proliferation and tumor in the vegetable world. The author goes on to argue that cancer is a disease of parasitic origin, because some occupations suffer more than others; there is a strong resemblance in growth to a well-known parasitic disease, namely, actinomycosis, stimulation to overgrowth occurs in the vegetable world from certain parasites, tumors of mice have been reduced to 195 degrees in liquid air and yet reproduced, while animals' cells are killed at this temperature, and the parasite stimulates the part to growth without much fever or local inflammation. He then goes on to state the objections to the parasitic theory, and to meet them in turn. He states: "After reading an enormous mass of literature on the subject I am convinced that there is every indication that cancer may be of parasitic origin." He then goes on to show how certain occupations and localities may favor the growth of the parasite. In his concluding chapter he goes on to show that cancer may be curable, and suggests the use of calcium and heat upon cancerous growths. The book is a very readable one, and full of interesting statements.

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### VICIOUS CIRCLES IN DISEASE.

By James B. Hurry, M.A., M.D., Cantab.; ex-President, Reading Pathological Society, with illustrations. London: J. & A. Churchill, 7 Great Marlborough Street, 1911. Price, 6s. net.

This very handsome volume of 210 pages, with bevelled board and gilt edges and lettering, contains a great deal of most interesting matter. The vicious circles are often mentioned, and may not always be too well understood. In this book, by the aid of reading matter and carefully prepared cuts, these circles are made clear. It is a book that makes a free and most intelligent use of the graphic method. The author begins with a classification of circles, and then goes on to describe the vicious circles associated with the nervous system, the vascular system, the respiratory, the digestive, the urinary, the sexual systems, and with the eyes, etc. The genesis of these circles is taken up and the methods to be adopted to break them up. This is very much emphasized in the book, as the first step that must be taken towards the recovery of the patient. The author speaks of a vicious circle as "a morbid process in which two or more disorders are so correlated that they act and react

reciprocally on each other." The author remarks that these circles are exceedingly common, and play an important part in the progress and duration of disease. The author has struck out on a new and original method of setting forth some of the fundamental principles of the *modus operandi* of disease. We recommend this volume very highly.

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### THE PAPYRUS EBERS.

Dr. Carl H. Von Klein is making a translation of the Papyrus of Ebers. It is being published by the medical department of the John Crerar Library, Chicago, Illinois. It will consist of one volume of about 650 pages, printed in two colors, the same as the original. The price will be \$5. The originals were discovered in Egypt in 1870-73 by George Ebers and Ludwig Stern. Dr. Klein has been at work on the translation for a period of twenty years. The book will be a wonderful exposition of ancient Egyptian medicine, and covers a wide range of medical subjects.

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### OBITUARY.

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#### E. G. KNILL, M.D.

Dr. Edwin Gilmoure Knill died, 10th February, after a week's illness, at the age of 55. He was born near Toronto in 1855, and took his M.D. from the University of Toronto in 1881. He spent some time in Edinburgh, and received the diploma of L.R.C.P. there. He then practised in Markham till 1889, when he removed to Detroit, where he had been in active work ever since. He had a large clientele, and was regarded as one of the leading practitioners in Detroit.

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#### JAMES KERR, M.D.

Dr. James Kerr, a prominent physician and surgeon of Washington, D.C., died at his country home at Warrenton, Va., 2nd February, aged 62 years. He had been in failing health since 1907.

Dr. Kerr was born in Ireland, and was a graduate of the Royal University of Dublin and Queen's College, Belfast. At various times throughout his career he had acted as surgeon for the Royal Canadian mail

service, chief surgeon for the Canadian Pacific Railway, surgeon for H. M. transport No. XX. on the Gold Coast expedition, and surgeon for the Canadian militia in the Riel rebellion of 1885.

He had been president and professor of surgery at the Manitoba Medical College, Winnipeg, and professor of surgery at the Georgetown Medical College, of Washington, and was a member of the Washington Academy of Science.

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#### EDWARD GRINALIEL JANEWAY, M.D.

Dr. Edward Grinaliel Janeway, of New York, died 10th February. He was widely known as a most able practitioner. He filled at different times positions of importance, and was one of the medical men who attended the late President McKinley, when he was shot in Buffalo. He also attended Rudyard Kipling when he had pneumonia in 1899 in New York.

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#### GEORGE J. BULL, M.D.

Dr. Bull, of Paris, died in December last. He was a graduate of McGill in 1869. He practised for some time in Massachusetts, and then in Colorado. He finally settled in Paris, and practised as an ophthalmologist.

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#### L. A. LAPALME, M.D.

Dr. Lapalme died in Montreal in December. He had followed his professional work in Lewiston and St. Anne de Bellevue. He removed to Montreal in 1908.

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#### RAYMOND H. PHILLIMORE, M.D.

Dr. Phillimore had been medical inspector of schools in Montreal. He had also taken much interest in military matters. He was a graduate of McGill. The cause of death was cancer of the throat.

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#### FRANK B. LUNDY, M.D.

Dr. Lundy died at Portage la Prairie. He was born in Ontario in 1860, and graduated at Trinity College, Toronto, of the class of 1880. He was a son of the late Dr. Lundy, of Galt. For a time he practised in Dunganon.

## MISCELLANEOUS MEDICAL NEWS.

TO THE MEDICAL PROFESSION IN THE COUNTIES OF  
HURON AND PERTH—DIVISION NO. 4.

DEAR DOCTOR,—I enclose a copy of a bill to amend the Ontario Medical Act, and also a statement of the attitude of our medical society regarding the proposed bill.

This bill puts the whole control of the status of the medical profession, who may and who may not become licensed practitioners, in the hands of Toronto University and the Lieutenant-Governor in Council. It practically wipes out the Medical Council, and makes it a registering office under their control. It places the profession where it was prior to 1866. It opens the way to all cults. For example, if there were a school established for electropaths, osteopaths, Christian Scientists, or any other body professing to cure disease, the Lieutenant-Governor in Council could, and no doubt would were he friendly to that body, order the Medical Council to register its graduates. The more closely the bill is read the more manifest will be its destructiveness to the medical profession and to the best interests of the public.

It is certain that if the members of the House become possessed of the full purport of this bill it will be at once rejected. To make them acquainted with its true nature it is our duty as individuals and as societies to lay the matter before the members for our respective constituencies, or any others with whom we may have influence. No time should be lost in taking action, as the House meets on January 24th. Nor ought this to be left to the Medical Council. You are aware that there has been a council election. The Council is, therefore, a new body, and does not meet regularly until next July, and I personally do not know how they can deal with it as a body until they meet; hence the greater necessity for each of us doing his part.

There may not be a consensus of opinion as to doing away with the dual examinations, but I think it is pretty generally admitted that there should be some modification in the examinations. To me there are three methods, any one of which I prefer to the one we have at present: (1) One set of examinations. This, to me, seems the best, and ought to work to the truest interests of all if under the control or censorship of the Medical Council. (2) The Council to have examinations similar to those of the College of Physicians and Surgeons in England—that is, to examine the candidates in medicine and therapeutics, surgery and pathology, obstetrics and gynecology. (3) To do away with the primary examination and retain the intermediate and final examinations.

If there is anything which you think as representative of the division I can do, I will be pleased to receive your suggestions. I am,

Yours very truly,

Goderich, Jan. 21, 1911.

A. T. EMMERSON.

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BILL—AN ACT TO AMEND "THE ONTARIO MEDICAL ACT."

His Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. So long as the University of Victoria College and the University of Trinity College respectively remain federated with the University of Toronto, the member of the council of the College of Physicians and Surgeons of Ontario to be chosen by each of the two first mentioned universities, as provided by section 6 (1) of "The Ontario Medical Act," shall be chosen by and shall be a representative of the University of Toronto, and as the last-named university by its medical faculty performs the medical teaching work previously performed by the Toronto School of Medicine and Trinity Medical School respectively, the member of said council to be chosen by each of said schools as provided by said section 6 (1) shall be chosen by and shall be a representative of the University of Toronto.

(2) Every person who has heretofore obtained or may hereafter obtain from the University of Toronto the degree of bachelor of medicine (M.B.) or doctor of medicine (M.D.) may within five years from the date of obtaining such degree present to the registrar of the said council the diploma or other proper evidence of the granting of such degree and that he is the holder hereof, and may apply to have his name entered on the book or register referred to in section 21 of said Act, and thereupon the registrar shall, on payment of a registration fee to be fixed by the council and approved by the Lieutenant-Governor in Council, enter his name on the said book or register as a person deemed to be qualified and licensed to practise medicine, surgery, and midwifery in the Province of Ontario, and the provisions of said Act and of the rules and regulations of said Council respecting the admission and enrolment of students, their courses of study or medical education, and the matriculation, preliminary, intermediate, final, or other examinations, shall not apply to such applicant, but after registration as aforesaid the provisions of said Act applicable to persons whose names are inscribed on said book or register shall apply to him in the same manner and to the same extent as to such persons.

3. The provisions of section 20 of said Act shall not apply to the University of Toronto.

4. Any university, college, or body in the Province of Ontario now or hereafter by law authorized to grant in medicine or surgery, and which maintains a medical faculty and grants such degrees after a course of education, medical study, and examinations therein which are claimed by it to be of a standard equal to the standard maintained by the University of Toronto for similar degrees, may apply to the Council of the College of Physicians and Surgeons of Ontario for a declaration that its said standard is equal to the standard maintained by said university. Should the said council make such declaration, then sections 2 and 3 of this Act shall apply to such university, college, or body and to the persons who obtain such degrees therefrom. Should said council refuse to make such declaration there shall be an appeal to the Lieutenant-Governor in Council from such refusal, who may make or refuse such declaration, and if such declaration be made on said appeal said sections 2 and 3 shall apply as if such declaration, and if such declaration be made on said appeal, said sections 2 and 3 shall apply as if such declaration had been made by said council.

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## THE GODERICH MEDICAL ASSOCIATION.

### RE MR. LASH'S MEDICAL BILL.

At a meeting of the Goderich Medical Society, January 12th, 1911, the proposed bill to amend the Medical Act prepared by Mr. Lash, which is to come up during the coming session of the Ontario Legislature, was discussed and the following conclusions reached:

Section 1. In favor of doing away with the representation in the council of the colleges and schools not actively engaged in teaching medicine, but opposed to that representation being given to the University of Toronto, as it is already represented, and this would give it an undue representation and influence.

Section 2. In favor of doing away with the dual examinations, but opposed to the taking from the council the power to set the standard of education and training necessary to enable a candidate's name to be placed upon the register of the College of Physicians and Surgeons. This power is under the control of the profession in other provinces, in the American States, and in Britain. Other professions in this province retain that power, and to take it away from the Medical Council would be to destroy its usefulness, retrograde the profession, and bring it to the position it occupied before the Council was brought into existence.



Montreal, January 30th, 1911.

*Dr John Ferguson, Editor of the Canada Lancet, 15 Wellington Street East, Toronto, Ont.*

DEAR DOCTOR,—In the *Canada Lancet* of January, 1911, you publish on pages 335 and 336 an article entitled "Laval University Medical Department." You reproduce in this article the principal passages of Dr. Flexner's report on the faculty of medicine of the Laval University at Montreal, which report is contained in the Bulletin No. 4 of the "Carnegie Foundation for the Advancement of Teaching" (pages 324 and 325). You then say:

"This report may not be absolutely correct in every detail, *but it may be accepted as practically so*, and for our purpose will serve as a basis for what we wish to say." Starting from that, you express the opinion that, with eight professors and the very limited facilities which the report states we have, Laval University is not on the level with its mission, and that the law should intervene to oblige it to give to the young French-Canadians a medical instruction which would be as good as the one given by the English faculties, a medical instruction of the twentieth century.

If Dr. Flexner's report was practically exact, I would not be welcomed to protest, for your article would have its reason to be, but I protest strongly, for Dr. Flexner's report is false. Here are some proofs:

Dr. Flexner says in his report, page 324, that the whole body of teachers consists of eight professors. Now, if you refer to the Laval University of Montreal calendar for the years 1909-10 you will find the list of the whole body of the medical faculty on pages 24, 25, 26, 27, 28, and 29. This official list consists of twenty titular professors and thirty assistant professors. (I leave out eight aggregated professors who do not teach, page —.) This gives a total of fifty professors, both titular and assistant. Dr. Flexner, I will repeat, states only *eight* professors in his report.

We have written to Dr. Flexner and to Mr. Pritchett, the president of the Carnegie Foundation, about this error and many others. Dr. Flexner answered us on the subject of the professors: "Your catalogue for 1909-10, pages 27 and 28, is my authority for the number of professors." This has permitted us to verify that what he calls our 1909-10 catalogue is the calendar (or catalogue) of the Laval University of *Quebec*. In fact, in this calendar we find on pages 27 and 28 a list of the *surviving* professors of the discontinued branch of the medical faculty of Quebec at Montreal, which list contains eight names. But, the calendar explains in a footnote, that this is not the list of the faculty of medicine of Montreal. The footnote states that "these professors (eight in number)

belonged to the old Montreal section of the Faculty of Medicine. The professors of the School of Medicine and Surgery, Faculty of Medicine of Laval, at Montreal, will be found in the Montreal calendar." Dr. Flexner did not think necessary to take into account this explanatory note. But we know that he has the two calendars—the one of Quebec, since he refers to the 27th and 28th, and the one of Montreal, because Dr. St. Jacques, one of our aggregated professors, gave him a copy at the time of his visit in March, 1909, and also because he saw the list of the pupils who were following the course, and of which he gives the correct number 217. If he has counted the pupils in the *Montreal catalogue* why did he count the professors in the *Quebec catalogue*, despite the warning of the note hereabove mentioned?

Other examples of Dr. Flexner's incompetency and inexactness: He writes: "Chemistry is given by the university," meaning that the medical faculty does not itself give the chemical course. In the *Quebec catalogue* (pages 30 and 126), yes; there the medical students follow the chemical lectures given in the science faculty. But, in the *Montreal catalogue*, Dr. Flexner could have found out: Page 26 that Dr. Rivet is our faculty's professor of chemistry and toxicology; on page 80, that Dr. Rivet gives his lectures at 10 a.m. every day. Dr. Flexner says again: "Anatomy is limited to dissecting." This assertion is absolutely unwarranted and false. The Montreal Laval University's catalogue for 1909-10 says: Page 25, Dr. Mignault is professor of descriptive anatomy; page 27, Dr. Virolle is assistant to the course of descriptive anatomy; page 26, Dr. Délorme is professor of practical anatomy; page 80, at the "horaire," the descriptive anatomy course is given every day at 9 a.m. and the practical anatomy course (dissection) every day from 4 to 6. Dr. Flexner pretends that the clinical education is given in two hospitals, while, as a matter of fact, the Laval professors of *Montreal* give clinics in two general hospitals, one maternity, one contagious diseases hospital, and one hospital or asylum for nervous diseases and insanes. Dr. Flexner saw but one laboratory, when we have five of them, etc. Even when he comes to the population of Montreal, he claims it to be of 167,000, when it is over 500,000.

Dr. Flexner's report concerning what he calls Laval University Department (at Montreal) is false from one end to the other. He does not render justice to Laval at Montreal; he depreciates us. It is, perhaps, what Dr. Flexner wants. But for that it will require something else than lies.

No doubt, Laval at Montreal is not quite as rich as McGill or Toronto. The university at Toronto receives \$750,000 yearly, I believe, from the Government at Toronto. Quebec gives each year to our faculty the small sum of \$2,000. Our faculty has, consequently, to depend most

entirely on the students' fees for her annual income, not exceeding \$30,000. So our professors have to show good-will and self-devotedness. None of them receives a salary equivalent to the ones paid by the English faculties, and our laboratories are not so well and so completely equipped. But, if we have not the luxury, we have the necessary desire to teach medicine, as we should teach it in the twentieth century.

Dr. Flexner wanted to misjudge us, I believe, for he did not content himself with juggling with the Quebec and Montreal catalogues, but he avoided to apply to the proper authorities to obtain reliable data. Nobody at Laval has seen Dr. Flexner at the time of his visit here, except Dr. St. Jacques, one of our young aggregates who happened to be giving his lecture at the time of his visit. Neither the dean nor the secretary had any notice of his inspection of the faculty. Mr. Flexner made an enquiry *ex parte*, and he brought forth the conclusions that pleased him.

This is not the way to find out the truth. At Laval at Montreal we object to Dr. Flexner, an incompetent and partial judge, and we refuse to be condemned without being heard. This is not twentieth century methods; it is not in conformity with the ideas of the American constitution, and less of the British fair play.

In the same number of January of the *Canada Lancet* you admit yourself that Dr. Flexner's report does not render justice to the Queen's University, and yet you rely on this Dr. Flexner's report to write a very severe condemnation of the faculty of medicine of Laval University, of Montreal.

I believe I have given you sufficient proof of the inexactness of Dr. Flexner's report on Laval of Montreal. I now appeal to your sense of justice, and I beg of you to rectify your opinion on our faculty, and to make known to your readers the facts which I have laid before you.

I know you will do so with pleasure, because what we ask is only an act of evident justice to accomplish.

Faithfully yours,

E. P. LACHAPPELLE,

Dean.

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THE CARNEGIE FOUNDATION  
FOR THE ADVANCEMENT OF TEACHING,  
576 Fifth Avenue, New York.

February 3, 1911.

MY DEAR SIR,—Your letter of January 31, just received, explains completely my error and uncovers its source. Through inadvertence, which I profoundly regret, I did use the catalogue issued by Laval Uni-

versity of Quebec and apparently referring to the schools of both Montreal and Quebec. As you rightly point out, I obtained from this catalogue the number of your professors, instead of consulting the Montreal catalogue which, in some way that I am unable to explain, I did not use, though from it I obtained information on other points.

My statement on the subject of anatomy you misunderstand. As it is given under "Laboratories," it referred only to the work in the laboratories, and, of course, does not exclude the usual teaching and lecturing. I meant to point out that, as is the case in many medical schools, research work in anatomy, embryology, etc., was not part of the regular laboratory procedure.

President Pritchett's note will, I hope, convince you that I endeavored to see the dean or the secretary of the school; but, being unable to do so, I asked to be referred to someone to show me through the building. I beg you to believe that the error of detail which you have pointed out, and which I now very clearly see, I very deplly regret, and I shall take every possible step to acknowledge my fault and to set Laval University right before the world.

I am sending to the *Journal of the American Medical Association* a statement, a copy of which I enclose, and I shall be very happy to have you use the same as freely as possible.

I am, with respect, very sincerely yours,

(Signed)

ABRAHAM FLEXNER.

*Dr. E. D. Lachapelle, Dean of the Faculty of Medicine, Laval University, Montreal, Quebec.*

THE CARNEGIE FOUNDATION  
FOR THE ADVANCEMENT OF TEACHING,  
576 Fifth Avenue, New York.

February 3, 1911.

*The Editor of the Journal of the American Medical Association.*

DEAR SIR,—Will you permit me to utilize your columns in order to rectify an error in Bulletin No. 4 of the Carnegie Foundation, dealing with *Medical Education in the United States and Canada*? I have reference to my account of the medical department of Laval University, Montreal. This institution is entirely distinct from Laval University, Quebec, which also has a medical department. The Quebec school, however, publishes in its catalogue certain data respecting the Montreal school some material taken from the inadequate statement in the Quebec catalogue.

The staff of the Montreal school numbers 50, of whom 20 are professors.

The number of beds in the two general hospitals used should have been given as 290, and an additional statement that the school has several supplementary hospitals should have been made.

The lectures on chemistry for medical students are given by a professor in the medical faculty.

I am informed by the dean that the population of Montreal is considerably greater than that given in the text; but our information on this point was supplied to us by the Statistician of the Dominion of Canada

With many thanks, I am,

Very truly yours,

(Signed)

ABRAHAM FLEXNER.

#### THE TRUSTEES OF THE TORONTO GENERAL HOSPITAL.

Mr. J. W. Flavelle was re-elected chairman of the Board of Trustees of the Toronto General Hospital at the annual meeting. Mr. P. C. Larkin was chosen vice-chairman. The board of trustees for 1911 is as follows: Mr. J. W. Flavelle, Mr. P. C. Larkin, Mr. W. E. Rundle, Mr. W. T. White, Prof. A. B. Macallum, Mr. J. C. Eaton, Mr. H. H. Fudger, Mr. M. J. Haney, Mr. Cawthra Mulock, Dr. John Hoskin, K.C., Sir Edmund Walker, Ald. J. O. McCarthy, Mr. H. C. Cox, Mr. C. D. Massey, His Worship the Mayor, President R. A. Falconer, Mr. D. R. Wilkie, Sir William Mackenzie, Mr. W. J. Douglas, Mr. Z. A. Lash, K.C., Mr. Eugene O'Keefe, Mr. Mark H. Irish, Ald. N. G. Heyd, Ald. Alfred Maguire, Ald. George R. Sweeny. Col. Sir H. M. Pellatt and Thomas B. Greening were added to the honorary governors.

#### THE ONTARIO HEALTH BOARD.

A new board of health has been appointed for the province. By an order-in-council passed recently the Provincial Government appointed Dr. Adam Wright, of Toronto, as chairman of the board. His associates are Dr. David B. Bentley, of Sarnia; Dr. George Clinton, of Belleville; Dr. W. H. Howey, of Sudbury; Dr. Paul J. Maloney, of Cornwall; Dr. James Roberts, of Hamilton, and Dr. J. W. S. McCullough, who was reappointed secretary and chief health officer of the province.

This board succeeds the one appointed by the Whitney Government in 1906. Dr. Charles Sheard, of Toronto, was made chairman, and his associates were: Dr. M. I. Beeman, of Newburgh; Dr. W. R. Hall, of

Chatham; Dr. Coughlin, of Peterboro; Dr. Robinson, of Guelph; Dr. J. W. S. McCullough, and Dr. C. A. Hodgetts, secretary. Since that time Dr. Coughlin has been appointed head of the Institute for the Deaf and Dumb at Belleville; Dr. Robinson has been appointed to the Hospital for the Insane at London; and Dr. Hodgetts was appointed head of the Department of Public Health on the Conservation Commission. This board served over a year over the full term of three years for which it was appointed.

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### FIFTEEN MILLION DOLLARS SPENT IN TUBERCULOSIS CAMPAIGN IN 1910.

The second annual statistical statement recently issued by the National Association for the Study and Prevention of Tuberculosis shows that in 1910 nearly \$15,000,000 was spent in the fight against tuberculosis, as against \$8,000,000 in 1909. The largest item of expense in 1910 was for treatment in hospitals and sanatoria, \$11,376,500 being expended for that purpose. Antituberculosis associations spent \$760,500 and dispensaries \$889,000. Special municipal and state expenditures aggregate \$1,750,000. Of the total amount expended, 62.6 per cent. came from public appropriations. New York State again leads in the money spent, with a total expenditure of \$4,245,000. Pennsylvania runs second, with a total expenditure of \$2,104,000. Expenditures of other states are as follows: Massachusetts, \$1,518,000; Colorado, \$836,000; Ohio, \$649,500; Connecticut, \$506,000; New Mexico, \$501,000; Illinois, \$453,000; California, \$404,000; New Jersey, \$385,700.—*New York Med. Jour.*, 21 January.

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### HEROISM OF MEDICAL MAN AT THE CAPE.

The medical profession seems bent upon distinguishing itself in the colonies as well as at home. Reports from Cape Town early in the present week tell of a terrible railway disaster at Gaika's Loup to a crowded trainload of people, chiefly women and children, returning from a holiday. The train was descending a steep incline at midnight, when the snapping of some couplings toppled six of the coaches over to the bottom of a curved embankment fifteen feet high. The coaches turned turtle, and a number of unfortunate victims were crushed and mangled among the *débris*. Among the passengers was a Dr. Robertson, of Cathcart, who emerged from the wrecked train with three of his ribs damaged, not to mention the accompanying shock and other damage. In spite of his injured condition, however, he set to work to assist the wounded. He was actually carried from place to place in order to superintend the treat-

ment of the injured. The *Reuter's* telegram detailing the news of the disaster contains the pithy sentence: "The survivors declare that he deserves the Victoria Cross." It is to be hoped that the conduct of this brave man will be brought to the notice of King George, and that he will receive that equivalent to the Victoria Cross which is granted to civilians. We further suggest that the medical profession of the United Kingdom should found a medal of its own as a recognition of distinguished bravery. The organization necessary to that end might well be undertaken by the British Medical Association. Failing any concerted action, the *Medical Press and Circular* would be pleased to co-operate in any way possible towards the achievement of so worthy an object.—*Medical Press*, 11 Jan., 1911.

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### AN ACT TO PROHIBIT THE IMPROPER USE OF OPIUM AND OTHER DRUGS.

His Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:

1. This Act may be cited as *The Opium and Drug Act*.
2. In this Act, unless the context otherwise requires,—
  - (a) "Drug" means and includes any substance mentioned in the Schedule to this Act; or which may be added thereto under the authority of this Act;
  - (b) "Opium" means and includes crude opium, powdered opium, and opium prepared for smoking, or in any stage of such preparation;
  - (c) "Imports" or "imported" means and includes the bringing or conveying, or the causing to be brought or conveyed, into Canada of any drug;
  - (d) "Export" or "exporting" means and includes the taking or conveying, or causing to be taken or conveyed, out of Canada of any drug;
  - (e) "Magistrate" means and includes any judge of the sessions of the peace, recorder, police magistrate, stipendiary magistrate, two justices of the peace, or any magistrate having the power or authority of two or more justices of the peace.
3. Every person who, without lawful or reasonable excuse, imports, manufactures, sells, offers for sale, has in his possession, or takes or carries or causes to be taken or carried from any place in Canada to any other place in Canada any drug for other than scientific or medicinal purposes shall be liable, upon summary conviction, to a fine not exceeding

five hundred dollars and costs, or to imprisonment for a term not exceeding one year, or to both fine and imprisonment.

4. Every person who smokes opium, or who, without lawful or reasonable excuse, has in his possession opium prepared or being prepared for smoking, shall be liable, on summary conviction, to a fine not exceeding fifty dollars and costs, or to imprisonment for a term not exceeding three months, or to both fine and imprisonment.

(2) Any person who, without lawful and reasonable excuse, is found in any house, room or place to which persons resort for the purpose of smoking or inhaling opium, shall be liable, upon summary conviction, to a fine not exceeding one hundred dollars and costs, or to imprisonment for a term not exceeding one month, or to both fine and imprisonment.

5. Any person who deals in any drug, who gives, sells or furnishes any drug to any person other than a duly authorized and practising physician, veterinary surgeon or dentist, or to a druggist carrying on business in a *bona fide* drug store, or who neglects to make or preserve a proper record in a suitable book of the name and address of the physician, veterinary surgeon, dentist or druggist to whom he gives, sells or furnishes any drug, and the date of such sale; and any druggist who gives, sells or furnishes any drug except upon a written order or prescription signed by a duly authorized and practising physician, veterinary surgeon or dentist, or who, without the authority of the prescribing physician, veterinary surgeon or dentist, uses any prescription to sell any drug on more than one occasion, or who neglects to make or preserve a proper record in a suitable book of the name of the physician, veterinary surgeon or dentist signing such order or prescription, the date of filling the order or prescription, and in the case of a prescription the name of the person for whose use the prescription was granted, or who refuses to allow such record to be examined by any police officer, shall be liable, upon summary conviction, to a fine not exceeding two hundred dollars and costs, or to imprisonment for a term not exceeding three months, or to both fine and imprisonment.

(2) Any physician who signs any prescription or order for the filling of which any drug is required, unless such drug is required for medicinal purposes or is prescribed for the medical treatment of a person who is under professional treatment by such physician, and any dentist or veterinary surgeon who signs any order for any drug, unless such drug is required for medicinal purposes in connection with his practice as a dentist or veterinary surgeon, shall upon summary conviction, be liable to a fine not exceeding two hundred dollars and costs, or to imprisonment for a term not exceeding three months, or to both fine and imprisonment.

6. Any person without lawful or reasonable excuse exporting or attempting to export any drug to any country which prohibits the entry



of such drug shall be liable, upon summary conviction, to a fine not exceeding five hundred dollars and costs, or to imprisonment for a term not exceeding six months, or to both fine and imprisonment.

7. If it be proved upon oath before any magistrate that there is reasonable cause to suspect that any drug is kept or concealed for any purpose contrary to this Act in any dwelling-house, store, shop, warehouse, outhouse, garden, yard, vessel or other place, such magistrate may grant a warrant to search by day or night any such place for such drug, and if such drug is there found, to bring it before him.

8. When any person is convicted of an offence against this Act, the convicting magistrate may adjudge and order, in addition to any other penalty or punishment, that the drug in respect of which the offence was committed, or which has been seized under the search warrant as aforesaid, and all receptacles of any kind whatsoever found containing the same be forfeited and destroyed, and such order shall thereupon be carried out by the constable or peace officer who executed the said search warrant, or by such other person as may be thereunto authorized by the said convicting magistrate.

9. Any drug now in the custody of any court, and any drug that may be seized for the violation of any law shall be destroyed, unless such drug is claimed within three months after the passing of this Act, or after such seizure, as the case may be, and it is established to the satisfaction of the court that no offence has been committed in connection therewith, or unless the court otherwise orders, provided, however, that the provisions of *The Customs Act* shall apply to any drug unlawfully imported into Canada.

10. If any person charged with an offence against this Act pleads or alleges that he imported, manufactured, sold or offered for sale, or had in his possession, any drug in respect of which the offence is charged, for scientific or medicinal purposes, the burden of proof thereof shall be upon the person so charged.

11. One half of any fine recovered from any person convicted of an offence against this Act may be paid to the person giving information leading to such conviction, if so directed by the magistrate.

12. No conviction, judgment or order in respect of an offence against this Act shall be removed by certiorari into any of His Majesty's courts of record.

13. The Governor in Council may make such orders and regulations as are deemed necessary or expedient for carrying out the intention of this Act; for the seizure of any drug that there is reason to believe is liable to forfeiture under this Act; and for the use or sale of any drug for scientific purposes.

14. The Governor in Council may, from time to time, add to the Schedule to this Act any alkaloids, derivatives or preparations of the drugs named in the said Schedule, the addition of which is by him deemed necessary in the public interest, and every order in council in that behalf shall be published in *The Canada Gazette*, and shall take effect at the expiration of thirty days from the date of such publication.

15. Chapter 50 of the statutes of 1908 is hereby repealed.

16. Section 4 of this Act shall not come into force until the first day of July, one thousand nine hundred and eleven.

#### SCHEDULE.

Cocaine.  
Morphine.  
Opium.

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#### ONTARIO MEDICAL ASSOCIATION, NIAGARA FALLS, 1911.

The thirtieth annual meeting of the Ontario Medical Association will be held in Niagara Falls, Ont., on May 30th, 31st, and June 1st. The spacious rooms of the Clifton House have been secured for the meetings, and from the appearance of the provisional programme, which has just come to hand, the attendance this year should surpass all previous records.

The session will open on Tuesday morning, May 30th, with registration of members at the secretary's desk. At 2 p.m. the president delivers his address, which is followed by a symposium on appendicitis. The pathological aspect is discussed by N. T. McLaurin, Toronto, the medical treatment by R. D. Rudolf, and the surgical by H. A. Bruce, Toronto. Following this is the address in medicine delivered by a Canadian, T. B. Fitcher, now associate professor of medicine in Johns Hopkins, Baltimore.

#### 8 P.M.—EVENING SESSION.

1. The Relation of Laboratory Work to Medicine—Norman M. Harris, professor of bacteriology, University of Chicago.

2. Public and Professional Aspects of the Pneumonia Question—William Charles White, medical director, Tuberculosis League, Pittsburg, Penn.

#### 9 P.M.

Reception in Clifton Hotel ballroom, tendered to the members of the association by the president, H. R. Cosgrain.

## WEDNESDAY, MAY 31—MORNING SESSION.

## SURGICAL SECTION—9 A.M.

1. A paper—Robert Lucy, Guelph.
2. Surgical Diagnosis of Lesions of Kidney and Bladder—J. K. McGregor, Hamilton.
3. Open Method of Treating Fractures—F. N. G. Starr, Toronto.
4. A paper—A. Primrose, professor of clinical surgery, Toronto.
5. A paper—E. Archibald, Montreal.
6. Thoracic Surgery—E. Von Eberts, Montreal.
7. Some Interesting Cases—H. S. MacKendricks, Galt.

## MEDICAL SECTION—9 A.M.

1. Bacteriology of Tuberculosis—A. H. Caulfield, Gravenhurst.
2. A paper—John McRae, Montreal.
3. The Present Status of Radium Therapy—W. H. B. Aikens, Toronto.
4. A paper—L. E. Roundtree, Baltimore.

## GYNÆCOLOGY, OBSTETRICS, AND PEDIATRICS SECTION—9 A.M.

1. Post-partum Hæmorrhage—Robert Ferguson, London.
2. Non-surgical Treatment of Tuberculous Adenitis—Campbell Laidlaw, Ottawa.
3. Use of Cold Baths in Treatment of Diseases of Children—James Newell, Watford, Ont.  
Discussion, led by S. McCoy, St. Catharines.
4. Differential Diagnosis of Right-sided Salpingitis and Appendicitis. When to Operate in Salpingitis. When to Operate in Appendicitis—S. M. Hay, Toronto.
5. Diagnosis of Extra-uterine Pregnancy—James McLeod, Buffalo.  
Discussion, led by Dr. Goldsborough, Buffalo, N.Y.

## SECTION OF HYGIENE AND MILITARY SANITATION—9 A.M.

1. Municipal Control of Milk Supply—Charles J. Hastings, M.H.O., Toronto.
2. A paper—John Phillips, associate professor of medicine, Western Reserve University, Cleveland.
3. A paper—J. Heurner Mullin, Hamilton.
4. A paper—Major Lorne Drum, P.A.M.C., general secretary Canadian Public Health Association.

## WEDNESDAY AFTERNOON—GENERAL SESSION—2 P.M.

1. Address—George W. Crile, Cleveland.
2. Surgical Diseases of the Umbilicus—Thomas Cullen, assistant professor of gynæcology Johns Hopkins, Baltimore.

## 4 P.M.—BUSINESS SESSION.

WEDNESDAY EVENING, ANNUAL DINNER, CLIFTON HOTEL BANQUET HALL.

## THURSDAY MORNING, JUNE 1.—SURGICAL SECTION—9 A.M.

1. A paper—H. R. Elliot, Niagara Falls.
2. Two Cases of Phlegmonous Enteritis—L. W. Cockburn, Hamilton.
3. A paper—C. T. McKeough, Chatham.
4. Fractures—Walter McKeown, Toronto.
5. A paper—Hadley Williams, London.
6. A paper—Ingersoll Olmstead, Hamilton.
7. A paper—James H. McGerry, Niagara Falls.

## MEDICAL SECTION—9 A.M.

1. A paper—F. C. Neal, Peterborough.
2. Aortitis—F. Arnold Clarkson, Toronto.
3. Serum Treatment of Pneumonia—James H. Duncan, Chatham.
4. Our Results with "606"—R. H. Campbell, Montreal.

## GYNÆCOLOGICAL SECTION—9 A.M.

1. A paper—A. B. Welford, Woodstock.
  2. Infantile Eczema—W. H. Moorehouse, London.
  3. A paper—A. T. Shillington, Ottawa.
  4. Typhoid in Child, Complicated by Thrombosis of Femoral Artery—Henry T. Machell, Toronto.
  5. Twisted Pedicle of Ovarian Cyst—R. R. Secord, Brantford.
  6. A paper—Charles Carter, Hamilton.
  7. Cæsarean Section: When to Operate—Frederick Fenton, Toronto.
  8. Phlebitis Following Pregnancy—J. L. Hauley, Almonte.
- Discussion, opened by Adam Wright and A. T. Shillington.

## SECTION EYE, EAR, NOSE, AND THROAT—9 A.M.

1. A paper—T. Woodruff, Chicago.
2. A paper—Dr. MacPherson, New York.
3. A paper—D. G. Wishart, Toronto.

## THURSDAY AFTERNOON, GENERAL SESSION—2 P.M.

1. Address in Surgery—A. E. Garrow, assistant professor of surgery McGill University, Montreal.
2. Symposium of Anterior Poliomyelitis. (a) Epidemiology—Robert Parry, Hamilton.
- (b) Surgical Treatment—John Parry, Hamilton. Discussion, led by A. Moir, Dunnville.

F. ARNOLD CLARKSON,

Secretary, Toronto.

THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH,  
Sixty-sixth Street and Avenue A, New York, N.Y.

ANTI-MENINGITIS SERUM.

The Rockefeller Institute for Medical Research, in accordance with an announcement made last summer, now gives notice that it has discontinued the general distribution of anti-meningitis serum which it has undertaken without charge ever since the discovery of this remedy for cerebro-spinal meningitis. The effectiveness of this remedy in that form of meningitis which is caused by the *Diplococcus intracellularis* (Weichselbaum) having been generally accepted by medical authorities throughout the world, it has seemed appropriate that the Rockefeller Institute should devote to other lines of investigation the funds hitherto needed for the gratuitous distribution of the serum, handing over to the public health authorities of municipalities and states, and to commercial establishments, the routine preparation of the serum for general use. The anti-meningitis serum will thus take its place with vaccine and diphtheria anti-toxin as an approved agency for the protection of public health.

The Board of Health of the City of New York is the first of American boards of health to undertake the regular production of anti-meningitis serum. It will provide for the free distribution of serum to all hospitals in the city, and, at the outset, to all physicians who apply for it. Later the gratuitous distribution other than to hospitals will be limited to those cases in which the physician certifies to the hardship that would be caused by a money charge. All others will be required to pay for the serum at a price covering its estimated cost. Pending the production of the serum in other localities, the New York Board of Health will, as a matter of humanity, supply such urgent requests as may come to it from outside the state, but this provision will probably be necessary for only a short time. Within the City of New York the Board of Health will designate a few stations where serum will be kept on hand.

The statistics show that the death rate from cerebro-spinal meningitis has been reduced to less than a third of its former amount by the early use of anti-meningitis serum. That statistics may be reliable, however, it is important that all distributing agencies should provide means for controlling the bacteriological diagnosis. Otherwise the serum will undoubtedly be applied in some cases of meningitis due to causes which are not subject to the action of this serum, and not a few cases of epidemic meningitis will be deprived of the benefit of its use.

The serum is administered by being injected into the spinal canal by means of lumbar puncture, an operation which is also required to secure the fluid for bacteriological diagnosis; and several separate injections of the serum are required in treating a given case. The effective employment of the serum is likely, therefore, to be restricted on account of the

experience and skill required in its administration and the high cost of the commercial product, unless the preparation, distribution, and, when necessary, administration, are undertaken by state and municipal authorities.

JEROME D. GREENE,

February 13, 1911.

General Manager.

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## MEDICAL PREPARATIONS, ETC.

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### A SUGGESTION TO THE DOCTORS.

In order to decrease the sale of worthless, harmful nostrums widely advertised to cure gynæcological ills, women need emphatic advice and instructions. They need to be told by their own physician that the "testimonial" brands of medicine are largely alcohol, opiates, or nerve-destroying drugs.

Doctors must *make* women *realize* that sunshine, fresh air, and proper food are nature's healing forces. They can be told of a few reliable preparations that are healthful because they are pure nourishment for the whole body, and so carry renewed strength to weakened pelvic organs.

Scott's Emulsion is a standard food-medicine that is 50 per cent. finest Lofoten oil, and contains no alcohol. It has been the leading oil-food preparation for nearly forty years, and has strengthened thousands of sufferers from gynæcological disorders.

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### LARYNGEAL OR WINTER COUGHS.

*The Journal of Nervous and Mental Disease*, in an article by Dr. Walter M. Fleming says: "In acute attacks of laryngeal or winter cough, tickling and irritability of larynx, Antikamnia and Codeline Tablets are exceedingly trustworthy. If the irritation or spasm prevails at night the patient should take one tablet an hour before retiring, and repeat it hourly until the irritation is allayed. Allow the tablet to dissolve slowly in the mouth, swallowing the saliva. After taking the second or third tablet the cough is usually under control—at least, for that paroxysm and for the night. Should the irritation prevail in the morning or at midday, the same course of administration should be observed until subdued. In neuralgia—in short, for the multitude of nervous ailments—he doubts if there is another remedial agent so reliable, serviceable, and satisfactory, and this, without establishing an exaction, requirement, or habit in the system, as morphine does."—*The New York Medical Journal*.

## THE DIFFERENCE BETWEEN MORPHINE AND CODEINE AND HEROIN.

A short time ago the Board of Health of the City of New York promulgated an ordinance providing that "no cocaine or salt of cocaine, and no morphine or salt of morphine, either alone or in combination with other substances, shall be sold at retail by any person in the City of New York except upon the prescription of a physician." Immediately every druggist in the city stopped the sale of all preparations containing any derivative of opium, and raised such a furore that the Acting Commissioner of the Board of Health felt called upon to explain what every druggist ought to have known, viz.: that "Heroin and Codeine are not salts of morphine, and therefore are not included in the proscribed list."

In order to make this matter perfectly clear, the following on the subject of opium is submitted for the information of the many who have been laboring under the misapprehension that Codeine and Heroin are salts of opium or of morphine.

Opium, besides wax, fat, glucose, gum, pectin, resin, etc., contains about 20 alkaloids, among them being morphine, codeine, thebaine, narcaine, papaverine, pseudo-morphine, narcotine, etc., all occurring in varying amounts according to the grade of opium. While morphine is an analgesic, it does not follow that Trebaine is an analgesic simply because it is also derived from opium. One might equally as well say that Acetanilid and Diamond Dyes have similar therapeutic effects, because both are derived from coal tar. Heroin, as is well known to every druggist, is a synthetic preparation, and is not an alkaloid of opium. There are no salts of opium; there are active principles or alkaloids from which, by the addition of acids, salts are formed, which become, not salts of opium, but salts of morphine, salts of codeine, etc. All chemists know this, and all druggists probably know it, but fear of transgressing the law made the New York druggists take a position contrary to that which their knowledge of chemistry would indicate to be the correct one. Codeine and Heroin are not salts either of opium or of morphine, the one being an active principle and the other a synthetic compound. Furthermore, morphine and codeine have widely different properties, codeine being entirely devoid of the evil effects of morphine, not locking up the secretions or causing constipation; and the codeine habit is a thing unknown in medical literature. In fact, all authorities agree that codeine does not create habit.

From all the above we glean the following facts:

1. Opium and derivatives of opium, except morphine and its salts are not in the proscribed list under the regulation of the New York Board of Health.

2. Codeine and Heroin are not salts of opium.

3. Codeine and Heroin are not salts of morphine.—*Apothecary and New England Druggist*, October, 1910.

### THE STANDARD THESSICO SALVARSAN OUTFITS.

These are designed for the administration of Salvarsan, or Ehrlich's 606, and are endorsed by the American agent, Messrs. Victor Koechl & Co.

In this treatment of syphilis right technique is of the utmost importance. With the co-operation of Dr. John A. Fordyce and Dr. Wainwright, of New York, the two outfits have been assembled.

Each outfit contains explicit directions how to prepare the solution, or suspension, and how to use the syringe and needles.

The reagents are specially made by Dr. Allen Rogers, of the Pratt Institute, who absolutely guarantees their purity.

### THE THESSICO SALVARSAN SYRINGE AND OUTFIT

for intravenous injection of Salvarsan (Ehrlich's 606). Authorized and endorsed by the American agent, Victor Koechl & Co., consisting of 1 Thessico Salvarsan syringe 20 cc., 3 Thessico modified Schreiber needles, 1 three-way stopcock, 1 graduated mixing tube, glass stopper 300 cc., 30 glass beads, 1 glass syphon with rubber tubing, 1 bottle sodium chloride, 1 dropping bottle containing sodium hydrate solution 15 per cent., 1 pipette graduated in minims, 1 rubber tubing 10 inches with two metal connections, ensembled in polished wooden case, with space for bottle of Salvarsan. Price, complete, \$17 net each.

### THE THESSICO SALVARSAN SYRINGE AND OUTFIT

for intramuscular and subcutaneous injection of Salvarsan (Ehrlich's 606). Authorized and endorsed by the American agent, Victor Koechl & Co., consisting of 1 Thessico Salvarsan syringe 10 cc., Thessico Salvarsan needles for use of suspension fluid, Thessico Salvarsan Needles for use of solution fluid, dropping bottle containing caustic soda solution (Rp. purified sodium hydroxid. 1.5 gramme, distilled water 8.5 cc.), 1 dropping bottle containing diluted hydrochloric acid, 1 mortar with pestle, 1 graduated mixing tube, glass stopper, 25cc., 1 graduated pipette 2 cc., with bulb, 1 bottle red litmus papers, 1 bottle blue litmus papers; ensembled in polished wooden case with space for bottle of Salvarsan. Price, complete, \$12 net each. Same, ensembled in copper sterilizer, \$18 net each.

The Surgical Supply Importing Company, 19 Murray Street, New York, sole makers.