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## EDITORIAL

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### THE UNIVERSITY HOSPITAL.

It will be a matter of much pleasure to all to learn that arrangements have been completed whereby the University of Toronto is to man a base hospital of 1,000 beds. This will place a heavy demand for doctors and surgeons, but they are willing and ready to meet this call for the aid of the wounded and sick who are fighting for their King and country. This is the highest duty that could fall to the lot of the medical profession, and it is being responded to in a noble manner. All the arrangements are now being pushed forward.

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### THE ONTARIO MEDICAL ASSOCIATION.

The meeting of the Ontario Medical Association should not be overlooked this year. Because the country is in a state of war, and many of the brightest members of the profession are busily engaged on military duties, there is all the greater a responsibility on the others to come forward and do their best for the association by attending its sessions and contributing to its proceedings.

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### THE BELGIAN DOCTORS' FUND.

The committee in charge of the raising of a fund for the relief of Belgian doctors and pharmacists should feel highly gratified at the response that has been made to the appeal for help. The appeal has been prompt and generous. There is much yet to be done, and those who may not have contributed have still open to them an opportunity to assist a very worthy cause. The need is great, and those who give early aid most efficiently. The distress of the Belgian doctors and their families is beyond words to describe.

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### THE CANADIAN MEDICAL ASSOCIATION.

This association meets this year in British Columbia. As many medical practitioners arrange for a holiday, it would be well if some of them made it convenient to take a trip West, and enlarge the attendance of the national association. Information will be furnished of a fuller character at a later date.

## ORIGINAL CONTRIBUTIONS

## PSYCHIATRY AS A PUBLIC HEALTH PROBLEM.

THIS subject was very fully discussed in the Section of State Medicine of the Toronto Academy of Medicine on 28th January. Drs. C. K. Clarke, J. M. Forster, J. W. S. McCullough, J. G. Fitzgerald, Harvey Clare and others contributed papers or took part in the discussion.

## THE NEED FOR A PSYCHIATRIC CLINIC.

In opening the discussion, Dr. C. K. Clarke, medical superintendent of the Toronto General Hospital, spoke from notes only, and said that while he was quite willing to discuss the subject of the psychiatric clinic, he was not at all optimistic about its possibilities at the present moment. In 1905 he had come to Toronto filled with enthusiasm and hoping after his years of experience to make at least one great advance in the subject of psychiatry by establishing something which America had not before attempted. He carried the good judgment of the Hon. Mr. Hanna, who became enthusiastic over the proposition of establishing a Psychiatric Hospital. He also impressed Mr. J. W. Flavelle so much that a commission was appointed by the Ontario Government to investigate the psychiatric clinics of Europe. This commission consisted of Hon. Dr. Willoughby, Dr. E. Ryan, of Kingston, and Dr. C. K. Clarke. They went to the most important of the psychiatric clinics in Germany and visited Great Britain and France as well, and on their return an exhaustive report was prepared and published. From this it was evident that while they regarded the care of the chronic insane as being well done in Europe, but not better than in Canada, yet in regard to the more recent cases of disease they were most impressed with what they saw in the Kraepelin Clinic at Munich. The findings of this report had a marked influence on the Hon. Mr. Hanna, and the sum of \$100,000 was included in the estimates for the commencement of a scheme which would involve the expenditure of at least \$500,000. It was hoped that a site could be found near the University and in the vicinity of the large new hospital about to be built on College Street. Dr. Bruce Smith warmly defended the scheme and gave it all the assistance he could from first to last, but much to the surprise of those who expected better things, some of the authorities in the institutions of the Province exhibited open hostility, apparently thinking that it would interfere with their personal glory.

An attempt was made to buy a site, but failed, and a diminution

of the enthusiasm which had been developed showed itself when practical politicians who did not understand the importance of the subject began to contemplate such a large expenditure. With the building of the new General Hospital commenced, and a very large sum of money to be produced by this community, it was more than ever apparent that the psychiatric clinic would have to wait, because it was no longer possible to look for half a million dollars from the Ontario Government. Perhaps this, in itself, was not an unmitigated evil because, if such a hospital is to be established, it must be kept absolutely free from political control and the ideal arrangement would be to have it under the supervision of a dignified board of trustees of the same class as those to be found in the General Hospital; men who are superior to the temptations of political exigency. We cannot disguise ourselves to the fact that politicians will interfere where the chance offers itself and the appointments to such an institution should be absolutely above suspicion, scientific attainment alone should be the qualification. It must be realized that the psychiatric clinic should exist in the first place, for the proper treatment of early cases, with the hope that they may be restored in a short time, but in addition to that there is a duty to science that must be assumed by even as new a country as Canada. It is a duty to add something to the sum total of knowledge to be gained regarding early conditions, and if necessary the prevention of disease, which is, after all, the greatest thing to be striven for. Take, for example, the one department of psychology, in which the Hospitals for the Insane have absolutely failed in their duty. The psychiatric clinic should contain the most elaborately equipped psychological department in abnormal psychology, and this department should collaborate with the University department. The chemico-pathological side should be just as well attended to; indeed, the whole scheme would call for the most hearty co-operation between all the laboratories of the University and the General Hospital. I have little sympathy with the idea of a country as wealthy as Ontario fighting shy of large expenditures connected with this problem, because as a matter of fact money intelligently expended for the prevention and cure of disease is money saved by the community at large, especially when one realizes what the cost of the care of even one insane person means. Of course, those who are chicken-hearted will say, let us commence this thing in a modest way and creep before we walk. Such reasoning is beside the mark and does not recognize the importance of the question we are discussing. If Ontario cannot depend further on her present sources of revenue, which are rapidly becoming exhausted, it surely must be ordinary common sense to suggest that we have arrived at the time when direct taxation

must be resorted to, to accomplish what as wealthy a Province as this is justified in doing. When I think of the poor States in Europe which devote ten times the amount we do to scientific work I have little patience with the dilatory and crass methods employed here. I have faith, too, in the intelligence of the community and think that there would be little opposition to a tax for hospital purposes if the importance of the necessity were firmly established. I do not wish to belittle any of the work that is being done in the institutions to-day. It is good work, but it is work hampered by restrictions for which the men in charge are not responsible. If we take the population of this district alone and assume that one person in every 250, not an unlikely estimate, is insane, that means that we must have hospital accommodation for at least 2,400 or 2,500 people. To meet that there is an institution with say 1,000 beds. No wonder the authorities are beside themselves when endeavoring to supply the demands of the public, to say nothing of the needs. When Whitby is finished the condition of affairs will not be very much better.

My impression is, then, that the solution of the present difficulty will not be found by the Government, because their ideas are evidently based on the assumption that an expenditure of \$500 per bed is a reasonable amount and they will simply be staggered at all times when they realize that at least \$5,000 per bed will be required for a psychiatric clinic. The cost of maintenance will, of necessity, be as large as that of the General Hospital, because the same sort of organization is required and the expense of salaries for laboratory heads will be, if good men are to be secured, great.

Unfortunately it is difficult to get such men, and some of the best of those who have gone into the Ontario service have been lost to psychiatry simply because they could not conscientiously exist under conditions forced upon them by the laymen who, to a great extent, control the policy for Hospitals for the Insane. A very glaring case is that of an assistant, who would have been an ornament to psychiatry and who had before him the most brilliant possibilities. He understood how thoroughly collaboration between the clinical and laboratory sides of psychiatry should be if any advance is to be made.

My impression is, then, that at the present moment the psychiatric clinic scheme must be considered in abeyance, if not actually dead, because war conditions have made it impossible to look to sources from which money might be derived under ordinary circumstances. While it is true that a Reception Hospital has been established, an excellent institution, well conducted and under intelligent management, yet it cannot meet the highest requirements and already the complaint of

excessive cost of maintenance has been heard in more than one quarter.

Probably the real solution of the difficulty will eventually be found, and I think it will be discovered that this solution will have to be arrived at by co-operation between the government, city and private beneficence, with the accent on the private beneficence. We shall have to look for a Henry Phipps to arise in our midst, and when the wealthy men have got over the shock caused by building the General Hospital they may be induced to put their hands in their pockets to contribute towards the development of a scheme which is of the utmost importance to the welfare of the community. I have no doubt that at any normal time if such a man as Mr. J. W. Flavelle would undertake the question of raising money it could be done. The Hon. Mr. Hanna's ideas run on very similar lines to my own, and I have not the slightest reason to believe that he would do otherwise than try to help this along in the most enthusiastic way possible.

Now as to the feeble minded clinic, which has been developed at the Toronto General Hospital, this has been a little experiment conducted with the idea of investigating feeble mindedness and the early manifestations of several of the psychoses. This is a department thoroughly equipped and officered and being under the care of the Social Service we have found it possible to study such problems as heredity, environment and other social conditions playing important parts in the development, both of imbecility and early psychoses. We were fortunate indeed in securing such enthusiastic workers as Drs. Withrow and Hinecks, and the amount of unselfish work they have given is greatly to their credit. I have been surprised to find how closely these studies fit in with the future history of many of the patients who find their way to Hospitals for the Insane, and after a time we will no doubt have something to contribute to science that will be of interest and value. Again my contention that the proper provision should be made for the greater portion of the insane of the community in institutions is borne out by what is to be seen in the numerous homes where insane are found in the poor parts of the city. The association of the mental diseased with children cannot but produce evil results of the most striking character, and it is only too evident that we are merely on the border of useful knowledge regarding the problems connected with the prevention of insanity, and, after all, these problems are of even greater importance than the cure of the disease.

After the remarks of the previous speakers, Dr. Clarke referred humorously to Dr. Bruce Smith's optimistic remarks, which were so condemnatory of what he called the speaker's pessimism. Dr. Clarke disclaimed being pessimistic, and qualified himself as a rather skeptical

optimist, as his experiences of the last seven years in connection with Government promises regarding the future had given him every reason to believe that the only way in which the work could be carried on would be through a combination of happy circumstances, and if a clinic was to be constructed it must be on a considerable scale, both regarding size and equipment, otherwise it would spoil the whole problem. Too many half-hearted developments had already been undertaken by the Province, and there is no reason why a psychiatric clinic should not be built on the same elaborate scale as the Toronto General Hospital. One is just as important to the community as the other.

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RELATION OF PSYCHIATRY TO PUBLIC HEALTH.

(Abstract).

John W. S. McCullough, M.D., D.P.H., Chief Officer of Health for Ontario, read a paper on this topic. He said that a man confined in an asylum ceased to support his family, and had to be paid for either by his family or the state. As the majority committed to the asylums were incurable, the expense caused in this way was very great. One only requires to think of the number of asylums and the patients confined in them to form some idea of this burden on the community. There are more beds in the asylums in the United States than in all the hospitals combined.

Formerly the treatment of the insane consisted in retaining them in custody, where they were often harshly dealt with, and their whole life was worse than useless. That method has been superseded by our present humane way, which effects a cure in many cases.

In recent years a good deal of attention has been given to the subject of the prevention of insanity. This was a topic of the utmost importance from the standpoint of public health. This led up to a study of the causes of insanity. Among these the following should be noted:

1. Among the causes of insanity infectious diseases play an important part. Syphilis causes from 10 to 15 per cent. of all the cases; and is the direct cause of about one-fifth of all first admissions. It usually assumes the form of general paralysis and is fatal in from three to five years. It also plays a part in hardening the arteries, gumma, and meningitis, all of which may affect the brain. General paralysis causes one-half as many deaths as typhoid fever; and yet syphilis is looked lightly upon by the public.

2. Alcohol is an immediate or predisposing cause of insanity in one-third of our cases of insanity. Drinkers are often of a lowered

mental type, and the indulgence in drink intensifies the evil. The idea is spreading that "the alcoholic is an abnormal type."

3. Heredity is the most important factor in the production of insanity. It is claimed by competent observers that this accounts for fifty per cent. of all the causes.

In dealing with the prevention of insanity we must bear in mind the influence of syphilis and other infections; the evils of drugs and alcohol; and the weight of heredity. In this country, because of a loose system of the inspection of immigrants, the load of defectives is rapidly increasing. Stress of living, want of employment, overwork, poverty, child labor are tending to the production of mental disease.

In the prevention a few considerations must be borne in mind:

1. The medical profession must study mental diseases and become familiar with their various forms. It must be conceded that the average medical student leaves college with too limited a knowledge of insanity. Our asylums should become post-graduate centres for the study of mental affections. In connection with the asylums there should be a dispensary to which persons might come for advice, such as those who have been at some former time committed, borderland cases, and the relatives of the insane. Useful information regarding prevention could in this way be spread. Members of the asylum staffs might give talks on the prevention of insanity in schools, churches and clubs. It should be made clear that insanity is a disease. The modern humane method of treatment should be very clearly pointed out.

2. An opportunity ought to be given medical practitioners to obtain post-graduate instruction in these institutions. There is at present a vast amount of clinical material unused, to the loss of both the profession and the state. Medical meetings might be held in these hospitals for practitioners nearby. There should be a competent scientist in each institution, who could explain to the visiting doctors the true conditions. The good results would more than pay for the initial cost.

3. The distribution of leaflets and literature are means of spreading useful information. A good deal is now being done by the *Bulletin*, giving the work done in the asylums, and by the lectures and literature furnished by the Board of Health.

4. Attention should be paid to the families from which patients come, with the view of detecting any tendencies, and preventing other cases.

5. The formation of societies for the study of mental diseases should be encouraged. These have done much good in other countries.

6. Every defective child should receive proper care. In this way some cases may be cured; and, where this is impossible, the child could

then be placed in a suitable institution where they may be educated. The segregation of defectives would also prevent the propagation of their kind.

“It is estimated that one-fifth of the country’s income would be required for a high standard of the care of the insane. Is it not worth while?”

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#### THE RECEPTION HOSPITAL.

(Abstract).

J. M. Forster, M.D., Medical Superintendent for the Hospital for the Insane, Toronto, read a paper on this aspect of the care of the insane.

Prior to 1841 the county gaols afforded the only asylum for the destitute insane in Canada. In 1839 an Act was passed for the establishment of an asylum, and in 1841, on the recommendation of Dr. Rees, the old gaol in Toronto Street was made the first provincial asylum, and placed under his management. Seventeen patients were entered. The number of patients rapidly increased, and it became necessary to make use of an old building in Queen’s Park, and the residence of Hon. J. H. Dunn, on the corner of Bathurst and Front Streets.

The corner stone of the asylum on Queen Street, Toronto, was laid on 22nd August, 1846, and opened in January, 1850. The late John G. Howard was the architect. The building was a splendid tribute to the liberality of the people of that day.

Dr. Scott was appointed the first superintendent of the institution and continued in office till 1853. He was succeeded by Dr. Joseph Workman, who filled the position for twenty-three years, resigning in 1876. Many of the modern methods of treating the insane were introduced by him. The late Dr. Daniel Clark was the next to hold the office of medical superintendent, and continued to direct its affairs till 1905, when Dr. C. K. Clarke was appointed, having filled a similar position at the Rockwood Asylum, Kingston. Both Drs. Workman and Clarke did a great deal for the proper treatment of the insane, and their work was an inspiration to the study of psychiatry. Dr. C. K. Clarke taught one to look upon the mental case purely and simply as any problem in medical science and to carefully observe the symptoms, treatment and pathology of the various cases coming under his care. He extended greatly the liberties of the patients and advanced the treatment by the introduction of the training school for nurses. This was the beginning of the hospital treatment of patients in the provincial institutions.”

On the subject of our newer ideals in dealing with the insane, Dr. Forster quoted from the address of Dr. W. A. White on the occasion of laying the corner-stone of the John Hübner Psychiatric Building of the Springfield State Hospital:

"The literal application of the doctrine of diabolical possession may have gone out and at least in many places did go out of existence, but there remained a certain attitude towards those of diseased mind, which was not very different from that born of this horrid superstition. The mentally diseased were considered, just as though they had been under the influence of the superstition, to be beings apart from others; 'craziness' was a condition which was not capable of being understood and which had the peculiar effect of isolating and ostracizing those who suffered from it. Along with this attitude, born of ignorance, there naturally went the twin brother of ignorance, fear. For wherever there is lack of understanding, wherever phenomena are enveloped in mystery, wherever the source of events is unknown, we always find fear. Ignorance and fear then have been the great obstacles that have had to be overcome in dealing with the problems of the care and treatment of the mentally diseased."

The reader of the paper then referred to the many definitions of insanity, and that the subject of insanity was shrouded in a good deal of mystery. He referred to an article recently in which ten definitions of insanity were given; and new ones were being advanced daily.

Two years ago the terms "lunatic" and "asylum" were removed from the statutes; and voluntary admission was permitted. Since then the doors have been opened to those who wished to come of their own accord for care and treatment. The removal of these terms has done good, as many of these patients are very sensitive on the subject of being regarded as insane, or being sent to an asylum. It is well to remove all mental shock or worry from these people. Even with these efforts many did not care to go to the asylum, and a reception ward was opened in the old General Hospital for mental cases. An Act was passed making access to it of the easiest possible kind. In this way none need now be placed in the gaol, and anyone desirous of treatment may have it. A physician may have a patient placed in there for observation and treatment, as in any hospital. Many cases can be treated there and relieved, or sent on to the larger hospitals for the insane.

Dr. Forster then referred to the new Hospital for the Insane at Whitby, with all its many advantages. The work of the Reception Hospital is a very important one. "I should like to see this branch of the work recognized in the Social Service Branch of the Public Health Department of the city, so that one or two graduates from our hospital

training school would be on this service. They would be specially qualified to instruct in the home care and to report on the progress of patients on probation."

When the asylum at Whitby is opened the medical student will disappear, and the clinical institution will have to be given at the Reception Hospital. It is to be hoped that arrangements will be made at Whitby for some students as clinical clerks for a period of a month or so. These could rotate in groups.

Dr. Forster laid stress on the view that mental cases do not differ much from other hospital cases, when his motives and thoughts are properly analyzed. The farther we advance along the hospital line the more hopeful will be the prospect. He said that some patients had gone out and done much better than expected. It is not just to the patient to weigh too seriously the question of insanity, but to view the case from a medical standpoint. When there is sufficient grounds for it the patient should be given the chance and allowed some liberty. There will be some mistakes, but the good will far outweigh these.

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#### THE PROGRESS THAT HAS BEEN MADE.

Dr. Bruce Smith said that the splendid papers to which all had listened with such interest was unmistakable evidence of progress and increased interest in the great subject of psychiatry. Twenty years ago such a sectional meeting could not have been held and the interest and attendance of medical men secured, for then there was little interest in a subject that is now attracting great attention. This interest manifested in the splendid work that is being done clearly indicates, in spite of any false note that had been sounded, that this was no time for pessimism, but that conditions were so favorable that there was well-grounded reason for buoyant optimism. There never was a time when so much attention was being paid in Ontario to promote the welfare and recovery of patients suffering from mental disease than at the present time. The Ontario Government has surely been most liberal. About one-quarter of the total expenditures from the Provincial Treasury was expended on behalf of Ontario's dependents and delinquents. Ten years ago on the 1st of January there were 160 persons in the gaols of Ontario—committed there on account of being insane. On the first of January of this year there was only one patient committed on the grounds of insanity to any gaol in the Province. Surely we should cry down any expression of pessimism for the future does not warrant anything but encouraging hopefulness.

The Reception Hospital for the Insane has been well started and

the work it has done already proves that the city of Toronto could not do without such an institution. The Reception Hospital, however, is only the commencement. It has already done excellent work and from it must be evolved the greater institution with the psychiatric clinic and the laboratory advantages that will follow, not only on behalf of the patients, but also as a means of educating medical students to recognize the early signs and symptoms of insanity and thus enable them to join in what promises to be one of the widest fields for usefulness in preventative medicine in the future. Politics cut no figure in the control of the Provincial Hospitals for the Insane in Ontario. In fact, there is nothing like the interference that we sometimes see in the general hospitals by their local boards.

No longer, he said, are our institutions called asylums, but hospitals, conducted on the most modern lines. Each patient of the 7,017 now in residence is given individual study. Each has a clinical record and the establishment of training schools for nurses gives to the patients hospital care and attention that indicate a progress that is most commendable.

Dr. Smith said he looked forward to the time in the not distant future when Ontario would have at Toronto a Reception Hospital for the Insane with a psychiatric clinic in connection therewith on lines broader and better than had ever been attained in any country, notwithstanding the discouraging and discordant note that, unfortunately, had been introduced in the evening's discussion which, the Doctor said, he considered as uncalled for as it was unwarranted.

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#### THE VALUE OF A PSYCHIATRIC CLINIC.

Dr. Harvey Clare, in discussing the papers, said: I am pleased to agree with Dr. Clarke concerning the curative benefit of a psychiatric clinic. Some days ago I feared that Dr. Clarke was taking a pessimistic view concerning recoveries, but if we have the proper equipment the percentage of our recoveries will increase. Since opening the Reception Hospital we have received 298 patients and 199 of these have not been sent to the Hospital for the Insane, but instead have been improved sufficiently to go to their homes. Ninety-nine have been transferred to the Hospitals for the Insane. This is only about one-third, or thirty per cent. All of these cases were of a type that some one had suspected them of being insane, and had recommended their treatment in the Reception Hospital.

During one month, November, we admitted fifty patients and discharged fifty patients, that is, we had the same number of patients in

residence at the end of the month that we had at the first. Of these fifty discharged, two died, ten were sent to the Hospital for the Insane, and thirty-eight were sent home, and the interesting point is that although social conditions are very hard outside during this winter, still these patients are not being sent back.

We hope some time to have a modern Reception Hospital. It may not reach Dr. Clarke's ideal of a psychiatric clinic, but now is the time for the medical profession to insist on an up-to-date, modern Reception Hospital for the treatment of early mental cases. The Queen Street Hospital for the Insane is going to Whitby some time during the next year or two. The present Reception Hospital is in temporary quarters. The property may be sold any day, and we will have to move out. When the Queen Street hospital goes to Whitby we have to have some place for the temporary care of acute cases. Now is the time for the medical profession to insist that that new place shall be reasonably equipped with all the modern facilities for doing scientific work. We must have a good staff of trained nurses, we must have good laboratories, and a capable staff of medical men. Good work cannot be done without good physicians, good nurses and good laboratories. The medical men in Toronto must refuse to accept a make-shift. Any old building will not do for the care of acute mental cases, and now is the time to insist that we must have suitable headquarters.

We could make our discharge list larger if we had a proper system of after-care, carried on by trained mental nurses. This might be managed by the Public Health Department of the city of Toronto.

A great deal has been said to-night about insanity being hereditary. There is just a possibility that this idea has been overdone. The influence of environment has been underestimated, and, I believe, it is possible to take any child of three years of age and so treat him, or rather mistreat him, as to make for him a paranoid disposition, a hysterical condition, or a neuropathic tendency. He may be made a hypochondriac. In fact, I believe, that we can develop almost any form of mental disease by the improper care and treatment of children.

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#### THE NEED FOR NEUROLOGICAL WARDS.

Dr. Campbell Meyers congratulated the chairman on this most successful and interesting meeting. He thought the account of the work done at the Reception Hospital by Dr. Clare Clare marks the beginning of a new era in the care of the insane. While entirely in sympathy with the remarks of the previous speakers in regard to the prophylactic measures to be taken for the prevention of insanity—especially in re-

gard to alcohol and syphilis—there was another and most important phase of the question which had not been discussed, which was, moreover, a very practical one, arising as it does in the daily round of professional duties, viz., the method of treatment to be employed when such psychical symptoms have actually appeared as will indicate the outbreak of insanity if left untreated. That this phase had not received consideration in the past has been due to the lack of adequate instruction in nervous and mental diseases, a lack, which, even at present, is more inevidence than that of any other branch of medicine in spite of its primary importance. There are at present in this Province one in 420 of the population in the Hospitals for the Insane. There are, at least, an equal number daily passing over the boundary line of insanity for whom practically nothing is being done.

But few cases of insanity develop in a day. As a rule for weeks and months before the outbreak of an attack symptoms are present and increasing gradually in intensity. These preceding symptoms are psychical in their nature, commonly described as nervous, and the patient is said to be suffering from a form of neurasthenia. The name applied to the condition matters little; and it by no means influences the symptoms; the real point is the comprehension of the existing type of symptoms, whatever name may be attached to it. The patients are only insane when the disease has reached a pronounced stage of its development. No one considers that abnormal psychology and insanity are synonymous terms. If, for example, a patient exhibits marked indecision, which was previously foreign to him, or a difficulty in concentration of mind for a prolonged period, a power he formerly possessed, is he to be considered insane and treated as such? Many of the common psychical symptoms of neurasthenia are present in an intensified or exaggerated form during an attack of insanity. The division between the two is clinical, and must be such in view of the treatment. The suggestion that the pre-insane be treated in a psychiatric clinic is doomed to failure, certainly so far as prevention of insanity is concerned, for the reasons that the surroundings and associations are such as to be most inimical to success and especially because the nervous will only enter a building with the insane for treatment when their trouble is so far advanced that they have no alternative, and consequently the stage of their disease, in which prevention would have been practicable, would have passed. A demonstration of this may be seen in the report of Pavilion F at Albany, in which only about two per cent. of neurasthenia has been admitted. The true solution is in the formation of neurological wards in general hospitals, the value of which has already been proven by several years of experience in Toronto. The value of such

wards accrues not only to the patient—the nursing staff reap an abundant harvest of information; the house staff are thus thrown in constant relation with a type of disease which can be best studied in such surroundings; and lastly, the instruction to the student will enable him to appreciate, as has never before been possible, the magnitude and the importance of these diseases. To all there will come clinical light and greater knowledge—the most urgent need from a present and practical point of view.

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### SOME EXPERIENCES WITH SHOTGUN WOUNDS.\*

F. N. G. STARR.

MANY years ago a man presented himself at the out-patient department of the General Hospital with a request that I should remove a bullet from the outer side of his right thigh. It had been there for two years, but only recently had begun to cause discomfort. The scar of entrance was on the outer side of the thigh, just below the great trochanter, while the bullet was resting just above the knee under the tensor fasciæ femoris. The bullet was removed without anæsthetic of any kind, at the patient's request. The nose of a .38 calibre bullet was bevelled where it had struck the femur a glancing blow, and had it not been for the elastic resistance of the tensor it would undoubtedly have made its exit.

In association with the late Dr. Peters, I saw a man who was accidentally shot in the thigh when lifting his gun out of a duck punt. When he regained consciousness and looked about him, he saw a piece of the shaft of his femur, about 2 inches or more in length, lying some distance away on the river bank. The wound was a horrible one, but Dr. Peters made a thorough washing-up of it with green soap and 1-20 carbolic solution, removing shot, gun wad and pieces of clothing. Though the fractured ends would not approximate, yet bony union ultimately took place, and the man, with the aid of a high boot, walks without a limp.

Another interesting case that I saw in Dr. Peters' practice was a young man, who, when returning from a day's shooting, received the contents of his companion's gun, at short range, in the upper abdomen, just to the right of the middle line. At least one-third of his liver was blown to pieces. The wound was cleaned and packed, and after a hazardous convalescence he made an excellent recovery. I think I am

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\* Read at the Surgical Section of the Toronto Academy of Medicine, January 19th, 1915.

correct when I say that he afterward went through the South African campaign in the Mounted Rifles.

Another case was that of a sporting accident, where part of a charge of buckshot from a companion's gun entered the thigh, part of it also striking the stock of the injured man's gun. Pieces of clothing and the buckshot were removed and the patient was then removed to Toronto. In an emergency I saw him a few days later for severe secondary hemorrhage. After examining the wound, I found that a sharp sliver of the stock, about two inches long, had ulcerated into the femoral vein. This was removed and the vein ligatured. The patient made a good recovery.

A boy, aged ten, was holding the muzzle of a .22 calibre rifle against the abdomen, just to the left of the umbilicus, with the butt against the wall of the back shed fixing the trigger, the hammer came down and the bullet entered his abdomen. He was carried into the kitchen and said that his bowels wanted to move. A chamber was produced and upon sitting down he immediately passed the bullet with a quantity of blood. He was brought to the Hospital for Sick Children, and while going into an account of the accident and subsequent events he asked me "to take a good look at the thing that holds the water," and informed me that when he urinated there was blood in the water. A rectal examination revealed a jagged abrasion on the anterior wall just above the internal sphincter. Upon opening the abdomen I found two coils of small intestine perforated, and a coil of the sigmoid. After closing these I examined the fundus of the bladder and there found a hole of entrance, which I also closed. He made an uneventful recovery.

A woman at a summer resort was out rowing with her husband when, without apparent reason, she fell forward from the rowing seat. She immediately got back on the seat and turning to her husband expressed surprise at doing such a thing. He then noticed some blood upon her blouse and made for shore. She had been shot, at a distance of at least 100 yards, through the ninth interspace posteriorly. A pneumonia developed and later resolved, then developed on the right side, and it also resolved. When both lungs had quite cleared she began to go down hill rapidly. Six weeks after the accident I saw her, together with Dr. McPhedran, and we made out evidence of the presence of pus below the diaphragm, posterior to the stomach. Upon making an incision I found the bullet in the rectus sheath, and after a careful dissection came upon about a pint of foul-smelling pus, posterior to the stomach. This was drained, and for the next two or three weeks she improved rapidly. Then, I believe, she began to fail and subsequently died, probably from a further locking-up of a focus of pus.

Another case that has been referred to in medical literature upon more than one occasion was a man admitted to the General Hospital under the late Dr. Peters, suffering from a severe tetanus. He had been shot in the hand with a toy pistol nine days previously and the wound had healed. I dissected out the site of injury, removing a great many very fine shot, and then injected the whole area about the wound with equal parts of carbolic and glycerine, using a drachm of each, hoping to produce an aseptic slough, but the slough never developed. I then had administered to him, in conjunction with a few doses of anti-tetanic serum, a drachm each of carbolic and glycerine, subcutaneously, every four hours. No carboloria developed until he had had nine drachms of carbolic. We then skipped a couple of doses and again began treatment. In all, I think he had five ounces of carbolic acid. He recovered.

Last spring I removed a bullet from Hunter's Canal in a man. Had it been situated anywhere else he would probably be still wearing it, but it was causing some pain about the knee, and remembering the case of the splinter ulcerating into the vein, I thought it wise to remove it.

The next is a bullet wound in the knee of a boy aged 14. The doctor who saw him first evidently had a mad desire to do something, and therefore injected the wound of entrance with peroxide. The peculiar shadows in the X-ray are bubbles in the knee joint from his cause. The bullet you see is lodged in the condyle of the femur. We decided to leave well enough alone. He ultimately recovered with a movable joint.

A boy at Newmarket Fair was shot in the back. You see the plate. As the bullet was doing no harm we allowed him to go home, requesting the doctor to watch him carefully, for tetanus, until the period of incubation was over.

The last case was a boy of 12 who was shot with a .22 at short range in the front of the thigh. This case is interesting, as it shows the advantage of the stereoscopic x-ray. The bullet, by this means, was demonstrated to be in the medulla of the femur, and is about one inch below the hole of entrance into the shaft. He still wears the bullet. It gave rise to very little inconvenience.

You will see from the foregoing cases reported that unless the wound is a lacerated one, or unless the bullet is causing symptoms, it has been left severely alone. An antiseptic dressing is applied to the wound and the patient kept at rest to see if any symptoms of irritation develop. Of course, if the patient has been injured about a barnyard it would be wise to give an immunizing dose of anti-tetanic serum, because that is one of the great dangers.

As a result of my experience of the use of carbolic and glycerine in

tetanus, I am convinced that its free use in these extensive shell wounds of the present campaign, as a primary application, would eliminate much of the gas gangrene, as well as the tetanus, providing the wounds are left open, so that subsequent applications can be easily made. It seems to me preferable to the application of pure carbolic acid, in that it produces no eschar.

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## THE INTERNAL SECRETIONS.

BY JOHN FERGUSON, M.A. M.D.

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### I. HISTORICAL NOTE.

**T**HERE is no subject to-day of more importance to the medical profession than a clear knowledge of the actions of the internal secretory glands in health and disease. The many infections to which the human body is prone, and the numerous accidents and injuries loom large in the thought of those who are called upon to deal with these. These conditions, however, are not always present, whereas the actions, normal or abnormal, of the internal secretory glands are ever present, and doing their work for good or evil. It is well, therefore, at frequent intervals to pass under review our knowledge, or lack of knowledge, on the functions of these very important organs. By this means we take stock and find out wherein our storehouse is lacking, and in what direction it requires replenishing by further investigation, research, correlation and addition; and, equally important, by depletion through the elimination of theories or views no longer tenable. This whole subject is one of vast moment to the practical surgeon and physician; and also to the therapist, as the active principle of these glands are now playing an important rôle in the treatment of disease.

One of the first definite statements regarding these glands comes from the pen of Mueller, in his work on Physiology, in 1844, wherein he said: "The ductless glands are alike in one particular: they either produce a definite change in the blood which circulates through them, or the lymph which they elaborate plays a special rôle in the formation of blood or of chyle. In every instance venous blood and lymph are the only substances which pass from the gland into the general economy." Here are a few bold statements, namely, that blood flows to these glands, and blood and lymph form them, and that they possess no ducts. The assumption is made that they form some products that enter the general circulation and which play an important "rôle in the formation of blood

and chyle." If one looks into the writings of that period, the same indefiniteness is everywhere to be found. There was the surmise that these glands did modify the blood in some way, but no proof of the nature of these secretions was advanced.

A great step forward was made by Claude Bernard in 1855, when he announced the discovery of glucose in the hepatic veins. This product did not exist in the blood of the hepatic artery, and, consequently, must be produced in some way by the cells of the liver. He then threw out the suggestion, so pregnant of possibilities, that what had taken place in the liver might be true of the other ductless glands. But this suggestion of Bernard lay dormant for many years before it began to attract the attention of physiologists in a scientific manner. Another sure step onward was made by Brown-Sequard in 1856. In that year he found that the removal of the supra-renal glands was followed by the death of the animal; and he properly concluded that these glands formed some substance that was essential to life. At the same date Vulpian found the coloring element of these glands in the blood emerging from them. Schiff, in 1862, devoted much attention to the relationship of function between the spleen and pancreas. About 1880, Cyon and Schroder proved that the ureas in the hepatic veins was formed by the liver. Schiff, in 1884, drew attention to the effects he had observed following the removal of the thyroid gland. In 1883, Reverdin and Kocher observed that following the complete removal of the thyroid body, a condition resulted which was similar to myxœdema that had been studied by William Gull in 1872, and W. M. Ord in 1878. With the single exception of Brown-Sequard, the eminent observers failed to follow up their own discoveries and deduce from them their true meaning.

The great value of the researches of Brown-Sequard lies in the fact that he assumed that the principle formed by one of these ductless glands might act on some other organ or tissue of the body. During the years 1889 to 1891 he advanced the theory that was destined to revolutionize physiology, namely, that the secretions of these glands possessed selective influence; and that the nervous system was no longer the sole agency in influencing growth and development, and the activity of organs of the body. Thus it will be seen that to the theory of Claude Bernard that some chemical change was effected in the blood by the ductless glands, was added the more important one of Brown-Sequard that the products formed by these glands acted in a definite manner upon certain tissues or organs as stimuli. Quite recently, Professor Starling, in 1905, gave to these secretory stimuli the name of hormones.

The period beginning with 1895 was destined to be a very active

one. In 1895, Gley and Delezenne discovered the antithrombic and the antioaglant action of the liver. In the same year, Cybulski noted the influence of supra-renal venous blood on the vascular system. This was confirmed later by Langlois, Biedl and Dreyer. During the years 1902 and 1903 Wertheimer, Fleig, Enriquez and Hallion discovered secretion in the veins of the jejunum, and its presence in the systemic arterial blood. In 1911 and 1913 Hidon discovered an active hormone in the blood coming from the pancreas, which has the capacity of controlling the glycosuria resulting from the removal of the pancreas.

To these observations was soon to be added another important line of study. Brown-Sequard made use of his extract of testicle; and, in 1891, Murray treated successfully myxœdema by the administration of thyroid gland substance. It is now known that thyroid gland extract acts as a stimulus to respiratory and nitrogenous changes. It is also known to have a marked influence over the growth and development of the skeleton and the nervous system. In the study of the function of the thyroid gland and the influence of its extract yielded a very striking proof of the certainty of some internal secretion. The removal or destruction of the thyroid body gives rise to symptoms that are relieved by the exhibition of preparations from the gland. The same sort of evidence in support of an internal secretion by the supra-renal glands was forthcoming in 1894. In that year Oliver and Schäfer demonstrated the powerful influence over the vascular system which they discovered to lie in an extract obtained from the adrenals. It was found that the venous blood coming from these glands had the same effect as the extract obtained from their medullary substance. About the same time Takamine and Aldrich recovered from the venous blood of these glands adrenalin, their active principle. It must be borne in mind that a gland may not produce an active principle giving rise to the same symptoms as arise from the administration of an extract of the said gland. To prove that there is a common active agent it must be discovered in the gland and the venous blood emerging from it, as has been done in the case of the adrenals.

## II. THE SUPRA-RENAL GLANDS.

These glands consist of two very distinct portions. The medullary portion makes up about 10 per cent. of the entire gland. It is composed of a very free venous plexus, in which are embedded the soft cells of the medulla. These cells secrete the adrenalin, and the richer they are in this active principle the darker is their color. These cells stain readily with chromate salts and hence are spoken of as chromaffine cells. The readiness with which these cells stain is a measure of their activity.

The medulla has very close relationship with that portion of the sympathetic nerve system that lies between the fore and hind limb plexus, from which arise the vasomotor and inhibitory nerves of the intestines. Adrenal stimulates unstriated muscle in like manner as do the sympathetic nerves or an electric current. This substance in the blood acts similarly to the sympathetic nerves, and they supplement each other. The amount of adrenalin thrown into the blood is controlled by the sympathetic nerves; and strong emotions, fright, violent effort, cause a marked increase in its output. This has the effect of constricting the vessels and strengthening the heart. It has also been shown to liberate sugar and thus supply a needed nourishment for the muscles that are called upon to perform some extraordinary task. The medullary cells that secrete the adrenalin are of the same origin as the cells of the sympathetic ganglia.

The cortical substance makes up 90 per cent. of the gland. It contains a brownish pigment and a special secretion of a fatty character. The cortex is not controlled by nerves, nor is it derived from the nervous system. It has very close affinities in origin with the ovaries and testes, and has much to do with sex characteristics. It is in this way that the cortex is related to the thyroid and pituitary bodies, and stimulates the growth of the genital organs. The only connection between the supra-renal cortex and the nervous system is revealed by its almost entire absence in the case of an encephalus fœtus.

Complete extirpation of these glands causes a loss of tone in the heart and blood vessels. This loss of tone steadily increases until death results. Stimulation of the sympathetic nerves causes no rise in the blood pressure. This can only be brought about by the administration of adrenalin. In Addison's disease pathological processes destroy both cortex and medulla. There is loss of tone in the cardiovascular system which goes on to a fatal issue. In these cases the administration of adrenalin has not proven of any material advantage. Occasionally there is a slight temporary rise of blood pressure, and some febrile reaction, but no stay in the progress of the disease has resulted from its use. It may be that sufficient has not been given or that its administration lacks the continuous character of the normal gland.

In severe infections and in heart failure the supra-renal glands fail in their function. In such conditions as pneumonia, diphtheria and cardiac dilatation this failure in function becomes a very serious feature in these cases. The usual cardio-vascular stimulants and tonics completely fail here. When the vascular system is deprived of its proper supply of adrenalin the patient is in the gravest danger, and the administration of this substance, as in Addison's disease, appears to be of very

doubtful value. The reverse condition of high blood pressure, as in chronic renal disease and general hardening of the arteries, has been thought by some to be caused wholly or in part by an extra supply of adrenalin in the blood. This theory is now almost universally abandoned.

There is a form of tumor of the cortex of slow growth and low malignancy that exerts a remarkable influence on the individual. Should a tumor appear in the cortex of one gland in a young lad, he rapidly develops sexually and assumes all the characteristics of a man, though still a mere boy in age and stature. The occurrence of such a growth in a young female has the effect of suppressing menstruation, causing a growth of beard and bringing about other male features.

Adrenalin has a few well recognized uses in therapeutics. It is used locally as a means of arresting hæmorrhage; but it must be borne in mind that it only acts where there are sympathetic vasomotor nerves, and consequently is of no use in bleeding from the lungs, the brain, or spinal cord. It would really be injurious in pulmonary hæmorrhage by raising general blood pressure. It is sometimes used along with novocaine in producing local anæsthesia. This should be done in the spinal cord, as it does not contract vessels there and, further, is poisonous to the nerve cells of the cord. It should not be applied to the mucous membrane of the urethra, as it causes a protracted spasm of the muscular tissue. Adrenalin should not be employed locally nor hypodermically in the case of patients under the influence of chloroform, as its action in these is very dangerous on the heart. In shock 15 to 20 minims of 1:1,000 solution in one pint of normal saline given intravenously is of distinct value. Hypodermic doses of 1 to 6 minims of 1:1,000 solution have been found very useful in acute attacks of asthma. The muscles of the bronchioles are relaxed by the sympathetic nerves which are stimulated by the adrenalin.

### III. THE PITUITARY GLAND.

The oldest view of the function of this gland was that it secreted the mucus found in the nose, the pituita. In 1672 Bower contended that this was erroneous, and that any secretion formed by it did not appear in the nasal cavities, but entered the blood. Majendie held that its secretion entered the blood. The discovery of the important functions of the supra-renal and thyroid glands gave a great impetus to the study of the pituitary body. That this substance was of much importance, and not a mere vestigial body, was shown in 1888, when Marie announced in investigations on the relationships between tumors of the

gland and acromegaly. The next step came in 1895 with the discovery by Oliver and Schäfer that an extract from the pituitary had the power of raising blood pressure.

The body is composed of three parts: The anterior glandular, the intermediate, and the posterior or nerve portion. The anterior is an up growth from the buccal cavity, the posterior portion is a down growth from the thalamic part of the brain, and the intermediate part is a development from the anterior portion at an early period in fetal life. In structure there is an abundant network of epithelial cells among which the blood vessels circulate. The cells of this glandular part have well-defined staining properties, as chromophilic, either acid or basic; or those that resist chromaffine. The intermediate portion contains granular cells, some colloid substance, but not many vessels. The posterior part contains neuralgia, pigment cells, granules, and some hyaline matter.

Prof. Howell, of Johns Hopkins, found that the substance which raises the blood pressure and slows the heart is obtained from the posterior lobe. Vincent, Osborne and others found that there is usually a fall of blood pressure before the rise. It has also been observed by Schäfer that the cardiac slowing is not constant. It appears that this rise is due to the action of the pituitrin on the muscle fibres of the heart and arteries. When a second dose is given to a dog there is a fall; and this tendency becomes more marked with subsequent injections. It is thought by some that it is due to a depressor principle found in the gland.

Pituitary extract has the effect of lessening the fulness of respiration, which may even stop and begin again, a process which may be repeated several times. This stoppage appears to be due to vague stimulation.

By careful preparation a substance has been obtained that acts upon the uterus, and not on the blood vessels. The uterine contractions, following the administration of pituitrin, is likely due to this element. Pituitrin has been observed to increase activity of the muscular tissue of the urinary bladder, and increases the excitability of the nerve supply. Another very important action of pituitrin is its stimulating influence on the muscular substance of the distended intestine. There would appear to be two active principles: one which acts as a sympathetic inhibitory, and the other which is an augmentor. On the stomach as first the action that of inhibition,, which is followed by strong and prolonged increase. The injection of pituitrin temporarily increases the flow of milk. On the kidneys the effect is to dilate the vessels and increase the flow of urine. This action on the renal arteries differs from

the action of pituitrin on the arteries in general. In the case of the stomach the intravenous injection of pituitrin increases the flow of gastric juice. It has been thought by a number of experimenters that the effect in the mammary gland, the kidney, and the stomach is brought about an action on the cells of these organs. Toxic doses of pituitrin cause hurried respiration, quickened heart's action, and paralysis. These are followed by drowsiness, muscular weakness, and, perhaps, sudden heart failure.

The discovery of Howell that it is the posterior portion that yields the active substances has been confirmed by Schäfer and others. Further investigations have shown that it is the central portion of the posterior body in which there are no epithelial cells that the active principle is found. It thus appears that it is the nervous portion that contains the agents having these active properties. It would seem that the present state of our knowledge may thus be summarized that the active substances are secreted in the intermediate part and thereafter elaborated by the nerve portion of the posterior part of the gland.

In the case of normal animals practically no effects have been observed to result from the feeding of pituitary substance. When the whole of the pituitary body is removed death results; but the life of the animal can be prolonged by implanting the removed gland in the brain. The implanting of the gland in the brain of an animal from the pituitary has not been removed has only the effect of increasing for a short time the urinary flow, as would have followed from the injection of pituitrin. It would appear from many experiments that the view of Professor W. S. Halsted is borne out that the exhibition of the preparations of the gland has but little effect unless there be at the time a deficiency of pituitary action, due to the removal or disease of the gland. Another thing has been observed, namely, that when the gland has been removed and then inserted in the brain it remains there and functionates for a considerable time, but if the gland be implanted in the brain of an animal from which the gland has not been removed, the implanted gland is soon absorbed. Cushing has found that when there is defect of pituitary activity the implanted gland may remain permanently active.

Removal, more or less complete, is followed by a series of remarkable symptoms. In 1886 Victor Horsley performed the operation of removing the gland experimentally. Cushing has also done a good deal of work in the same line. It has been observed that young animals may survive extirpation for several weeks, whereas adult animals live only a few days. When recovery occurs it was found that a part of the anterior portion of the gland had been left. The acute symptoms of removal are tremors, twitchings, slow pulse, fall in body heat, apathy and coma.

It has been discovered that it is the posterior or nervous part that is mainly concerned with the changes in metabolism that follow the removal of the gland. This posterior lobe deficiency gives rise to an accumulation of fat and sexual inactivity. The skin is thickened and dry, the hair is stiff and apt to fall out, and in young animals there is arrest in growth. It would seem, according to the investigations of Cushing, that posterior lobe activity is essential to carbohydrate metabolism. When this portion of the gland is removed by experiment or disease there is a remarkable tolerance for sugar and a distinct tendency to obesity.

That there is an inter-relationship between the pituitary and the thyroid bodies has long been held. Cyon thought that the pituitary influenced cerebral circulation through the thyroid. Many observers have noted marked enlargement of the pituitary in animals from which the thyroid had been removed; while others found only a moderate degree of enlargement. After complete extirpation of the thyroid the pituitary has been found to be three times its normal size. In these instances of enlargement, there is a noted increase in the pars intermedia and the nervous portion of the posterior lobe. It does not appear from the experiments of Hunter and Simpson that when the thyroid is removed the pituitary supplies any active principle to take the place of the thyroïdin. The pituitary does not seem to take on the function of producing iodine compounds.

The active substance found in the anterior portion has to do with the growth of the body and skeleton, and the development of the sexual organs. There are important changes in this portion during pregnancy. The intermediate portion secretes substances that raise the blood pressure, slow the heart, stimulate smooth muscles, and increase the flow of urine, gastric juice and milk. These latter active substances can be obtained in greater quantity and more active quality in the nervous portion of the posterior body.

#### IV. THE THYROID BODY.

With regard to the functions of the thyroid gland there are two statements that may now be made with certainty. The first is that the proper growth and development of the cells of the body is dependent upon the proper functioning of the thyroid; and the second is that this gland has much influence over the elimination from the body of the waste material resulting from the breaking-down and regeneration of tissues.

In 1825 Caleb Hillier Parry, of Bath, England, first mentioned the disease now known by the name exophthalmic gaitre. In 1835 Graves,

of Dublin, further described the affection; and in 1840 Basedow, of Germany, still further outlined its clinical features. From these it has taken two of its names. New and valuable ground was broken when, in 1892, Hofmeister found that the thyroid in young rabbits was accompanied by an arrest in growth and development, and that a condition of chronic cachexia resulted. This work was followed up by many, such as Eiselsberg, Lanz, Moussu and Falta.

As the outcome of clinical and experimental observations it has been fully established that two opposite conditions exist, namely, those of over activity and under activity of the gland. The state of over activity, or hyperthyroidism, is that of exophthalmic goitre; while the conditions of under activity, or hypothyroidism, give us such pictures as cretinism, myxœdema and postoperative cachexia strumipriva.

When the thyroid is removed from young mammals a cretinoid condition ensues, manifested by slow growth, small face, prominent abdomen, sexual infantilism and delayed ossification of the epiphyses. There is a marked tendency to atheroma of the aorta. Nitrogen excretion is greatly reduced, and the need for protein food is thus lessened. There is a marked tendency to obesity, owing to faulty fat metabolism; but the thyroidless animal can consume large quantities of carbohydrates without showing glycosuria. In such an animal the administration of adrenalin is much less likely to produce glycosuria. Respiration is faulty, the appetite is impaired, the body heat is lowered, the sympathetic nerves are less responsive, and there is a type of anæmia.

The well-defined cases of myxœdematous dwarfism and infantile cretinism, or the well-marked example of myxœdema in the adult are not likely to be overlooked. The slight forms of thyroid deficiency often go undetected. They may be mistaken for Bright's disease, as there is frequently albuminuria. They may be also confused with the ill health of syphilis and alcoholism. In the adult the morbid change is confined to infiltration. In proportion to the thyroid defect will be this infiltration. This does not tend to spontaneous cure. When such a condition exists in a woman who becomes pregnant decided abatement of the symptoms takes place, the reason for this being that pregnancy stimulates the thyroid to greater activity. This infiltration is found in the muscles, nerve substance, the glands, and the skin; and with the result that their functions are seriously lowered. There are muscular pains, the nerve tissue is poorly nourished, the skin is dry, the heart muscle is feeble, there is constipation with ptosis of the viscera, and the bladder becomes very sensitive and sheds large amounts of epithelium.

To these conditions of thyroid inadequacy, thyroid excess presents a complete contrast. In this state we have the heart hurry, sleepless-

ness, vasomotor disturbance, perspirations, increased metabolism. Most of these symptoms can be induced in the healthy animal by the administration of liberal doses of thyroid gland extract. In this condition there is loss of weight, because metabolism break-down is more rapid than the up-building of tissues. This is just the reverse to what happens in myxœdema, where the wasting is due to faulty digestion and assimilation.

Many theories have been advanced on the question of how the thyroid gland acts. Some have claimed that its action is due to some substance produced in the gland acting as an antidote to some toxin. In support of this theory the fact that the gland contains iodine has been urged. This theory breaks down, however, and does not meet all the requirements. That there is an internal secretion in the gland is made clear by the results obtained by feeding it to animals. This also proves the power of the gland to store up within itself its own active secretion.

There is no domain where there is a richer field for the physiologist than the tracing of the influence of the ductless glands upon each other. It is known that the thyroid has close relationships with the supra-renal bodies. It is also known that when the thyroid is removed the pituitary enlarges. Then, again, the early removal of the thyroid leads to imperfect sex development. Further, the thyroid is more active at menstrual periods and during pregnancy than at other times, and exophthalmic goitre is much more frequent among women than among men.

In the treatment of hypothyroid conditions, as laid down by E. Hertoghe, care should be taken not to begin with too large doses, which would have the effect of too rapidly removing the fat, mucin and other waste products in the body. If too large doses of the thyroid be given the patient is liable to suffer a great deal from muscular and joint pains, and the heart may show signs of disturbance of quite an alarming nature. Indeed, so far as the heart is concerned, there may be induced all the symptoms of hyperthyroidism. Too large doses may cause such a rapid combustion of material in the body that a condition of fever may ensue. The weight of the patient should be reduced very gradually, not more than 3 to 5 ounces a day. For this purpose three daily doses of 5 grains each are usually ample.

As one is dealing with a lost gland function, the treatment can only be regarded as palliative, and must be continued for a long time, perhaps for the remainder of the patient's lifetime. The other functions of the body must be regulated. Any form of diet may be allowed, with a limit on the supply of sugar and starch. Alcohol in all forms must be prohibited. Cold baths must be interdicted strictly, and all

forms of treatment that would tend to lower body temperature. In the case of hypothyroidism in children the improvement in health and the commencing growth of the body are very noticeable; and the mind becomes more active. In these cases the best way to stimulate the growth and development of the testicles and ovaries is by administering thyroid gland extract. This is much more reliable and effective than that of employing extracts of these organs.

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### FRACTURES OF THE EXTREME LOWER RADIUS AND, PERHAPS, ULNA.\*

By A. A. BEATTY, M.D.

**T**HIS paper is intended to convey to you a method for the reduction, fixation and after treatment of this form of fracture.

*Reduction.*—It is very important that you should examine thoroughly and with all the means available, to make sure of your fracture or fractures, especially as to directions, and actual positions of fragments. I have found very few actually transverse, they all seem to be oblique in some direction or other, the most common being from the palmar surface obliquely upwards and backwards to the dorsal surface. Then if this fracture be diagnosed and confirmed by fluoroscope, or better still, photographic plates, you will find there are very few impacted fractures, except to the extent of hard, dense bone of the anterior part of the lower fragment being driven into the cancellous bone tissue just anterior to the dense bone of dorsal surface of the upper fragment.

This statement about oblique fractures should, I think, be borne in mind, for I have let go these arms while under the anæsthesia, and they have recurred. How much more would they with the muscles active!

I will have to couple Reduction and Fixation. The wrist joint and lower fragment being in an abnormal position, the lower fragment and hand must be out of their proper alignment, that is to say, posteriorly and upwards. Apply a splint to the hand and wrist, fixing the parts firmly and securely to it; now, with the marked deformity and the splints fixed in this way, the upper portion of the splint will not be in apposition to the arm. (Give anæsthetic).

Grasp the patient's hand firmly in your right hand, including the splint, an assistant holding the elbow firmly. Produce violent extension and manipulate fragments with your left hand. After approximating

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\* Read at the Surgical Section of the Toronto Academy of Medicine, January 19th, 1915.

the fragments still keep up extension and bring the upper portion of splint in apposition to the arm, while the nurse applies a three-inch strip of adhesive strapping around the upper part of splint and forearm very tightly. This will keep up the continuous extension and will not allow a *recurrence*. With this method there will of necessity be a great deal of swelling in the fingers, but by persistent elevating and continuous movement of the fingers, this rapidly disappears and usually the splint can be removed in not less than the fifth day, but any day after that is thought desirable.

The after-treatment consists in getting the patient to, as nearly as possible continuously, move the fingers and exercise the hand, even with the splint on, but light exercises, such as carrying a stick or using a walking-cane. About the third week the patient should be able to use the hand at work; in fact, at the end of the second week.

*Advantages.*—These are very apparent, for with the splint off in a few days and the free use of the joints and fingers, the amount of ankylosis due to inflammatory exudates will be reduced to a minimum and then what little is left will be readily absorbed and the patient able to use the arm as usual after the third week; in fact, some will be able to use it at the end of the second week.

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#### PRINCIPLES OF VENTILATION.

(1) There must be a constant stream of pure air admitted into the room. (2) The inlets and outlet should be placed as far apart as possible, so as to allow of proper diffusion throughout the room. If possible they should be placed on opposite sides of the room with natural ventilation, but on the same side with artificial ventilation. (3) The inlets for cold air must discharge some five or six feet above the level of the floor, and the outlets for vitiated air must be near the ceiling. (4) The admission of warm air can be permitted near the floor. (5) The incoming air should be itself pure and of sufficient quantity. (6) The inlets for each person in the room must equal in total area 24 square inches, and the outlets should contain the same area. (7) The incoming air must not produce a draught. (8) The ventilation of a large room is always easier than that of a small one. (9) A large room will not compensate after the first hour for a proper system of ventilation. (10) If proper inlets and outlets are constructed, all other means for the admission of air should be closed. (11) The windows of all unoccupied rooms should be opened wide so that they may be flushed with a stream of pure air.—From Evans' *Student's Hygiene*.

## CURRENT MEDICAL LITERATURE

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MEDICINE  
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## ABDERHALDEN TEST IN MENTAL DISEASE.

Charles E. Simon (*Jour. Amer. Med. Assoc.*, May 30th, 1914) discusses the claims of Fauser as to the results of the Abderhalden test in certain types of insanity, with special reference to dementia praecox. In surveying the literature which followed Fauser's publication, he says one cannot help being impressed, on the one hand, by the wonderful uniformity of the results reported by Fauser and the wide divergence from those of certain other authors, like Hauptmann and Bumke. He thinks there is good ground to suspect that Fauser was too enthusiastic in his views, and on the other hand that his opponents may have lacked complete control of the technique. Fauser himself states that he obtained a reaction with sex gland repeatedly in cases in which it was unexpected, and that the diagnosis between maniacal depressive insanity and dementia praecox could not always be made with certainty. Simon relates his own experience with the use of the test in 106 cases, and summarizing the results, says that a sex gland reaction may be obtained in nearly all cases of dementia praecox at some stage or another, but that this action is not specific, as Fauser asserts. He finds that the reaction may also be obtained in other forms of insanity and he does not attempt to explain them. He is therefore driven to conclude that Fauser's rule has exceptions or that the positive findings in maniacal depressive insanity or paresis are due to errors of diagnosis or technique. The fact, however, remains that in dementia praecox the positive reaction is the rule, while in the purely functional psychoses it is the exception. Simon believes that while we cannot, as yet, draw positive conclusions regarding the significance of the reaction in dementia praecox, certain possibilities suggest themselves. One of these is that of a perverted function of the cells concerned in the production of the internal secretion of the sex glands in dementia. "Considering the problem from the clinical side, the all-important question, of course, suggests itself whether or not the reaction has any relation to the pathogenesis of dementia praecox. Theoretically, this is, of course, perfectly possible. Granted that anti-sex-gland ferments do occur in the circulation in dementia praecox, and that their presence were the outcome of the appearance in the circulation of an abnormal secretion or of abnormal cells, then we may also assume that digestion of the cells or cell products will take place, and that all conditions would thus be given for a

chronic protein intoxication which might very well expend itself on the central nervous system. Should this be true, then we might also expect that the administration of sex gland to such patients would cause an aggravation of the patient's condition, while partial or entire castration, possibly combined with the transplantation of normal organs, might similarly be expected to have a beneficial influence. Evidently the problem is now open to investigation from many sides, and it does not seem unreasonable to expect that definite advances will be achieved in the near future."

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### CHRONIC INTERSTITIAL PNEUMONIA.

The overgrowth of interstitial connective tissue produces the following changes: 1. Encroachment upon the subsequent obliteration of the air vesicles. 2. Changes in the bronchial tubes, their muscular coats being replaced by fibrous tissue. The tubes subsequently yield to intrapulmonary traction, and form bronchiectatic cavities. 3. Obliterative changes in the smaller pulmonary and bronchial blood-vessels. The lung as a whole is shrunken, often enormously, airless, and hard. The opposite lung is emphysematous, and the right ventricle is hypertrophied.—Wheeler and Jack's *Handbook of Medicine*.

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### BRONCHO-PNEUMONIA.

The disease affects both lungs, and begins in the terminal bronchioles, spreading thence to the infundibula and alveoli. The consolidated patches have therefore a lobular arrangement, but if many adjacent lobules are affected the consolidation may be almost lobar. The bronchioles are inflamed and frequently plugged with mucous, and their walls and the surrounding interstitial tissue are infiltrated with small cells. The walls of the air vesicles in the consolidated area are congested, their epithelium is swollen, and their lumen is filled with proliferated epithelial cells, leucocytes, and a mucous or mucopurulent (not fibrinous) exudate. Many lobules are collapsed, but not inflamed, from plugging of the bronchioles. When cut into, the small consolidated areas are seen to be conical in shape, with indefinite margins, and separated from each other by crepitant lung tissue. Adjacent lobules may be emphysematous (compensatory emphysema). The bluish-gray collapsed areas are most numerous in the lower lobes.—Wheeler and Jack.

## NEW TREATMENT FOR NEURALGIA.

Grasset and Rimbaud use subcutaneous injections of air or water in neuralgia. The object is to free the nerve-endings held fast in the hyperemic tissues. Surmont and Dubois make use of distilled water, Debove and Bruhl use saline (75 per cent.) or Hayem's serum:

Sodium chloride .....	5
Sodium sulphate .....	10
Sterilized water .....	100

The injections are given at the painful spots in a dose of from 5 to 10 c.c. repeated every two or three days. Sciatica can be cured by 10 to 15 injections.

Cordier, of Lyons, was the first to use injections of air for neuralgia, using an apparatus similar to Paquelin's cautery, in which the cautery point is replaced by a needle, the air being filtered through a tube plugged with absorbent wool. The pump of Potain's aspirator may be used in like manner. The seats of election for the injections in the case of sciatica are the upper part of the buttock, the middle and after parts of the thigh, and the outer side of the leg. After having put in the needle, it is necessary to make sure that the point is not in a vessel. Air is then pumped in very gently, and the patient should only feel some numbness and tingling. The air spreads out irregularly under the skin, makes the limb torpid, and reaches the loins and the popliteal space. From 500 to 2000 c.c. are thus injected, and the gas is absorbed in from two days to a fortnight. The method is extremely simple, harmless and painless; the patient is nearly always relieved at once. Intercostal neuralgic may be treated in the same way; femoro-cutaneous neuralgia has been relieved; while good results have been obtained in the diffuse painful neuritis, following severe injuries like contusions of the shoulder and the hip.

In obstinate cases of sciatica, Sicard advises a combination of injections of air, and of water, and epidural injections. He injects from 800 to 1200 c.c. of air at the level of the leg; from 60 to 80 c.c. of normal saline containing about  $\frac{1}{2}$  e.g. of novocain immediately below the sciatic notch in the upper part of the ischio-trochanteric groove; and finally, from 10 to 20 c.c. of the same solution into the lower sacro-lumbar epidural region.—*Jour. de Méd. et de Chir, prat.*, lxxxiv. 15, and *Medical Times*.

## OPIUM.

In an interesting paper, D. I. Macht, Baltimore, (*Journal A. M. A.*, Feb. 6th, 1915), gives a history sketch of our knowledge of opium and

its uses in medicine. It would appear from this that the original home of the poppy was in Asia Minor, whence it was introduced into Greece, India and China. The earliest mention as a product of India is in 1511. Macht refers to the superstitions and kakopharmacy and polypharmacy of the older materia medica under the head of the "Four Official Capitals," the most important of which was the so-called theriaca, eulogized by Galen somewhat in the manner of certain quack proprietary medicines of the present time. The others of the four were mithridatoun, philanium and disacordium. At the present day the commonest pharmaceutical preparations of opium like laudanum are also of antique origin, or at least are centuries old, like Dover's powder, named after a noted buccaneer. This history of the alkaloids is also briefly given, and only within the last few years have we obtained a more thorough knowledge of their therapeutic properties, from the works of Straub, Burgi, Sahli and others.

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#### PROBLEMS IN MENTAL PATHOLOGY.

E. Goodall, in the fourth of the Croonian Lectures (*Lancet*), discusses the application of the method of complement deviation in psychiatry, and also the study of the cerebro-spinal fluid in this branch of medicine. He calls attention to the fact that the Wasserman reaction may be negative at a given test in both the serum and cerebro-spinal fluid in certain cases of paresis. With the use of increasing strengths of cerebro-spinal fluid amboceptor a positive Wasserman with 0.2 c.c. of a 1 in 10 solution indicates paresis, but a negative reaction with any strength up to even 1 c.c. of the pure fluid does not exclude this disease if only once obtained. Negative reactions with large amounts of fluid are not infrequently obtained in, at any rate, the more quiescent periods of the disease, or in slowly progressive cases. In such periods and cases the complement deviation method cannot be relied upon for diagnosis between paresis and cerebro-spinal syphilis. As regards the value of the Nonne-Apelt test: in cases of undoubted paresis it is more often positive than the Wasserman test with the cerebro-spinal fluid; it is obtained more consistently throughout the course of the disease; and it is more reliable as revealing the persistence of the disease in remissions. On the other hand, it is less reliable in diagnosis, occurring more frequently in cases of insanity which are not cases of either paresis or cerebro-spinal syphilis. There is an absence or deficiency of complement in the cerebro-spinal fluid in paresis and there is sometimes a deficiency, at any rate, of amboceptor. In these respects the fluid re-

sembles that of non-paretics. In paresis complement is absent from the cerebro-spinal fluid, which resembles that of normal persons in having no hemolytic properties.—*Medical Record*.

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### VALUE OF VACCINATION.

The beneficent results of the introduction of vaccination into the United States are well shown by a comparison of the conditions obtaining in the early part of the eighteenth century and in the corresponding period of the nineteenth century in Boston. In 1721, Boston, with a population of about 11,000, had 5,989 cases of smallpox, with 850 deaths. In 1730, in a population of about 15,000, there were about 4,000 cases with 509 deaths; but between 1811 and 1830, in a very much larger population, there were but 14 cases of the disease. In London, during the third quarter of the seventeenth century, the average annual mortality from smallpox per million was 4,000. A hundred years later, between 1770 and 1780, it was more than 5,000; in the first years of vaccination it was more than 2,000; by the middle of the nineteenth century it fell to about 500, and in the last decade of the century to less than 75. In the whole of England, during the period of optional vaccination, the mortality rate fell from about 2,000 to 417, and after the practice was made compulsory in 1850 it fell to 53.—Harrington's *Hygiene*.

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### SURGERY

UNDER THE CHARGE OF A. H. PERFECT, M.B., SURGEON TO THE  
TORONTO WESTERN HOSPITAL

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### BRAIN TUMORS.

In an elaborate paper amplified from the discussion of Dr. Küttner's paper read before the Section on Surgery of the A. M. A., June 23rd, 1914, H. Cushing, Boston (*Journal A. M. A.*, Jan. 16, 1915), discusses the operative results obtained in brain tumors by Professor Küttner and those compiled by Drs. Eiselsberg, Tooth and Krause, and also his own experience in these cases. There is, he says, no uniform classification for the multiform growths met with within the cranium and the importance of their situation is often much greater than that of the tumor itself or its histologic character. In many cases also the removal of the tumor is far from causing a recovery; with the strict interpre-

tation of the word we would probably see not more than 5 per cent. cured. If, however, with some persistence of symptoms the individual can lead an effective life, the percentage of the so-called recoveries might, perhaps, be increased to 15 per cent.; and if we count relief and prolongation of life in more or less comfort as a success, 50 or 60 per cent. can be helped, but even with the greatest skill and experience and under the most favorable conditions 15 to 20 or 25 per cent. of brain tumor operations must be expected to be failures. The results, moreover, as shown in the statistics of the past years are affected by the relatively crude surgery of the past and the figures of the recent era are instructive only from the point of view of immediate mortality. Cushing finds that the data given by Drs. Eiselsberg, Tooth, and Krause are of value and he adds his own observations at Baltimore and at Boston, including 470 cases, about 350 of which have been subjected to one or more cranial operations. To avoid too great detail he analyzes these in two classes: those of the cerebral or supratentorial chamber, including the hypophysial cases, and those of the cerebellar or subtentorial region, including the pontine tumors. These are analyzed in detail. There are also 23 cases recorded under the head of pseudo-tumors, that is, tumors which have been clinically diagnosed but not proved to exist. There were 130 patients operated on 149 times, as follows; "Subtemporal decompressions, 41 (no fatality). Osteoplastic craniotomies combined with cerebral decompressions, 28 (3 fatalities). Osteoplastic craniotomy with attempted partial or total removal of the tumor, 24 (2 fatalities). Transphenoidal operations for hypophysial tumor, 17 (1 fatality). Suboccipital exploration and decompression, 22 (3 fatalities). Suboccipital operation with attempted partial or total removal of the lesion, 17 (2 fatalities)." The certified lesions are also given, including glioma and glioma cysts, angioma, sarcoma, carcinoma, syphiloma, tuberculoma, osteoma, echinococcus, adenoma and interpeduncular mixed tumors. The operative fatalities, numbered only nine; but this he points out does not include the latter fatal results. Cushing says the time has come when for proper advance we may well devote our analytic studies of operative results to specific types of lesions in specific localities, and he follows this with an analysis of the cerebellar pontine tumors in the European clinics mentioned. As Tooth says, the only hope of lowering this is by a modification of the surgical procedure. Cushing thinks the direction of this modification lies in performing these suboccipital operations with a bilateral exposure and in one instead of two stages, with complete hemostasis even it means two hours' labor; in lowering tension by puncturing the lateral ventricle, in removing the posterior half of the foramen magnum and possibly, in case of great hernia, through the foramen the arch of

the atlas as well; and being content with scooping out on each side as much tumor tissue as possible and leaving its capsule in place; in accurate closure of the wound in layers without drainage and leaving the patient in the face down position if necessary a whole morning or three hours at least to the operation. Cushing's own experience in the last ten years includes thirteen cases which have been certified by operation and seventeen in which the diagnosis of cerebellar pontine tumor was made but the operation was concluded as a decompression, short of laying bare the lesion. None of these decompression cases were fatal and the mortality in the other thirteen was 30 per cent. He believes that the prospects in these cases are improving, but special methods and special training are essential. The surgeon should make his own neurologic examination; no advance is being made when the operator is merely the tool and not responsible for the diagnosis. The prevalent view that these operations should be left as a last resort is combatted. Such a view has prevailed in regard to all important operations and in the cranium an exploratory operation may be more beneficial than is likely to be the case with growths in the abdominal cavity. A smooth anaesthesia in trained hands is essential and the operation should never be done in unaccustomed surroundings. The technical steps are delicate and the performance is time-consuming. "Specialization with some knowledge of neurology, skilled assistance—for intracranial operations are not star performances—familiarity with the safe and respectful handling of the central nervous tissues, which is best acquired by the experiences of the experimental laboratory, and painstaking, scrupulous technique, are the chief elements of success. An observance of these things will not make more tumors accessible, but it will permit the removal of those that are accessible to be more often accomplished and render those that are not, capable in a large percentage of cases of being safely palliated."

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#### INJECTION TREATMENT OF HÆMORRHOIDS.

Sir James F. Goodhart, in *The Practitioner*, strongly recommends injection of hemorrhoids because he has seen a good deal of partial and poor success in common operations, while the results of injection have seemed to him uniformly good. Supposing that some cases do fail, what harm has been done if, by other measures one cannot be sure of perfect success? He questions whether there is any risk of embolism after injection, and whether the risk as claimed is based on a single case and then handed on as authoritative. Injection produces a local thrombosis, but so does the natural course of the disease in many cases, re-

sulting in a spontaneous cure. The method is practically painless, and need not keep a man from his work, while the objections to operation are that it lays up the patient for some time, it causes shock, it sometimes causes serious local trouble later, and in other cases leaves a state of discomfort that is more or less permanent.—*New York Med. Jour.*

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#### TREATMENT OF PROSTATIC HYPERTROPHY BY ELECTROCAUTERY.

Luys (*La Clinique*, June 12th, 1914) recalls that enlargement of the prostate may cause difficult micturition in two ways—either the posterior lobe enlarges, causing a prostatic “bar” or ball-valve; or by the enlargement of the lateral lobes the upper part of the posterior urethra is rendered narrow, long, deep, and frequently tortuous. Section by cautery of the projecting enlarged posterior lobe was practised before the introduction of prostatectomy. Lately Young, of Baltimore, has advocated his “punch” operation, by means of which the posterior lobe may be partially removed through a straight cystoscope. The author believes that there is a field for these endoscopic operations, although the majority of enlarged prostates are susceptible of removal by the suprapubic route. He points out, however, that up to the present time endoscopic operations have been directed exclusively against the prostatic bar. Young’s punch operation in particular is not applicable to cases of retention due to enlargement of the lateral lobes. Also the operation by “punch” provokes severe hæmorrhage, controllable with difficulty. When the lateral lobes are enlarged, the portion of the urethra between the neck of the bladder and the posterior end of the veru montanum is affected; by the encroachment upon it of the lateral lobes, often unequally enlarged, it becomes functionally defective as a conducting channel. In two such cases Luys has destroyed the walls of this portion of the urethra by a galvano-cautery, is reduced through his straight cystoscope. The cystoscopic tube is introduced, and the local conditions studied; the posterior urethra is then anæsthetized by the topical application of stovaine; a general anæsthetic is unnecessary. The cauterization is then effected, and is slightly painful; the pain is reduced to a minimum, and the visual conditions much improved by the strong current of air which circulates through a cystoscope of this type. There is very little hæmorrhage, and the operation is not followed by retention of urine. Should bleeding occur at the time of operation, it is best treated by the application of a diathermic current, which at once causes arrest of the hæmorrhage. The operation is best done in two or more sittings, allowing a week or so to intervene between each. The

article contains several reproductions of cystoscopic photographs, showing the formation of an open tunnel replacing the narrow vertical slit to which the posterior urethra was reduced before the operation. In the two cases reported by the author the functional result was perfect. Disadvantages of this method of treatment are that it is tedious and requires expert manipulation; the advantages claimed are that it is safe and does not necessitate rest in bed. It should be the method of choice in selected cases.—*British Medical Journal*.

### THREE INTERESTING TUMORS OF THE SKULL.

Dr. Robert Abbé presented these cases before the Practitioners' Society of New York. In the first case, a small-celled sarcoma of the skull had disappeared after being one year under radium treatment. The patient, Mr. J., 41 years, builder, had noticed two depressions on the top of his head where he had previously had a blow against a beam, when raising his head suddenly. His surgeon found a soft growth, which on operation was too vascular to be removed. The man was referred to Dr. Abbé for radiotherapy. On operation to remove a piece for examination, he found a soft tumor raising the scalp from the dura, more than an inch and a half. The skull was entirely wanting at the site of the median half of the right parietal bone, and the defect extended across the median line for more than an inch. The diameter of the bone defect was irregularly 2 inches by 4 inches. The edges were sharply punched out. Microscopically the growth was sarcoma of the round cell type. Treatment: radium was at first used externally. Later, it was used through small punctures; long platinum and other tubes of radium were inserted into the soft tumor mass and a simultaneous cross firing was given by external applicators. No severe reaction occurred, but slow subsidence of the growth took place during three following months. The tumor had shown apparent cure during the past year. The dura was now flat and soft with smooth bone edges and no trace of tumor could be discovered. The patient was now in perfect health.

The second patient, Miss D., aged 41, was referred to Dr. Abbé for sarcoma of the upper jaw. A small piece of tumor had been removed above the gum and was reported osteosarcoma, involving the antrum. Examination showed a great hyperplasia of both alveolar portions of both maxillæ, with exostosis of the front of the right. Incidentally a prominence of the frontal bone and curious twist of the left forearm gave suspicion of Paget's disease. The X-ray picture showed great hypertrophy of all the cranial bones and of the left ulna and right femur which were distorted in length and curvature. The right an-

trum was well opened and cleaned of hypertrophied tissue which was reported to be round cell sarcoma, although the bone showed no sarcoma. A liberal use of radium followed the surgical cleaning out of the cavity and one year later the patient was reported to be in fine health and with no evidence of the disease.

The third patient, Miss R., suffered from a metastatic thyroid cancer of the skull. Since childhood the patient had had a large goitre. For some months she had had two tumors on the skull, one parietal, one frontal. On examination each was found to be the size of a small orange, 3 inches in diameter and two in thickness, firm and vascular in consistency. The bone edge was found to be sloping on to the tumor. The patient was reduced in health. Removal of the parietal tumor was first undertaken and proved to be a very bloody operation. It had entirely replaced the bone and rested on the dura. It contained much bone and was imperfectly removed from the diploetic edges into which it grew. The base had to be curetted from the dura. After due interval to convalesce from the exsanguination, the frontal tumor was removed with the same imperfection. Long spikes of bone grew up through the tumor as well as the granular dissemination through the tumor and showed again the diploetic growth extended beyond the margins of operable tumor. The only hope of benefit lay in the subsequent use of radium. While the wounds were still open a heavy post-operative treatment of radium was given, using some 300 milligrams of pure radium bromide. Both wounds healed promptly. The patient's health was perfectly restored and the scars were now soft, smooth and flat. Ten months after radium treatment the patient was still free from any trace of disease. The goitre was no smaller, but Dr. Abbé was endeavoring to influence it by radium without operation unless forced to it by increase. The pathological examination showed a type of cancer of the bone with thyroid structure, and therefore typical metastases.—*Medical Record.*

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#### DISLOCATION OF THE HIP ON TO THE DORSUM ILII.

The head of the bone may be felt on the dorsum ilii, unless the patient is very fat or very muscular. The leg is in a position of flexion, abduction, and inversion, and the ball of the toe rests on the other instep. The great trochanter lies above Nélaton's line, and is nearer to the anterior superior spine than that of the sound side. The limb is shortened two or three inches, and there is a marked hollow over the front of the joint. *Treatment.*—The patient is placed on a mattress on the floor and anæsthetized. The leg and thigh are flexed in the position

of adduction. This rolls the head down to the lower part of the acetabulum. The leg is then circumducted outward and brought down straight; this carries the head through the rent into the acetabulum. Failing success by this method, the body must be fixed and direct upward traction must be exercised upon the flexed thigh. As a rule these manœuvres are successful; if not, extension by pulleys must be made use of.—*Aids to Surgery.*

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## GYNÆCOLOGY AND OBSTETRICS

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### CESAREAN SECTION.

After noticing the rapid extension of the scope of Casarean section in the last few years, and the changes in its technique, George Gellhorn, St. Louis (*Journal A. M. A.*, Jan. 16, 1915), remarks that as the number of such operations increased, certain undesirable after-effects became apparent. The unsightly abdominal scar with its tendency toward hernia was perhaps the least of these. Much more serious, he says, was the frequent, almost constant, occurrence of postoperative adhesions, the unintentional ventrofixation of the uterus, with its annoying symptoms, the possibility of subsequent miscarriages, or the danger in future deliveries from the pathologic immobilization of the uterus. On these accounts, a number of modifications came into use, among which is the "high incision" of Davis, recently popular because of the claim that adhesions could be prevented with it. The classical Cesarean section and all its modifications have this essential in common, that is, lack of infection. The membranes had to be intact or be recently ruptured, and previous examinations and attempts at delivery had to be strictly avoided. There remain a large number of so-called "unclean" cases, in which infection already existed or the precautions mentioned have not been observed, or else suspected cases of infection in which there was some doubt as to this matter. For such cases, Frank's new method, called the "extra-peritoneal," essentially the same as an operation originated by Thomas, of New York, in 1870, but since forgotten, was designed. Its principle was to make an incision into the lower uterine segment instead of the fundus, and to exclude the operative field from the rest of the peritoneal cavity. It has not fully fulfilled the hopes it excited, and patients already infected could not be saved by it. Brilliant results, however, were obtained in suspected cases, and even more so when employed in aseptic ones. It is, strictly speaking, a trans-peritoneal method. The parietal peritoneum is first incised, then the

visceral peritoneum is pushed off the lower uterine segment, and finally, by stretching the parietal peritoneum to the uterus, the free abdominal cavity is excluded, and the operation rendered extraperitoneal. In the classical Cesarean section we have, beside the scar and adhesion, copious bleeding during the operation, escape of amniotic fluid and meconium into the peritoneal cavity during the section, and the possible leakage of womb fluid later on. The profuse bleeding and escape of amniotic fluid is also a drawback to the high incision method and actual experiment does not support fully the claim of the avoidance of adhesions. For these reasons, the extraperitoneal method with the special technique mentioned is preferable. Postoperative adhesions are not conceivable and the temporary protection of the abdominal cavity by suturing the parietal peritoneum to the uterus prevents the escape of fluids. After the operation, the parietal peritoneum completely covers the field, and the contractions of the uterus cause the peritoneal sutures to disappear, leaving an unbroken peritoneal surface. The afebrile course of the patient corroborates this statement, and the entire absence of bleeding in the lower uterine segment is striking. The possibility of future rupture of the scar is mentioned, but practical experience has not borne out the anticipations of danger from this cause. The scar is practically identical with that of vaginal Cesarean section, which we know does not dispose to rupture. There is only one condition in which the extraperitoneal method does not offer advantages over the others, and that is in *placenta praevia*. In such a case the incision through the lower uterine segment would open the enormous dilating blood sinuses, which would render orientation difficult from the blood inundation, and proper check of the hemorrhage might be difficult.

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#### DISEASES OF THE SKIN IN PREGNANCY.

Dr. P. E. Bechet states that most of these affections are due to the toxemias of pregnancy, and, with the exception of herpes gestationis and impetigo herpetiformis, rapidly disappear after parturition. Nothing definite has been established as to the etiology of impetigo herpetiformis, which is extremely rare, and the most promising treatment for it is the injection of small amount of blood serum. Genital pruritus may be idiopathic or caused by vaginal discharge, parasites, or glycosuria. General pruritus occurs most frequently in patients of neurotic temperament, and its treatment consists chiefly in elimination of the causative toxins through stimulation of the excretory organs. Locally, a lanilin ointment containing one or two per cent. phenol and from

two to five per cent. menthol may be used. Other affections likely to be met with are chloasma, paronychia, alopecia, fibroma molluscum gravidarum, and prurigo gestationis.—*New York Med. Jour.*

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### THE NURSING INFANT.

B. Craige, El Paso, Tex. (*Journal A. M. A.*, Feb. 6, 1915), offers some practical suggestions for the prevention and correction of the too frequent nutritional disturbances caused by sole breast feeding. During the first few months of infancy there is more milk secreted probably than at any other part of the nursing period and the liability of over-feeding in nursing babies is emphasized. Breast milk contains a much larger percentage of fermentive bacteria than cow's milk, and continued dilatation of a naturally delicate stomach in mixing fresh food with fermenting residue is almost certain, Craige says, to give rise to flatulent dyspepsia with its accompanying distress. The too frequent feeding affects the mother's nutrition and a vicious circle is thereby produced. When this mutual disturbance occurs, the mother must also become the patient and have an abundance of sleep, if necessary, apart from the baby, good nursing food, rest and exercise. A mother worrying all day and staying awake all night cannot be expected to produce a healthy food for her infant. When the father and mother are both healthy and lead well ordered lives and the baby is normal at birth, three hour intervals for feeding will give satisfactory growth and do very well up to weaning time, providing the night feeding is discontinued after the third or fourth month. The baby will probably cry, but it can be trained to sleep from 9 p.m. to 6 a.m., provided the mother will not go to it when it cries. As to the composition of the milk, the proteins and fat are the only constituents apt to be at fault, and the latter the more so. It is more difficult to reduce this fat excess than to raise a deficient percentage. Regular habits and fresh air and exercise with good feeding of the mother will probably give the desired results. For the treatment of colic, these are the principal suggestions: Frequently diluting the milk by lime water before nursing helps and carminatives can be sometimes employed with success. A common difficulty is the quantity of milk, and its deficiency is definitely shown by flabby breasts and evident dissatisfaction of the infant, and lack of growth. The more important factor in depleting the milk supply is nervousness of the mother, and there are some conditions that contraindicate nursing, such as much fever or serious complications after labor, grave anemias and heart disease, tuberculosis, etc., and the renewal of pregnancy. Before the physician advises weaning, he should

satisfy himself that he has tried every way possible to produce a healthy milk supply and the discontinuance of nursing is itself imperative. The great majority of infants that die before two years of age are bottle-fed, and when there is not enough breast milk or it cannot be made to agree with a child by treating the mother, the use of supplementary food is important. Craige has had some success as a temporary expedient with proprietary foods, especially if the fat content is too high. All mothers dread weaning and the second summer, but it is as natural as the beginning of nursing. The dreaded second summer with the parents should be the "dreaded parents" with the infant, and he mentions some inappropriate foods\* that have been found in the weaning diet list. No age limit for weaning can be set, for each infant has a law to itself, but by one year an infant will wean itself if gradually a bottle of milk is substituted with cereals, toast, broth, etc. At nine months, the average infant weighs 17 to 18 pounds, and few months can furnish sufficient nourishment for a child of this size. In most cases, when they attempt to nurse after 7 months, to the exclusion of other foods, they run the risk of grave malnutrition or rickets.

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#### PUERPERAL INFECTION WITH FRAENKEL'S GAS BACILLUS.

Schüler seeks to describe the disease picture due to puerperal infection with the bacillus aerogenes capsulatus. Of special interest is a case of "eclampsia" complicated with puerperal infection. While sewing, a woman who should have been about four months pregnant fell from her chair in convulsions and was admitted unconscious into the clinic. The urine was quite normal. Blood serum hemolytic. Fœtus expelled spontaneously, but placenta could not be delivered save by manual extraction. It was found to be a so-called hemolytic placenta. From the blood a pure culture of Fraenkel's bacillus was cultivated. The woman never recovered consciousness, dying about nine hours after admission. At autopsy there was sufficient evidence of a general and local infection with a gas bacillus. The problem is then to show whether or not eclampsia had ever existed. This must be answered in the negative. There were metastases of infection in the cerebrum to account for the convulsions, of cholemia or nephritis—there was no evidence at all. One might, of course, style the affliction clinical eclampsia—puerperal eclampsia even. But it is evident that such a designation is purely symptomatic and could be so stretched as to indicate a variety of conditions. One thing asserts itself persistently, to wit: some cases of so-called "toxemia of pregnancy" could be brought within the compass suggested by this observation. Some authorities have suggested

that puerperal sepsis will be found to depend largely on previous toxemia of pregnancy. In all alleged cases of toxemia of pregnancy, when hepatitis or nephritis is absent, and perhaps even when present, the systemic blood, placenta, etc., should be tested for evidences of gac bacillus infection.

#### INSTITUTIONAL MORTALITY OF THE NEW BORN.

L. Emmett Holt and E. M. Babbitt, New York (*Journal A. M. A.*, Jan. 23, 1915), have studied the infant mortality during the early weeks of life. According to Holt's statistics, out of one hundred infant deaths occurring during the first year, 33 occur in the first month, 28 in the first two weeks, and 22 in the first week, and 13 on the first day. While this number of cases is small, they are of value on account of accurate statistics. The questions they hope to answer were how the general figures of the city compared with these and what is the average or normal mortality in 10,000 infants. How much of this mortality of the first two weeks can be prevented by the proper use of obstetrics and how much is due to malformations and avoidable accidents of birth? Ten thousand consecutive confinements in the Sloane Hospital for Women were analyzed. They were divided as follows: Abortions before the twenty-seventh week, 253; stillbirths, 429; born alive, 9,318. These 9,318 cases are analyzed with care and detail, and the causes of death during the first two weeks summed up. In analyzing stillbirths, the period of gestation was estimated by the length of the fœtus. The paper is summarized as follows: "The deaths in the hospital during the first fourteen days were 3 per cent. of the living births. For half this number, prematurity was responsible. Forty-eight per cent. of the total deaths, and 66 per cent. of those due to permaturity occurred on the first day. Congenital weakness and atelectasis, together made up 58 per cent. of the total deaths. The mortality from conditions intimately connected with delivery—accidents of labor, hemorrhages, sepsis and asphyxia—together made up but 20 per cent. of the deaths of the first fourteen days. Malformations and congenital diseases other than syphilis caused 4 per cent., and syphilis 4 per cent. The only important disease developing after birth was pneumonia. Stillbirths must be reckoned as one of the large problems in infant mortality; they are one and a half times as many as the deaths from all causes during the first two weeks. Except for the larger rôle played by syphilis, the causes of stillbirths in no way differ from those which produce death during the first days of life. When we come to consider to what degree preventive measures might influence the mortality of the first two weeks

of life, two things stand out prominently: The great number of deaths from congenital weakness can be reduced only by care of the mother during her pregnancy; the number of stillbirths and the deaths from causes connected with parturition can be largely reduced by good obstetrics."

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#### OVARIAN CYST WITH TWISTED PEDICLE.

Dr. G. W. Bandler reported this case, which was interesting because of the onset and duration before operation. The patient, a woman about 40 years of age, a multipara, noted during the summer that her abdomen had become enlarged. In September she had an attack of abdominal pain which confined her to bed for three days. In October she had another severe attack of abdominal pain, equally severe on both sides. Her family physician suspected kidney stone. After suffering for five weeks the patient was able to be up and about. Her abdomen was hard and she suffered from obstinate constipation. When he first saw the patient Dr. Bandler said he made a diagnosis of ovarian cyst. At operation a little more than two weeks ago he found a large cyst reaching far above the umbilicus and intimately adherent to the anterior abdominal cavity. This tumor, greenish chocolate in color, was carefully loosened from its attachments to the anterior abdominal wall, the lateral wall of the pelvis, the great omentum, numerous coils of intestine, and particularly the sigmoid flexure. There was no point, except a certain area on its posterior surface, that was not glued to some interabdominal tissue. After extraction the tumor was seen to have originated from the left side, forming a complete twist of the pedicle, which was no thicker than a thumb. After removal considerable time was spent in applying hot abdominal pads to the numerous oozing surfaces. A large Morris drain was introduced down to the left side. The patient made an uninterrupted recovery.

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#### ENDOMETRITIS.

R Ichthyolis ..... ʒj  
 Tinct. Iodi ..... f. ʒiij  
 Glycerit. Hydrastis ..... f. ʒv  
 Glycerit. Boroglycerini ..... ʒvjss

M. Sig.; Apply on tampons.—Candler.

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 THERAPEUTIC NOTES
 

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## THYROID TREATMENT OF CERTAIN NERVOUS DISORDERS.

C. W. Crawshaw, in the *Lancet* for May 30, 1914, points out that in many cases of nocturnal enuresis in children, notably in those showing rachitic characteristics, excessive blinking of the eyelids is a disagreeable concomitant. In two cases in which the author administered a thyroid preparation in conjunction with syrup of calcium lacto-phosphate, the symptom disappeared in a few days. In one of these cases, in which the drug was discontinued and not resumed for a few weeks, the blinking reappeared; it disappeared again, however, when the thyroid was again given. In another case, that of a girl about seven years of age, who was unable to stand and who had extensive paresis of the muscles of the left arm and back—a condition attributed to diphtheria—the administration of thyroid gland, one grain (0.06 gram) daily, with syrup of calcium lactophosphate, forty-five minims (3 c.c.) three times daily, was followed by a relatively rapid recovery of power in the affected muscles, the child regaining ability to walk without assistance in five weeks and improving physically to a marked degree.—*New York Med. Jour.*

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 TREATMENT OF COLITIS IN INFANTS.

Hutinel, in *Monde médical* for April 25, 1914, is stated to recommend that all fluids containing soluble antiseptics, such as phenol, boric acid, and sodium borate, be avoided in the treatment of colitis in children. If the stools are foul smelling the following combination may, however, be employed as a detergent enema:

℞ Aquæ hydrogenii dioxidi ..... ʒiiss (50 grams)  
 Sodii phosphatis ..... gr. xlv (3 grams)  
 Sodii chloridi ... .. gr. lxxv (5 grams)  
 Sodii bicarbonatis ..... gr. viiss (0.5 gram)  
 Aquæ bulliatæ ... .. Oii (1 litre)  
 M. et ft. solutio.

The best procedure for combating bacterial development in the intestine in these cases is to give a purgative immediately after feeding has been stopped. Preferable to calomel are castor oil and sodium sulphate. In cases with marked tenesmus, a decoction of ipecacuanha may

be given with advantage in tablespoonful doses every two hours, and in dysenteric forms, irrigations with a solution of silver nitrate or potassium permanganate are sometimes serviceable.—*N. Y. Med. Jour.*

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STOMATITIS.

- ℞ Phenolis ..... gtt. viij  
 Sodii bicarbonatis ..... ℥ij  
 Glycerini ..... f. ℥iv  
 Aquæ ..... ad f. ℥iv  
 M. Sig.; Use as a mouth wash.

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TINEA FAVUS.

- ℞ Acidi salicylici ..... ℥ij  
 Acidi chrysophanicæ ..... ℥ij  
 Lanum ..... ℥x  
 Petrolati ..... ℥vij  
 M. Sig.; Remove the crusts, and rub in the ointment for fifteen minutes at night.—*Merck's Archives.*

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ATROPHIC RHINITIS.

- ℞ Red iodide of mercury ..... gr. xv  
 Potassium iodide ..... gr. xxxiv  
 Distilled water ..... ℥iiiss  
 M. Sig.; Poison; use only in spray; do not swallow.

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INFANTILE ALBUMINURIA.

- ℞ Strontii lactatis ..... ℥iv  
 Syr. aurantii amari ..... f. ℥j  
 Aquæ destillatæ ..... f. ℥iij  
 M. Sig.: A dessertspoonful morning and night.—*Comby.*

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FOR GASTRIC HYPERACIDITY.

- ℞ Extracti belladonnæ foliorum ..... gr. iij (0.2 gram)  
 Bismuthi subcarbonatis ..... ℥ii (7.5 grams)  
 Magnesii oxidi ..... ℥ii (7.5 grams)  
 Sodii citratis ..... ℥ss (15 grams)  
 M. et ft. pulver.  
 Sig.: Take as much as will cover the point of a knife three times a day between meals.

## PERSONAL AND NEWS ITEMS

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*Ontario.*

Dr. Edmund Boyd is looking after the practice of Dr. McDonagh during his absence from Toronto.

Dr. E. Rodger Wells, who spent five years in general practice and did post-graduate work in New York, has located at 82 College Street, Toronto, and will confine his attention to diseases of the eye, ear, nose and throat.

Dr. G. Sterling Ryerson, on retiring from the presidency of the United Empire Loyalists' Society, was presented with an address and a gold badge.

The annual cost to the public at the University of Toronto per student, in the departments of arts, practical science and medicine are as follows: Arts, \$151; practical science, \$104; medicine, \$14.

Any physician who is willing to share, with other members of the profession, a private house on College Street (specially adapted for several doctors), within a block of Toronto General Hospital, can obtain full particulars by addressing the editor of this journal. The only reason that there is a vacancy is owing to more than one of the former members having joined the colors.

Seventy nurses and two matrons left Ottawa recently for the purpose of reinforcing the hospitals in England and France.

The Women's Auxiliary to the Army Medical Corps recently received a donation of \$20 from the nurses of Grace Hospital and \$10 from the employees of the same institution.

Lieut.-Col. D. W. McPherson, one of the surgeons to Grace Hospital, Toronto, was recently in command of Larington Manor House, in Wiltshire, England. He went with the 2nd Field Ambulance.

The Hospital Board of Hamilton has asked for \$166,000 for this year, or an increase of \$8,000 over last year.

The Ontario Board of Health is determined to force Ottawa to proceed with the necessary arrangements to secure for the citizens a proper water supply.

A short time ago there were 25 cases of smallpox in Brantford, and the Provincial Board of Health ordered that city to enforce general compulsory vaccination. This the civic authorities refused to comply with, as it was contended that the epidemic was being successfully coped with by other means.

*Quebec.*

The daily cost of patients in the Royal Victoria Hospital is \$2.20. There was a slight credit balance this year owing to the gift of \$500,000 from the late Lord Strathcona. Mr. J. K. L. Ross is donating a private ward pavilion in honor of his father, the late James Ross.

Surgeon Major-General Fiset, a former member of Parliament, and a Senator since 1887, was made a C.M.G. on New Year's Day.

The Governors of the Montreal General Hospital have guaranteed an amount that will meet requirements for the next three years. Notre Dame and the Western Hospital will also be able to keep open for a similar period.

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*Western Provinces.*

Dr. A. G. Price has been appointed Medical Officer of Health for Cowichan, B.C., to succeed Dr. W. Dykes.

The hospital at Regina has opened its new four-storey wing. It is modern in every way.

The medical faculty of the University of Manitoba has raised its matriculation standard to that of the first year science examination. There are 176 students registered in medicine.

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*From Abroad.*

Our friends will be glad to learn that *Paris médical*, suspended since August 15th last, has resumed publication. With the issue for January 2nd, 1915, it begins a fortnightly appearance to continue until the end of the war, when it promises once more to become a weekly.

A tract of land valued at \$125,000 has been presented to the University of Oregon by the Oregon-Washington Railway and Navigation Company, for use as a campus, with the privilege of erecting hospitals upon the grounds.

A bequest of \$50,000 to Harvard Medical School is contained in the will of William Baker, of Waltham, Mass. The money is to be used to establish a chair of gynæcology in the school.

By the terms of the will of Henry Miller, who died in New York on January 8, 1915, an estate of at least \$300,000 will be divided equally among the Presbyterian Hospital, St. Luke's Hospital, Roosevelt Hospital and the German Hospital and Dispensary.

The medical profession in the United States is doing excellent work for the relief of Belgian doctors. Up to January 16th the sum of \$1,414 had been collected.

In his stirring appeal for aid for the Belgian physicians, Professor Charles Jacobs, of Brussels, states that 1,000 doctors are poverty-stricken, and that 2,000 to 3,500 doctors are suffering cruelly through this war. That 2,000 physicians need to be supplied the necessities of life would seem a low estimate. It seems probable that the physicians' families will average four members. That means that 8,000 members of physicians' families are dependent upon outside contributions; \$4.40 will supply sufficient food to sustain life for four for one month. Belgian physicians and their families, therefore, absolutely need at least \$8,800 worth of food every month.

Professor James Swain, M.D., M.S., surgeon to the British Royal Infirmary, has been appointed to the War Office as consulting surgeon to the troops serving in the southern command, and his duties will be in the south and west of England.

John Wyllie, professor of medicine in the University of Edinburgh, has resigned on account of ill health. He was appointed to the chair in 1900. He was assistant physician to the Royal Infirmary for seven years, then full physician for fifteen years, and for fifteen years professor of medicine.

Dr. Henry Jellett, master of the Rotunda Hospital, has resigned. He offered his services to the army medical service, but the governors of the hospital would not release him, and consequently he resigned.

Mr. Thomas Bryant, F.R.C.S., the noted surgeon of London, died recently, at the age of 87.

Dr. E. F. Bashford has resigned the post of general superintendent of the Imperial Cancer Research Fund, which he has held for the past eight years.

Dr. William Hallock Park has resigned as dean of the University and Bellevue Hospital Medical College in order to devote all his time to the duties of director of laboratories of the Department of Health.

On December 10th the House of Representatives passed a law putting many restrictions on the sale of cocoa leaves or opium or any of the alkaloids and other preparations made from them. The bill provides that "every person who produces, imports, manufactures, compounds, deals in, dispenses, sells, distributes, or gives away" any of these drugs shall register with the collector of internal revenue of his district and shall pay an annual tax of one dollar.

Mrs. Luther S. Johnson, of Lynn, Mass., has given \$100,000 to the Lynn Hospital corporation to be used for the erection, furnishing, and partial maintenance of a nurses' home.

The will of the late Mrs. Mary Anna Palmer Draper gives \$50,000 to the New York Polyclinic Hospital, \$25,000 to the New York Skin and Cancer Hospital, and \$25,000 to the laboratory of surgical research of New York University, of whose medical department Dr. Henry Draper was at one time deal.

The Annual statement of the National Association for the Study and Prevention of Tuberculosis in the United States shows that over \$20,000,000 was spent in the campaign last year.

The Academy of Medicine in New York is in a flourishing condition. It has trust funds on hand totalling \$687,000.

The Medical Society of the State of New York will hold its hundred and ninth annual meeting in Buffalo, April 27-29. On account of the European war, this will probably be the uargest medical meeting of the year, except perhaps that of the A. M. A. in San Francisco. Through the co-operation of the military authorities, the meeting will be held in the 65th Regiment Armory.

In the United States there is one person for every 500 an inmate of an asylum. The ratio of males to females is 208 to 200. Alcohol and syphilis have been shown to be two of man's greatest foes in this regard.

Surgeon-General Rupert Blue, United States Public Health Service, has recommended the Commerce Committee of the House of Representatives to establish a national lepro-sarium, as there are 146 lepers in the country.

Mr. Henry S. Wellcome, founder of the Wellcome Bureau of Scientific Research, London, who is an American by birth, has provided a fund of £2,000 to be awarded as prizes for the best designs submitted for ambulance bodies which may be attached to standard motor chasis for field motor ambulances. The management of the competition has been placed in the hands of a commission of experts, which includes representatives from the British army and navy. Sir Frederick Treves is chairman. The competition, which is open to citizens of all nations, will close June 30, 1915. Details of the conditions can be obtained from the secretary of the commission, Hardress O'Grady, Esq., 10 Henrietta Street, Cavendish Square W., London, England.

The St. Louis Medical Society has received through the will of Mrs. Bartscher, \$42,813, in memory of her husband, Dr. H. W. Bartscher.

Mr. Patrick Fenton, of Knoxville, Ia., has left to Dr. W. G. Choate, \$57,000 to build a sanatorium at Hot Springs.

Mr. Albert A. Sprague, of Chicago, bequeathed \$50,000 to the Presbyterian Hospital, Chicago.

James F. Hope, of Philadelphia, bequeathed \$50,000 to the Hospital for the Treatment of Contagious Diseases.

Dr. Charles William Chancellor, who graduated from Jefferson Medical College in 1853, and served as surgeon in the Confederate army, and afterwards professor of surgery and dean of the Medical School of Washington University, Baltimore, died at his home in Washington, D.C., 3rd January, at the age of 84.

The Grabfelder Medical Building at the National Jewish Hospital for Consumptives, Denver, was dedicated January 10th. The building cost \$75,000, and is modern in every way.

The State of Maryland is spending \$200,000 annually on the maintenance of sanatoriums for the treatment of consumptives. It is estimated that there are over 8,000 persons suffering from this disease in that State.

The Minnesota State Medical Society will ask the State Legislature to set aside 10,000 acres on which to establish a leper colony. There are now fifty persons in the State ill with leprosy.

The State Hospital Commission for New York State is planning a campaign for the prevention of insanity. There were 8,061 admissions into the asylums of the State last year.

The *Boston Medical and Surgical Journal* has removed to 126 Massachusetts Avenue, Boston. Robert M. Green, M.D., is editor-in-chief.

Sir Frederick Treves, the well-known surgeon, in speaking before the Royal Society of Arts, said that the results achieved by inoculation against typhoid fever in the British expeditionary force have been "positively astounding." He said that since the war began there had been only 212 cases, of which 173 were among persons who had not been inoculated. There had been only 22 deaths, and none of those who died had been inoculated. Not a single death from typhoid fever had occurred among those inoculated.

Professor Truffer, in an address before the Surgical Society, stated that of the 14,000 surgeons in the army 6,500 were at the front. At the end of December 93 had been killed, 260 wounded, and 440 were among the missing, while 155 had been mentioned in orders for gallant conduct on the field of battle.

Lt.-Col. Gorrell, recently gazetted to the command of the Canadian Base Hospital, established on the Thames side at Cliveden, the estate of William Waldorf Astor, near Taplow, went down a short time ago, accompanied by Col. Hodgetts, Canadian Red Cross Commissioner, to make the final arrangements. The hospital was opened about the middle of February with 125 beds and a staff of 80 men, and also a number of nurses from a party now voyaging from Canada. Mr. Astor has been very generous, having spent \$15,000 or more on the place, the accommodation of which may be ultimately extended to 1,000 beds.

There has been a severe epidemic of smallpox in Vienna. Many of the soldiers are ill with the disease.

News came recently by a cablegram that Dr. H. S. Beland, M.P. for Beauce, is unable to leave Belgium, the German authorities refusing him passports.

A severe epidemic of typhoid fever has broken out in Poland, and many villages around Lodz are suffering from the ravages of the disease. American Red Cross doctors are doing what they can to arrest the disease, but it is a very uphill fight under present conditions.

The American Hospital, in the north of France, is rendering very valuable services. Its work is being carried on in a new schoolhouse.

The Duchess of Connaught's Canadian Red Cross Hospital at Astor's beautiful Thames valley home of Cliveden, was ready on the 15th of February, and is to have 500 beds. At first it was to have 110 beds, but this would not be adequate for the needs of the Canadian troops, and so additional accommodation had to be furnished, costing \$10,000. Dr. C. A. Hodgetts was active in raising the funds. The hospital is under the control of Lieut.-Col. Gorrell, and all the doctors and nurses are Canadians. Seven motor ambulances and a motor kitchen are among the Canadian Red Cross equipment now at Cliveden.

A new model travelling hospital left Paris on 14th February, with the purpose of attending serious cases at the front. The expedition consists of six automobile vans, one of which is an operating theatre. One car is fitted with a heater for the sterilization of bandages and instruments. There are four cars for the personnel—five surgeons, two general practitioners, and 40 trained hospital attendants. The hospital will be established within the next fortnight at a point about ten miles from the trenches. If the experiment is successful the authorities intend to establish six similar hospitals, each in charge of a prominent surgeon.

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**OBITUARY**

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**H. M. SHEPHARD.**

Dr. Shephard died last October. He had been in practice in Ingersoll since April, 1914.

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**W. L. Gaboury.**

Dr. Gaboury, who was in practice at Pembroke, Ont., was killed while driving across a railway track.

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**FREDERICK FRANK.**

Dr. Frank, of Orangeville, died last November in his 76th year. He had been a resident of Orangeville for 45 years.

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**H. MARTEL.**

Dr. Martel, of East Angus, died on 23rd November. He was 28 years of age and leaves a widow and five children.

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**NATHANIEL O. WALKER.**

Dr. Walker died at Woodhouse on 25th November. He was born at Woodhouse in 1832. He held the degrees of M.A. and M.D. from the University of Toronto. He was also an M.R.C.S., Eng. He practised in Vittoria, Port Dover and Los Angeles. He served in the North-west Rebellion.

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**HILLIER NOEL COULTEE.**

Dr. Coultee, formerly of Sharbot Lake, Ont., died in the Kingston General Hospital at the age of 58 years. He was born in Ottawa and was a graduate of Queen's University.

## MICHAEL SULLIVAN.

The death occurred on 25th January of a former Senator of Canada in the person of Hon. Michael Sullivan, M.D., aged 76 years. Two years ago he was stricken with an illness which compelled him to resign his seat in the Senate, and he had been confined to his home ever since. He had been a resident of Kingston since he was three years of age, having been brought out by his parents from Killarney, County Kerry, Ireland. He served the city as Mayor and alderman, and was one of the first graduates of Queen's Medical College. He was appointed to the Senate to succeed the late Hon. John Hamilton in 1884. A family of one son, W. H., of Cornwall, and two daughters, Mrs. Crookall, New York, and Miss Fannie, at home, survive. Mrs. Sullivan died about a year ago.

## MARSHALL JACOB BROWN.

Death claimed on 13th February, Dr. Marshall Jacob Brown, 632 Princess Street, Kingston, aged 83. During his later years deceased had resided in the city and lived a retired life. He graduated from Queen's Medical College in 1856, and locating at his old home in Cataraque, practised his profession for many years throughout the surrounding district. He was a veteran of the Fenian Raid in 1866, at which time he was surgeon in the Frontenac Cavalry. He was an Anglican in religion. He is survived by a widow and three sons, F. M. Brown, K.C., Saskatoon; J. F. Brown and R. W. Brown, of Kingston.

## BOOK REVIEWS

## POLAK'S MANUAL OF GYNECOLOGY.

Students' Manual of Gynecology. By John Osborn Polak, M.Sc., M.D., F.A.C.S., Professor of Obstetrics and Gynecology, Long Island College Hospital; Professor of Obstetrics in the Dartmouth Medical School; Gynecologist to the Jewish Hospital; Consulting Gynecologist to the Bushwick, Coney Island, Deaconess' and Williamsburg Hospitals, Brooklyn, and the Peoples Hospital, New York; Fellow American Gynecological Society, etc. 12mo, 414 pages, illustrated with 100 engravings and 9 colored plates. Cloth, \$3.00 net. Philadelphia and New York: Lea & Febiger, Publishers, 1915.

There is a refreshing quality of conciseness about this work in which, while overlooking no item of essential and definite knowledge in the field of diseases peculiar to women, the author carefully avoids excursions into the realms of obstetrics and abdominal surgery and avoids the consideration of the theoretical aspects of his subject.

The facts that modern medical science has definitely established are plainly set forth. The pathology of the various disorders is adequately considered, and emphasis is laid on diagnosis and treatment. Indications for surgical intervention are fully presented, and a step by step description of the usual gynecologic operations enables the student readily to assimilate the procedures and technic, or the practitioner to refresh his memory quickly on any doubtful point.

The plan and arrangement is orderly to a marked degree. The opening chapters deal with the physiology of the various genital organs, with puberty, menstruation, ovulation and menopause, with discussion of hygienic considerations.

Chapters on general gynecological diagnosis serve as an introduction to the detailed consideration of the various gynecologic operations to which the book is largely devoted. Under each disease the pathology, the symptoms, diagnosis and treatment are presented fully and in sequence. Salient facts are emphasized. The full directions for treatment are a feature of marked value, and embody the best present-day practice.

While the author is evidently familiar with the literature of this department, he has based his work largely on personal observation, and has made accessible in small compass all the essential data required by the student and all that is demanded of a working manual for the general practitioner.

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#### WACHENHEIM'S INFANT FEEDING.

*Infant Feeding, Its Principles and Practice.* By F. L. Wachenheim, M.D., Attending Physician, Sydenham Hospital and Mount Sinai Dispensary, New York City. 12mo, 340 pages. Cloth, \$2.00 net. Philadelphia and New York: Lea & Febiger, Publishers, 1915.

The author has accomplished the monumental task of carefully considering the enormously extensive literature of this subject and presenting in readily available form the ultimate conclusions of the world's leading authorities and the most successful present-day practice.

So great is the volume of the literature referred to, and so widely do the authorities differ, that in the resultant confusion the practitioner who seeks light in this most difficult and important field is sure to welcome this volume in which the author gives critical consideration to the various systems and formulas, rejecting those which fail in some important particular.

It is not, however, a review of the bibliography of pediatrics, al-

though Dr. Wachenheim is peculiarly qualified for the task as well as for the broad consideration of the problems of infant feeding which his work affords. It is a very clear statement of the best modern thought and progressive practice, in which each conclusion is supported by indisputable evidence, and in a form which makes it immediately useful.

In the preliminary chapters a clear presentation of facts regarding infant digestion and metabolism opens the way to easy grasp of the detailed information. A point of interest is the author's demonstration of the extent to which the capacity of the infant's stomach is underestimated. Enlightening data is presented regarding protein, carbohydrate, salt and particularly fat metabolism. After reviewing fully the problems of breast feeding Dr. Wachenheim concludes that even incases of serious digestive derangement, if the supply is adequate, the only safe procedure is to keep the child at the breast.

The bacteriology of milk; milk infection; the constituent elements of cow's milk and the essential difference between it and human milk; milk regulation and the feeding of whole milk, are treated at length. While the basis of the discussion of milk modification is highly scientific, the reasoning is so logical and the conclusions so clearly stated that the practitioner cannot but find this section useful when called upon to draft a series of formulæ, while the specialist will find herein much interesting new material based on the author's study and observation.

He rejects top milk method as inaccurate, as well as characterized by inherent defects. He also makes out a strong case against the percentage method, and recommends the Jacobi system of simple dilutions. The formulas presented are readily adaptable to the individual requirements of the case in hand. The cause, symptomatology, diagnosis and treatment of digestive and metabolic disorders are considered at length. A section on the feeding of older infants up to four years brings the work to a logical conclusion.

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#### BACON'S OBSTETRICAL NURSING.

Obstetrical Nursing. A Manual for Nurses and Students and Practitioners of Medicine. By Charles Sumner Bacon, Ph.D., M.D., Professor of Obstetrics, University of Illinois and the Chicago Polyclinic; Medical Director, Chicago Lying-In Hospital and Dispensary; Attending Obstetrician, University Chicago Polyclinic, Hernotin, German and Evangelical Deaconess Hospitals. 12mo, 355 pages, illustrated with 123 engravings. Cloth, \$2.00 net. Philadelphia and New York: Lea & Febiger, Publishers, 1915.

Inclusiveness is one of the outstanding characteristics of Dr. Bacon's work. His great experience and unusual opportunities for observation

in the handling of obstetrical cases have enabled him to present concisely and yet with most painstaking fulness all the information needed by the nurse to achieve the success in this important field that is conditioned on a full understanding and complete grasp of the minor niceties as well as the fundamentals.

Indeed, as stated in the preface, the needs of medical student and practitioner have been kept in mind as well as those of the nurse. This is due as much to the author's belief that satisfactory results can only be obtained when the physician is fully posted on the approved minutiae of obstetrical nursing as to a realization that the exigencies of obstetrical practice may compel the nurse to act in place of the physician instead of as his assistant. Hence the section devoted to the handling of labor is more complete and detailed than might be expected in a work of this class.

The author nowhere loses sight of the primary purpose to develop efficiency in obstetrical nursing, but in his preliminary chapters presents a series of general observations of unique value to the nurse about to step from hospital surroundings to the changed conditions of private nursing.

The anatomical structure and functions of the pelvis, the genital and adpacent organs of woman, the development of the fœtus and the relations of the child to its mother are clearly set forth. The physiological and pathological changes of pregnancy; the nursing technique before, during and after labor and of obstetrical operations; lactation; the care of the patients in both ordinary cases and in the rarer forms of puerperal disturbance, are given detailed consideration. The chapters devoted to the early care of infants, infant feeding, and to diet, embody the best present-day thought on these difficult subjects, presented by one peculiarly qualified to make it available to the nurse.

Nothing has been omitted which is essential to a full appreciation of the duties of the nurse in obstetrical cases, or to the full understanding of principles and procedure. Its clear straightforward diction and uninvolved presentation of the most approved modern methods constitute it an ideal text-book for nurse or medical student and a not less useful handbook for the practitioner.

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### A COMPEND OF OBSTETRICS.

By Henry G. Landis, A.M., M.D., late Professor of Obstetrics and Diseases of Women in Starling Medical College. Revised by W. H. Wells, M.D., Assistant Professor of Obstetrics in the Jefferson Medical College, Philadelphia, etc., etc. Ninth edition, illustrated. Quiz-Compend Series. Price, \$1.00. Philadelphia: P. Blakiston's Son & Company, 1012 Walnut Street.

This is a very good small book of 260 pages. It contains much in-

formation, because its statements are given in such a condensed form. What has to be said is said in a definite and positive manner without an extra word. The subject of obstetrics is covered in the form of question and answer. The anatomy and physiology of the pelvic organs is first given, This is followed by sections on pregnancy and the pathology of pregnancy. Then the author takes up labor and the pathology of labor. Next come obstetric operations, the puerperium, and the care of the newborn child. There are numerous illustrations, and the paper and typography are good. We can recommend this book. It is an excellent means of refreshing one's memory on all that is essential in this branch of a practitioner's duties.

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### AMERICAN GENITO-URINARY SURGEONS.

Transactions of the American Association of Genito-Urinary Surgeons' twenty-eighth annual meeting, held at the Red Lion Inn, Stockbridge, Mass., May 15th and 16th, 1914. Vol. ix. Published for the Association by Frederick H. Hitchcock, 105 West Fortieth St., New York.

This report contains a number of very excellent papers and some good illustrations. These papers are a credit to the association and reveal the high standard aimed at by those who prepared them and those who took part in the discussions. Those who are giving some attention to genito-urinary diseases will find much in this report to interest them, and should secure a copy.

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### MISCELLANEOUS

#### ANNUAL MEETING OF THE SOCIAL SERVICE SOCIETY.

The annual meeting of the Social Service Department of the Toronto General Hospital was held at the hospital recently. His Honor Lieutenant-Governor Hendrie occupied the chair. During the course of his remarks his Honor congratulated the association on the excellent work that had been done since its inception in 1911. He also referred to the urgent need of a home for the feeble-minded and urged the members of the association to see the members of Parliament individually and press the need for an institution of this kind.

Miss Clara Flavelle, the treasurer, presented her report, and showed that the finances of the association are in a healthy condition, there being now a balance of \$1,847.13 in the bank.

Miss Jane Grant, head worker of the staff, gave a summary of the year's work. Her report showed that during the past year 2,915 calls had been made, they being divided as follows: 1,550 to investigate general and financial conditions, 263 in connection with the psychiatric clinic, and those in charge of the Burnside Hospital division made 1,102 visits.

Dr. C. K. Clarke, superintendent of the General Hospital, outlined the work of the psychiatric clinic, which he established last April. This clinic is in charge of Dr. Clarke, Dr. C. J. Withrow and Dr. C. M. Hincks. Its purpose is to deliver a report on the mental condition of children who have appeared in the Juvenile Court and whose sanity is questioned by the authorities in charge of this court. Through the work of this clinic eleven children were placed in hospitals for the feeble-minded, eight in hospitals for the insane, and ten in other institutions.

All the officers who composed the board for last year were re-elected. The meeting closed with an address on "Medical Social Service," by Dr. Franklin Johnson, of the University of Toronto.

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#### ST. JOHN'S AMBULANCE SOCIETY.

It has been the duty of the association to instruct every non-commissioned officer in the Canadian forces in the use of the field bandage kit, and the association has also been called upon to supply a number of men for the Army Medical Corps units. Besides carrying out both these responsibilities the association has undertaken to establish and equip a base hospital with 525 beds in Northern France.

According to the report of Dr. C. J. Copp, the honorary secretary-treasurer of the Ontario Provincial Council of the association, 2,332 members of the brigade have passed the first aid and nursing examinations. Up to September 30th, 1914, 114 classes were held in the province and since that date 50 additional classes have been held, with an average attendance of 20. Many members of the medical profession contributed their services for this work and as recognition of their services the following were made honorary members of the association: Dr. Margaret Patterson, Messrs. W. F. Plewes, E. Stanley Ryerson and J. H. Wood, of Toronto; Dr. A. S. Lovett, of Galt; Dr. C. A. F. Gaviller, of Owen Sound; Lieut.-Col. G. S. Rennie, of Hamilton; Major H. C. S. Elliott, of Cobourg, and Dr. C. T. Ballantyne, of Ottawa.

Just before the close of the meeting Dr. F. E. Watts was presented with his declaration as an honorary associate of the Order of the Hos-

pital of St. John of Jerusalem. The presentation was made by his Honor Lieut.-Col. Hendrie on behalf of the Governor-General, the Grand Prior of the order.

The following constitute the officers and executive committee for the years 1914 and 1915: President, Col. the Hon. James Mason; vice-presidents, Col. Sir Henry M. Pellatt, C.V.O., D.C.L., Lt.-Col. W. M. Gartshore, W. K. George; honorary secretary-treasurer, Dr. C. J. Copp; executive committee, Lt.-Col. J. T. Fotheringham, B.A., M.D., H. G. Hammond, Sir Lyman Melvin-Jones, Geo. A. Putnam, Capt. R. S. Wilson, Lt.-Col. C. A. Taylor, S.A.

### HEALTH STATISTICS OF TORONTO FOR JANUARY.

The following are the comparative figures:

	Jan. 1915	Jan. 1914	Jan. 1913
Births . . . . .	1,021	1,228	1,113
Marriages . . . . .	398	497	365
Deaths . . . . .	502	547	489

A general decrease in the number of deaths from contagious diseases is shown by the city clerk's figures. They are as follows:

	Jan. 1915	Jan. 1914	Jan. 1913
Smallpox . . . . .	0	0	0
Scarlet fever . . . . .	0	3	2
Diphtheria . . . . .	10	5	6
Measles . . . . .	0	1	0
Whooping cough . . . . .	2	0	3
Typhoid fever . . . . .	0	2	4
Tuberculosis . . . . .	24	24	30
Cerebro-spinal meningitis . .	2	0	1

### HEALTH OF THE PROVINCE OF ONTARIO FOR JANUARY.

The detailed returns are:—

	1915		1914	
	Cases.	Deaths.	Cases.	Deaths.
Smallpox . . . . .	170	0	76	0
Scarlet fever . . . . .	204	3	320	3
Diphtheria . . . . .	303	19	201	29
Measles . . . . .	241	1	184	3
Whooping cough . . . . .	20	2	89	3
Typhoid fever . . . . .	147	7	48	14
Tuberculosis . . . . .	95	51	126	64
Infantile paralysis . . . . .	1	0	0	0
Cerebro-spinal meningitis .	6	6	7	4
	<u>1,187</u>	<u>79</u>	<u>1,051</u>	<u>120</u>

## CANADIAN MEDICAL ASSOCIATION.

In spite of the unsettled political situation plans for the 48th annual meeting, to be held in Vancouver, B.C., July 6, 7, 8 and 9, are maturing excellently. Two symposia, namely, Chronic Arthritis and Chronic Renal Infections, have been selected, and many prominent men in Canada and the United States have signified their intention of taking part. The Panama Exposition and the meeting of the American Medical Association the last of June in San Francisco will materially help our meeting. Rates and further information will be announced later.

## TREATMENT OF MYCOSIS FUNGOIDES.

Wolff, in the *New Orleans Medical and Surgical Journal* for July, 1914, it is stated, obtained excellent results in three cases of this very obstinate affection with injections of sodium asranilate and sodium arsenate. In the case of a man, aged thirty-three years, a diffuse papillomatous eruption disappeared completely after seventy injections of sodium arsenilate. The patient remained well for three years, when two papillomatous lesions appeared upon the chin.

## LOCAL USES OF SALVARSAN.

Achard, in *Monde médical* for January 5, 1914, reports prompt cures in cases of Vincent's angina by the local application of salvarsan. Netter, he states, has likewise treated cases of necrotic stomatitis following scarlet fever. The drug has proved useful in pyorrhœa alveolaris. Leg ulcers treated with a ten per cent. salvarsan ointment heal rapidly. Lévy-Bing obtained excellent results from the application of neosalvarsan in chancroid and ulcerations of the genitals showing a phagedenic tendency.

## RELIEF BELGIAN MEDICAL AND PHARMACEUTICAL PROFESSIONS.

Amounts not previously acknowledged: Manitoba Txeutive Committee, \$200; Dr. H. B. Anderson, \$50; Dr. J. B. Gullen, \$25; druggists of Kingston, per W. T. Connell, \$50; members of Kingston Medical Association, per Dr. W. T. Connell, \$142; Dr. F. A. Clarkson, \$10; Dr. J. S. Hart, \$25; Dr. S. M. Hay, \$25; Mr. H. C. Tomlin, \$25; Dr. J. Ferguson, \$25; Dr. R. W. Wesley, \$10; Dr. C. W. Brand, \$5; Dr. W. W. Ogden, \$10; Dr. W. J. Wilson, \$2; Dr. N. King Wilson, \$1; Dr. Alger-

non Temple, \$20; Dr. S. Cummings, \$10; Dr. F. Harrison, \$5; Dr. R. R. Hopkins, \$2; Dr. N. H. Beemer, \$25; Dr. A. D. McArthur, \$2; Dr. J. S. McCullough, \$5; Dr. A. Wilson, \$2; Dr. F. C. Trebilcock, \$5; Dr. T. J. Page, \$10; Dr. J. Norman, \$2; Dr. A. A. Macdonald, \$25; Dr. Thos. Wylie, \$5; Dr. W. P. Caven, \$25; Manitoba Executive Committee, second remittance, \$300; Dr. Gilbert Royce, \$10; Dr. Musgrave, \$10; Dr. A. Crichton, \$1; Dr. C. D. Parfitt, \$10; Dr. Campbell Meyers, \$10; Dr. F. R. Scott, \$5; Dr. R. A. Pyne, \$10; Dr. Geo. Glionna, \$10; Dr. T. S. Webster, \$25; Dr. Thomas Kerr, \$10; Dr. T. A. J. Duff, \$5; Dr. J. J. Thompson, \$5; Dr. E. T. Hoidge, \$10; Dr. W. E. Ogden, \$2; Dr. A. Primrose, \$25; Dr. Chas. P. Luck, \$10; Dr. G. B. Smith, \$10; Dr. R. A. Stevenson, \$5; Dr. W. F. Fawns, \$5; Dr. H. M. Tovell, \$5; Dr. W. C. Heggie, \$5; Dr. Stewart Wright, \$2; Dr. James Beatty, \$5; Dr. J. W. Smuck, \$2; Drs. G. and H. Carveth, \$1; Dr. E. Clouse, \$1; Dr. C. E. Stacey, \$1; Dr. J. F. Goodchild, \$5; Dr. Chas. B. Johns, \$5; Dr. Angus Campbell, \$5; Dr. Jane Sproule, \$5; Dr. D. N. McLennan, \$10; Valley Medical Association of Nova Scotia, \$50; making a total to date of \$1,915.

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#### UNIVERSITY MEN WITH MEDICAL CORPS.

Lt.-Col. W. Scott, No. 2 G.H., Toronto, Med. 1900; Lt.-Col. D. W. McPherson, No. 2 F.A., Toronto, Med. 1895; Major J. T. Clarke, No. 2 G.H., Quebec, Med. 1897; Major P. Goldsmith, No. 2 G.H., Toronto, Med. 1896; Major W. T. M. McKinnon, Cl. Hosp., Berwick, King's City, N.S., Med. 1903; Major D. B. Bentley, No. 2 F.A., Sarnia, Ont., Med. 1891; Major E. B. Hardy, No. 2 F.A., Toronto, Med. 1905; Major A. E. Snell, No. 2 F.A., London, Med. 1902, Arts Varsity 1899; Capt. A. W. M. Ellis, No. 1 G.H., H.C. 1906, Med. 1908; Capt. G. R. Philp, No. 2 G.H., Toronto, Med. 1909; Capt. C. E. Cole, No. 2 G.H., Toronto, Arts Varsity, 1905, Med. 1907; Capt. W. H. Tytler, No. 2 G.H., Guelph, Med. 1909; Capt. P. K. Menzies, No. 2 G.H., Toronto, Med. 1910; Capt. L. L. C. McBeth, No. 2 G.H., Toronto, Arts Varsity, 1907, Med. 1909; Capt. S. Ellis, No. 2 G.H., Windsor, Med. 1909; Capt. J. C. Calhoun, No. 2 G.H., Toronto, Med. 1906; Capt. F. S. Burke, No. 2 G.H., Fergus, Med. 1911; Capt. N. V. Leslie, No. 2 G.H., Hamilton, Med. 1906; Capt. Wm. Bethune, No. 2 G.H., Hamilton, Med. 1906; Capt. G. W. O. Dawsley, Cl. Hosp., Toronto, Med. 1899; Capt. I. M. Stewart, Cl. Hosp., Halifax, Med. 1914; Capt. H. A. Frost, Chaplain Cl. Hosp., Percy Tp., Ont., Victoria, 1913; Capt. R. S. Pentecost, No. 2 S.H., Toronto, Varsity, 1907, Med. 1909; Capt. J. W. Wood, No. 2 S.H., Toronto, Med. 1908; Capt.

P. G. Musson, No. 2 F.A., Chatham, Med. 1895; Capt. P. A. Brown, No. 2 F.A., Toronto, Varsity 1906, Med. 1908; Capt. J. J. Fraser, No. 2 F.A., Walkerton, Med. 1902; Capt. H. B. Jeffs, No. 2 F.A., Toronto, Med. 1914; Capt. K. D. Panton, No. 3 F.A., Vancouver, Med. 1914; Capt. H. G. M. Nyblett, Depot Co., McLeod, Alberta, Med. 1896; S.-Sgt. J. W. White, No. 2 F.A., Toronto, Phar. 1899; S.-Sgt. E. G. Jeffrey, No. 2 F.A., Toronto, Med. 1914; S.-Sgt. E. B. Paterson, No. 2 F.A., Otterville, Phar, 1911-1912; S.-Sgt. H. H. Owen, No. 3 F.A., Vancouver, B.C., Med. 1917; L.-Sgt. A. Walton, Cl. Hosp., Toronto, Dent. 1915; Cpl. R. E. Dalton, No. 2 G.H., Toronto, Med. 1914; Cpl. S. Battley, No. 2 S.H., Sarnia, Med. 1917; Cpl. W. B. Locke, No. 2 F.A., Toronto, Med. 1915; Cpl. H. A. Rawlings, No. 2 F.A., Craigville, Med. 1916; F. R. Smith, No. 2 F.A., Barrie, Med. 1916; H. W. Bethune, No. 2 F.A., Toronto, Med. 1916; J. S. Crawford, No. 2 F.A., Toronto, Med. 1916; C. H. Archibald, No. 2 F.A., Toronto, Med, 1917; J. H. Ellis, No. 3 F.A., Alliston, Phar. 1913.

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## MEDICAL PREPARATIONS

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### GLYCO-THYMOLINE IN TONSILLITIS.

A local remedy must fill two requirements—it must be a detergent antiseptic and produce a degree of permanency of effect.

Glyco-Thymoline as a gargle, or used in an atomizer, produces excellent results. It rapidly relieves the dry congested condition of the mucous membrane by its exosmotic action and its anodyne effect is immediate and lasting.

Glyco-Thymoline is harmless, and if any is swallowed will produce a beneficial effect by breaking up any mucous plugs that may have gained access to the stomach.

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### DYSMENORRHEA.

Thomas George Stevens, M.R.C.P., London, in his text-book on "Diseases of Women," states: "When menstrual pain is sufficiently severe to interfere with a woman's work or pleasure, even for a short time, it must be dignified by the title 'Dysmenorrhœa,' and warrants treatment."

In the treatment of dysmenorrhœa, particularly the spasmodic type, H. V. C. has proven of especial service. It exercises an antispasmodic influence and is a sedative without being a narcotic.

Hayden's Viburnum Compound is a product of known composition, and when administered in teaspoonful doses, given in hot water, satisfactory results should be manifested.

The prevalency of dysmenorrhœa, and in consideration of the number of women who now earn their living, it is clear how important it must be that they should not be incapacitated for even a few hours during each month, and Hayden's Viburnum Compound properly administered in conditions where indicated, will afford relief.

The New York Pharmaceutical Company, Bedford Springs, Bedford, Mass., will send samples for clinical demonstration upon request.

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#### THE PHYLACOGEN TREATMENT OF PNEUMONIA.

As every physician of experience knows, the mortality in pneumonia is very high as compared to that of the average infectious disease. The dream of scientific men that a specific for pneumonia would some day materialize has not yet become a fact, and it is probable that it will not for a long time to come. In the opinion of many advanced members of the profession, Pneumonia Phylacogen, while not a specific, is the nearest approach to such an agent. Certainly some remarkable results have followed the use of this product in many serious cases that have been reported in recent months—cases in some instances that had failed to respond to conventional methods of treatment. Physicians owe it to their pneumonia patients to inform themselves with respect to the merits and accomplishments of Pneumonia Phylacogen. Ample literature on the subject is available. It will be cheerfully sent to any practitioner who will address a request for it to Parke, Davis & Co., the manufacturers of Phylacogen, with laboratory at Walkerville, Ont.

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