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OF  
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J. J. CASSIDY, M.D., EDITOR.

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## *Original Contributions.*

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### PRESIDENT'S ADDRESS.\*

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BY J. C. MITCHELL, M.D.,  
Asylum Service, Toronto.

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*Gentlemen of the Ontario Medical Association,*—To have been deemed worthy of the most exalted position within the province of this Society to grant is indeed an honor. The opportunity, however, to prove whether or not such virtue lies within me demands warmer expression of thanks, more zealous and untiring service from its recipient in order that the unblemished name and history of this Association may still stand for all that is worthy and of good report in our work. For both the kindly thought and the opportunity then, I desire to again express my thanks to the Medical Association of Ontario.

Permit me also to gratefully express my keen appreciation of the wisdom displayed in the selection of the executive. Surely no general ever had more faithful, earnest officers than were elected to support the hands of your President this year. To them, if there be success attending this meeting, let there be ascribed whatever of honor is associated in your minds with the successful carrying out of the general idea and the details of this meeting; theirs has been the tilling and sowing with the labor late and early, that to you may come the full measure of reward for your faithfulness to this old Society which has meant much to many of us during the past years.

And now once again the President and officers greet the members and friends of this Association, and desire to make their greeting warmer and more full of friendship than ever before, for

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\* Delivered at meeting of the Ontario Medical Association, Toronto, June 16th, 1903.

has not our sympathy been mellowing and ripening during another year, short though it may seem? And not alone the old members do we greet with gladness, but the new, and those who come to us as welcome guests. I utterly fail to grasp the true sentiment of the profession here if your visit at this time does not make you feel how glad we are to have you as our guests, and how anxious we are that this brief period of relaxation, from your onerous professional duties may be one of the most pleasant and profitable you have ever spent.

This province, though young in years, has for the greater part of its life taken a prominent place in educational matters. Our Public School system, growing out of that established by that wise educationist, Dr. Egerton Ryerson, is one of which we are justly proud, and yet it has its faults. A few years ago Dr. Ferguson, of London, read a paper before the Association pointing out the injury occasioned to our growing youth by the present system of determining promotion by the results of written examinations. He showed how a very large amount of the work done was simply cramming for examination, and not true education; that a great many children and young people were severely injured in health from the unwise but unavoidable competition under the system.

At last freedom and better order are making their appearance. The Hon. R. Harcourt, Minister of Education, has brought in a bill this session making changes as far as city schools are concerned, and he proposes discussing more radical changes with a committee appointed at the Ontario Teachers' Association, so as to enlarge its scope next year to apply to all the Public Schools of the Province, thus making our system more educative and less competitive by combining with it manual training and eliminating many of the examinations. Our pupils will not then be under so great a mental strain, and will have better opportunities to mature and make the healthy men and women this country requires for the great future it has before it. Truly we can get along with fewer neurasthenics, neurotics and cranks than we have at present. We welcome the evidence of progressive thought and interest in the welfare of our youth on the part of the Government.

We congratulate the Medical Schools of the Province on the good work they are doing. Our graduates compare most favorably with those of similar length of training wherever they may hail from—men going from our schools having that within "which maketh them not ashamed"—notwithstanding the immense endowments of many of the wealthy colleges elsewhere on the continent. The rapid changes and development in both medicine and surgery will soon require a longer and more extensive course than at present, and we can confidently depend upon the Ontario Medical Council keeping up the standard required to meet the exigencies of the time. We can also trust the efficient staff of each of our medi-

cal colleges to make the clinical teaching keep pace with the large amount of work now required in the laboratory, so that our graduates may be as skilled in their observation of symptoms as they are in chemical and microscopic analysis.

We are glad to note the ever-increasing number of our practitioners who are spending a greater or lesser length of time in post-graduate work. Has not the time arrived for the establishment of a post-graduate course in Toronto? We have physicians as well-instructed in scientific medicine, and surgeons who operate as skilfully as can be found anywhere. Our hospitals, too, have increased in number and importance so that plenty of material could be at hand. A staff formed by the union of our best men to give a post-graduate course could not fail to be of benefit to the Province, and afford opportunities for advanced study to many who could not, and to many who should not be allowed to go elsewhere.

We are glad to notice the increased number of hospitals throughout Ontario. It means a great deal to the afflicted, and particularly to those of limited means. It will give our local surgeons and practitioners a chance to do much better work, and to obtain vastly better results from the improved regime possible in a more general use of the hospital. We trust it will not be many years until every town in Ontario will have its hospital.

We congratulate Lady Minto on her success in the establishment of cottage hospitals, and feel sure she will be rewarded for her labors in this direction by the benefit obtained by those afflicted ones who will receive care and treatment therein.

In our city hospitals I would endorse what our immediate past President, Dr. Powell, proposed last year, that the term of the house surgeon should be extended to at least eighteen months, and so arranged that only half the staff be relieved at one time, so that skilled and expert men may be always in attendance. In this way a new appointee would not occupy a responsible position until trained for it, and a skilled anesthetist would always be available.

In Provincial legislation the only matter of special note is the regulation adopted by the Provincial Board of Health on February 12<sup>th</sup> last, *re* Scarlet Fever. It has occasioned a great deal of adverse criticism, and it is questionable if the order for removal to either isolation hospital or tent is practicable at all seasons of the year either in congested communities or rural districts, and unless the attending physician has some voice in the matter it is not likely this law will be productive of good.

As for the Dominion House, Dr. Roddick succeeded in getting an Act passed, providing for the establishment of a Dominion Medical Council with full power to hold examinations in medicine and grant licenses valid in any portion of the Dominion. This Council can only become constituted when all the Provinces have accepted the provisions of the Act. With the exception of Quebec

all have enacted such legislation as to make the Act effective. The Legislature of the Province of Quebec, however, defeated the bill introduced for the purpose, rendering the bill inoperative. The reason for this action was that under the present Provincial Act Quebec graduates in McGill, Bishop's and Laval Universities, who have passed four years in their studies and obtained their degree are entitled, without further examination, to obtain a license to practise medicine in that Province. Graduates of the Manitoba University also require but four years, whereas, in Ontario, as we all know, a fifth year has to be spent before the candidate can go up for his final examination before the Council.

Dr. Roddick's bill, had it been accepted, would have placed students in all the Provinces upon the same footing, and having passed the examination of the Dominion Council the successful candidate would then have possessed a license entitling him to practise anywhere in Canada. The series of amendments to the Act suggested to render it acceptable to Quebec would be so manifestly unfair to Ontario that we of this Province could never accept them. It would appear, therefore, that inter-Provincial legislation is dead for the time being unless Quebec is willing to rescind its action of the past session and, like Manitoba, unselfishly place itself on the equal and advanced footing of the other Provinces. Dr. Roddick, however, has still hopes, and writes to say that "Considering that four of the Provinces have completed the concurrent legislation necessary, I am not disposed to give up the fight." He is now asking the Parliament to amend the Dominion Registration Act so as to permit the Provinces that favor it to begin at once the work of such registration. The doctor certainly deserves great credit for the vigorous fight he has put up, and we earnestly hope he may be successful in his efforts.

The need for, and importance of, the continuous education of the public on the lines of public health and prophylaxis is well illustrated by the formation of an anti-vaccination society in this city. At some of the meetings of this society this year, some practising physicians made statements (or were reported to have made them, according to daily papers April 10th) so wide of the truth that they showed a most lamentable ignorance of the whole history of the subject. When we find the very commendable action for the enforcement of vaccination questioned by one of our own profession by the bringing in of a law at the late session of the Legislature for the repeal of said enactment, it is certainly time to look into the matter and ventilate it as thoroughly as possible.

We believe with Dr. Ridpath that: "Essential freedom is the right to differ, and that right must be sacredly respected, nor must the privilege of dissent be conceded with coldness or disdain, but openly, cordially and with good-will. No loss of rank abatement of character or ostracism from society must darken the pathway of



the humblest, honest seeker after truth. The right of free thought, free enquiry and free speech to all everywhere is as clear as the noonday and bounteous as the air and the sea."

If all professed seekers after truth were only honest in their views we could have no quarrel with them, even though we might differ in the result of our investigations. Some talk loudly on these subjects simply for effect, and are not honest in their statements, but desirous to achieve notoriety. Others talk through ignorance, having never taken either the time or labor to obtain for themselves the facts of the case. Then added to these classes we have the cranks and bores who will have a word in any way, even if it be but to repeat again and again some set speech.

At the same time it is the duty of the medical profession to continue to do as they have done in the past, ascertain all the facts in the case, study out the underlying truths and put them so far as we can in the possession of the public. We must, so far as in us lies, continue to protect the public from themselves even though we may often be called hard names and lie under the charge that we are working with interested motives. On the contrary we have motives of the very highest and noblest character; viz., the best interest of humanity; the desire to have justice done to the poorest and humblest who have not the means of protecting themselves from the scourges (such as smallpox, etc.), that may devastate and destroy countless numbers as in the past. Smallpox from being a dreaded scourge has become a disease seldom seen, and its increased prevalence during past few years may well be ascribed to our increasing carelessness in vaccination.

Unless we are occasionally wakened up by an epidemic the tendency to neglect all forms of safeguarding ourselves grows upon us and we do not like to take the trouble to render ourselves safe. It is difficult to convince people who have never seen the ravages of smallpox that it is an essential thing that their children should be vaccinated (and run the chances of a few days' illness or a very sore arm) for the sake of being prepared for an evil that is unknown to them and, therefore, entirely unappreciated. There certainly have been evils in connection with vaccination, but what are the very worst of those compared to an epidemic of true smallpox in an unvaccinated neighborhood? It would be safe to pay no attention to these anti-vaccinationists, and class them in with the followers of Christian Science, the Dowieites, Virosophists, Osteopathists, etc., were they not such a menace by reason of their position as guardians of the public health. We see very many apparently sensible people led off by these fads, so it becomes our duty to impart to them all the knowledge we can on these important questions of health and disease, and particularly along the line of preventive medicine.

Germany has possibly the most compulsory system of vaccina-

tion in the known world, and the result is that smallpox is almost vanished from the empire. In 1899 with a population of 54,000,000 there were only twenty-eight deaths, and these nearly all came in from an adjoining country.

If we consider the duty of the true physician is to stand by all measures that tend to promote health and prevent disease there should be some way of punishing those doctors who encourage the laity in their foolishness in combating the laws which are intended for their own best interests. Such action is certainly reprehensible, and it is hard to believe physicians of any school could be guilty of talking such "utter nonsense" as was attributed to them at one of their anti-vaccination meetings. It is highly probable that Dr. Councilman's great discovery of the germ that causes smallpox will assist us in a short time to a better understanding of the rationale of vaccination.

Two years ago the then President, Dr. McKinnon, referred to the great and often serious delay there was in gaining admission to our asylums for cases of acute mania, particularly with those at a distance. This need never occur at present time with our long-distance telephone facilities if our physicians are only careful enough to supply sufficient information. In all our asylums the superintendents are anxious to take in and look after this class of cases, and if applying physicians will but send full particulars setting forth the urgency of the case complete papers for admission will be sent on at once. Asylum authorities, as a rule, send the history or application paper to fill up first, and then if the case is a suitable one and they can still make room the patient is admitted. A great many senile cases are sent into asylums which could be looked after all right in their own home.

It is a matter of deep regret that so many insane people are sent to gaol without first making application to our asylums to see if such cannot be admitted at once. In the past year, of all the insane that have been sent into Toronto gaol (and there has been a large number), in only four cases was Toronto asylum asked to admit the patient previous to arrest, and in all of these cases (with one exception, due to overcrowding), although we sent the complete set of papers immediately on application, an arrest was made before the papers reached them when there was really no necessity for this precipitancy. Our physicians have a large measure of responsibility in this matter, and they should try and prevent any case of insanity being sent to the gaol unless there is absolutely no room for them in the asylums, as is sometimes the case. A change also should be made in the law so that two medical certificates should transfer a patient from gaol to the asylum, as it does from outside. In this way prompt action could be taken as against the complex procedure which at present exists. We are glad to note that the Provincial Secretary, Hon. J. R. Stratton, has

introduced and passed an Act the past session making it compulsory for all counties to erect and help to sustain County Refuge Homes, one in each county or united counties. If these homes were in every county our asylums could in time be unloaded of all the chronic harmless demented, and leave space for those amenable to treatment or who are a menace to the public or themselves. So much can be accomplished by proper treatment, and so many apparently hopeless patients restored to normal or almost normal conditions that it is certainly very sad that all the deranged cannot obtain a fair chance for recovery. We are overcrowded by a class of patients that would be quite safe elsewhere.

If county homes would take harmless demented, and the majority of the senile cases, it would leave room for the immediate admission of all acute cases, and give opportunity for the better classification and arranging of those under treatment. It would also, if properly looked after, lessen the arrests for insanity, and shorten the period of their confinement in gaol when arrested. It would be well to see the name asylum done away with, and the term hospital substituted. An asylum simply indicates a place of refuge, while the term hospital would educate the public to understand that it is an institution for cure.

The medical profession should educate the public as to the dire results of heredity by misalliances, which populate the country with degenerates, a large number of whom afterwards gravitate to the asylums. They also have a very wide field in the way of preventive treatment of children with a tainted line or lines of ancestry. Much more can be done than is commonly thought to ward off impending future evils by early attention to the mental and physical evolution of such children.

The officers and active friends of the Ontario Medical Library Association have made strenuous efforts the past few months to place the library on a more sound financial basis. There has been a movement on foot to enable the board to purchase or erect a suitable building in which to store the books, and in which the several medical societies in the city can hold their regular meetings. At the last annual meeting, held on June 10th, handsome subscriptions for this purpose were reported by the Trust Committee. Including \$1,000 from Prof. Osler, the amount subscribed by the profession is upwards of \$3,600. In addition, between five and six thousand dollars have already been promised by a few public-spirited gentlemen who have the interests of the library at heart. The members of the profession have not as yet been all canvassed. The board feel very much encouraged in their efforts, and hope soon to be able to report further progress, and that the long-felt want will soon be a reality.

Now, that the amalgamation of the Universities of Trinity and Toronto seems to be assured, there is greater unanimity than ever

among the friends of the library. The feeling is that we should have a large central building, which could be used for meetings such as this, in fact, a place where each medical man in the city and Province could feel that he had a home. For the present they still occupy rooms in the upper floor of the Medical Council Building, which have been provided for them by that body for a number of years. The board wish to convey their thanks to the members of the Ontario Medical Council and Ontario Medical Association, and the numerous private individuals who have generously contributed to the support of the library. The books on the shelves are now catalogued, and members of this Association are requested to take a copy of the catalogue with them, and if they wish to have a book sent them that can be done simply by mailing a card to the assistant librarian and paying express charges. It will be noted that in order to make the library self-sustaining as far as possible, the annual fee of \$2.00 has been raised to \$5.00.

At Gravenhurst, the National Sanitarium Association are continuing the excellent work for consumptive patients of our Province and of the Dominion. A free hospital has been provided at a cost of \$40,000 for the treatment of those who are really unable to care for themselves, as well as for those who are able to pay but a portion of the expense for their care. No patient has been turned away, providing he was medically considered fit to undergo the treatment there. So that all cases of incipient phthisis, the poorest as well as the richest, have thus a door opened to them which has in many cases proved a door of salvation. An effort is being made to induce the Government to make a grant of \$20,000 towards the latter institution, and we cannot conceive of a more legitimate demand on the part of the people for an apportionment of the people's money than one to this cause. It is greatly to be desired that both the public and the profession examine more thoroughly the work carried on, so that all may be more interested in what has proved to be one of the most worthy of our Province. One of the greatest bars to the successful prosecution of the work from the professional aspect is the failure on the part of the profession to secure an early diagnosis of the condition of a patient. How long will it be necessary for this Association to call attention to this fact? Happily our minds are slowly awakening to it, though our rising is but slow. The fault is not entirely with ourselves but also largely belongs to the careless public. As for ourselves, let there be no longer any taint upon our skirts, no partial and unsatisfactory examination of patients, no longer let the ready cough mixture take the place of scientific treatment preceded by systematic and minute analysis of symptoms. To-day with the enlightenment abroad in the world it is for every practitioner to enjoy the privileges made possible by the indefatigable workers along these lines. One of the greatest advantages that results to the patients

undergoing treatment at Gravenhurst is the knowledge he acquired as to how to live so that he may prolong his own life and care for as well as teach others how to live.

Although the religious periodicals of Ontario have greatly improved in their character, in the medical advertisements published during the past few years, they might go still further and copy the example set this year by one denomination in the United States. The agent having charge of all the advertising in the Methodist periodicals for the whole of the United States has definitely announced that no quack medical advertisement of any kind will be accepted this year. Many of these advertisements are not only very immodest, but have an extremely debasing and immoral tendency, and many things are advertised to be used for immoral purposes, but worded in such a way as to keep the advertiser safe from the law, as they admit of a double meaning.

Our public press panders to this kind of thing, and many of the advertisements in our daily papers are simply disgraceful and not decent enough to be introduced into a respectable home. Apart from this they are all intended to gull the public. Take, for example, the wonderful cures by "The great Dr. Bluff," of Boston, the electric belts, Peruvian syrup and scores of other fakes of that class. People who have led immoral lives, chronic sufferers and the weak-minded generally, are led away by the wonderful results promised in this misleading twaddle. They think there can be some miraculous change performed by these quack remedies, and they will be restored to health and still go ahead and violate nature's laws in any and every particular.

It is time that our leading journals freed themselves from this prostitution and published clean sheets that have for their object the building up and amelioration of man's condition. Our medical men themselves, we are sorry to admit, are not always free from dabbling with quack remedies, and it is not to be wondered at when some of the medical journals, to the south of us, advertise medicines which are on the border line of quackery, as freely as they do. If we want to retain our own self-respect, and the respect of our professional brethren, we must stand by legitimate medicine. "Prove all things, hold fast that which is good."

We cannot close without referring to some of the events which have occurred during the year, bringing sadness to all our minds. The rider of the Pale Horse has been busy counting up his roll of victims. We see emblazoned upon the marble shields of his hosts an ever-increasing number of names of good soldiers that have been overcome while battling "strong and true." We who are thrown into the posts of danger and the vanguard of the forces must yield our quota of losses—for the inexorable law promulgated in the beginning of time may not be set aside. Though our warfare must always end in defeat until that great day when a new

heaven and a new earth appear and the weapons of our warfare are laid aside, yet we battle on, proud in our strife, because of the glorious possibilities which lie before all seekers after truth. Every true physician desires but to say at last, "I have fought a good fight; I have finished my course," for though the sword of the King of Terror strike us from our places, yet does it but cut the latch which lightly closes the gateway to the eternal.

Ontario this year has a long roll of names of those who have gone up from the battle. Of these, perhaps, the most familiar to us all are those of Spencer, Gordon and Horsey—the first two because of their long connection with the two medical colleges in which they did faithful work, and also because of the active interest they took in this Association; the latter because of the important position he filled, and seemed destined to enlarge in the political life of the Dominion.

The kindly reference to the life and work of Gilbert Gordon in the daily press, with its general estimation of the value of the cultured, honorable and sympathetic practitioner to the community, commands our warm praise and makes us feel that the oft-times overtaxing strain is after all worth the labor, if it but brings us so near to the hearts of our fellowmen.

Abroad, one of the princes of medicine passed away in the person of the great Virchow; honored by his fellows the world over, by the State and people. While the veil of the future still hangs before our eyes, and though we stand on this side in what seems to be the full glory of the noon-tide of discovery, yet ever and anon there flash out from its impenetrableness gleams of light that seem to us revelations more glorious and full of hope than any which have yet been accorded to this age of rapid advancement.

We rejoice in the history of the past with its record from the groping of inexperience to the dawn of rationalism. The progress in our science has carried us from the question, "How shall we treat?" to "How shall we prevent?" and the unfolding of the future will largely concern developments along the line of the latter question. To its solution this chair again calls your eager attention and effort. No question involving greater issues has ever been presented to the minds of men.

The time demands greater concentration of effort, more systematic methods of study and work; a priesthood in the temple of Galen more intellectual and highly trained than has been found during the past, and these the time will have. Let it be our part to so lay the new road-beds of medical progress that the trains may run no danger of being jolted and hindered by the pine stumps and rocks of the "has been."

"Then let us on through shower and sun,  
And heat and cold be driving;  
There's life alone in duty done,  
And rest alone in striving."—*Whittier.*

UTERINE MYOMATA AND THEIR TREATMENT.\*

BY THOMAS S. CULLEN, M.B.,

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*Mr. President and Gentlemen,*—I gladly accepted your very kind invitation, not only on account of the great honor you have conferred upon me, but also because it gives me the pleasure of once more mingling with my teachers and schoolmates. It carries me back to my earliest glimpses of medicine, and even now I have vague recollections of sitting on the anxious bench nervously awaiting the results of the University and Council examination.

The subject I have chosen is a familiar one everywhere, but strikingly so in the South where the negro population is greater. In Baltimore, nearly one-tenth of all gynecological cases admitted to our wards have been uterine myomata. Dr. Kelly and I have been analyzing the material of the Johns Hopkins Hospital of the last fourteen years, and during that time considerably more than a thousand cases of myoma have been placed on record. In deciding upon the preferable operative procedure in a given case it is necessary to bear in mind the different varieties of myomata, their situation and size, the various degenerative processes which they may undergo and the complications that may arise. Furthermore, certain symptoms will also serve as a guide for treatment. In order to make the present paper clearer, permit me to discuss briefly these points. The subject is not new, but we are every day adding little by little to our knowledge of it.

From the investigations of others as well as from our own studies it would appear probable that in the beginning nearly all myomata are interstitial. As they increase in size they may remain so, or on the other hand, may push outward or inward, forming subperitoneal or submucous nodules. The number of myomata present in a uterus may vary greatly. Occasionally only one is present, but more frequently seven or eight and in not a few instances twenty or more can be counted. Again, these growths usually vary much in size. Thus in a uterus there will often be found a myoma of many pounds' weight, while in its immediate vicinity is another myomatous nodule not larger than a pin-head. As we all know, myomata may occupy any part of the uterus, sometimes being located on the surface of the organ or at other times pushing their way out between the folds of the broad ligament. Again, not infrequently they occupy the entire pelvis, and we find

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the body of the uterus lying on the top of them. These are the cervical myomata which at times are so difficult of removal.

*Condition of the Endometrium where Simple Uterine Myomata Exist.*—As a rule the cervical mucosa is perfectly normal, save for the presence of a cervical polyp or some dilated cervical glands. In the body of the uterus endometritis is occasionally found, but, when present, is almost invariably associated with inflammatory changes in the adnexa. Tuberculosis of the endometrium is occasionally associated with myomata, but rarely occurs independently, and is then usually secondary to a similar process in the Fallopian tubes. Of squamous-cell carcinoma of the cervix and adeno-carcinoma of the body of the uterus we shall speak later.

While any of the foregoing conditions may exist, in nearly all instances the changes present are usually entirely mechanical in their nature. If the myomata are subperitoneal or intra-ligamentary the mucosa is usually normal, provided of course that the tubes are unaltered. When the nodule impinges on the uterine cavity the mucosa over the most prominent part becomes stretched and thinned out, until eventually there will remain nothing but the surface epithelium covering the nodule. While this atrophy is taking place, the mucosa in the depressions at the sides of the nodules remains unaltered or becomes thicker, this thickening occasionally being due to simple gland hypertrophy. Portions of the mucosa are often mechanically forced out into the cavity, producing polypi. With the distortion of the mucosa the glands sometimes become blocked, and small cystic dilatations are formed.

When the myoma becomes entirely submucous, it is usually covered with a thin layer of mucosa, but in a few instances we have seen a sloughing focus in the myoma opening directly into the uterine cavity.

Now and then a submucous myoma in the posterior wall will blend with a similar nodule in the anterior wall, obliterating the uterine cavity entirely over a limited area. From an examination of a great many specimens we can lay down the general rule that where the Fallopian tubes are normal and where no sloughing submucous myoma exists the uterine mucosa is perfectly normal. This fact has no little bearing on the operative treatment inasmuch as the condition of the mucosa is an index of how far we may venture in removing a partially submucous myoma by way of the abdomen. Histological studies, then, having taught us that the endometrium is usually normal, we can in most instances open up the uterine cavity with little or no danger of infection.

*Parasitic Myomata.*—With the increase in their size the subperitoneal nodules are continually rubbing against neighboring structures and frequently become attached to them. As a rule they become adherent to the omentum, the omental vessels soon fur-



nishing a part of the blood supply and the original attachment to the uterus becoming less and less, until it is finally lost and the nodule apparently springs from the omentum, and from it receives its entire nourishment.

Recently I operated upon a patient giving a clinical history almost typical of an ovarian cyst, but on opening the abdomen I found a myoma about the size of a fetal head. This was attached to the uterus by a very delicate pedicle, while all the omental vessels plunged into its upper portion and supplied nearly all its nourishment. Associated with this partially parasitic myoma was an accumulation of fifty-two litres of ascitic fluid.

A few months ago while performing a hysteromyomectomy, I saw a nodule as large as a baseball situated at the brim of the pelvis. It lay directly over the ureter as the latter crossed the pelvic brim. Its nourishment came from the mesenteric vessels, and it had absolutely no connection with the uterus. This nodule in all probability had originated in the uterus, but becoming adherent to the pelvic brim had gradually changed its source of nourishment until eventually all trace of its former attachment was lost.

*Simple Degeneration in Myomata.*—Myomata, no matter where situated, often undergo softening. In the first place the tissue changes in color from the characteristic whitish-pink to a white or yellowish-white. Such areas are sharply circumscribed, and occupy a varying portion of the myoma. This whitish tissue gradually disintegrates and the spaces thus resulting are usually filled with a clear serous fluid. Sometimes, however, the material is oily in nature, resembling melted butter. As a result of the continual breaking-down of this altered tissue we have large cavities traversed by delicate trabeculae. On histological examination the degeneration is seen to be hyaline in character, and this hyaline tissue gradually melts or fades away, leaving the spaces filled usually with serum, but occasionally with the butter-like material. This fluid on histological examination is found to contain large quantities of fat droplets and cholesterol crystals. In these degenerated myomata there is usually not the slightest inflammatory reaction and no evidence of infection. This is fortunate since, if perchance we should accidentally rupture such a myoma during its removal, we should have little to fear if some of its contents escaped into the abdominal cavity.

*Suppurating Myomata.*—Occasionally subperitoneal and intraligamentary myomata become infected, probably as the result of some degeneration which has permitted the entrance of bacteria. These suppurating myomata have an outer covering of myomatous tissue, and are lined internally by granulation tissue. We have seen them containing several litres of pus. In one patient operated upon at the Johns Hopkins Hospital there was a large cavity in a subperitoneal myoma which extended as high as the umbilicus.

This cavity communicated freely with the transverse colon, the feces passing directly from the gut into the abscess cavity.

*Sloughing Submucous Myomata.*—While the subperitoneal nodules are extending upward and outward the submucous ones are forced more and more into the uterine cavity. Their mucosa becomes thinner and thinner, and eventually the dependent portion of the nodule usually undergoes necrosis and sloughing. Sometimes only a small portion of the nodule disintegrates, but occasionally the uterine cavity contains a sloughing nodule fully as large as an adult head.

In one of our cases we found a necrotic interstitial myoma, which on its inner side communicated with the uterine cavity. On its outer side it had involved the uterine wall; necrosis had followed, the peritoneum had become involved, and the patient had died of a general purulent peritonitis.

*The Tubes and Ovaries in Cases of Myoma.*—Let us now briefly consider the condition of the tubes and ovaries, and also see the effect of the myomatous uterus on the surrounding structures. In the tubes we have noted hydrosalpinx (simple and follicular), hemosalpinx, tubal pregnancy, salpingitis, tubo-ovarian cysts and adeno-carcinoma, secondary to adeno-carcinoma of the ovary. Occasionally the normal tubes may be lost on the surface of the myoma, and appear again at a distant point. While any of these conditions may be found, simple inflammatory adhesions are the most frequent. In all probability the adherent condition of the tube is due to the mechanical irritation caused by its being rotated and rubbed against surrounding parts.

Numerous pathological conditions of the ovary are also associated with uterine myomata. Thus we have found Graafian follicle cysts, both large and small, corpus luteum cysts, multilocular adeno-cystomata, dermoids, papillo-cystomata, primary adeno-carcinomata and ovarian abscesses. The ovaries are often embedded in adhesions, usually delicate and fan-like. The inflammatory reaction seems to be chiefly the result of mechanical irritation.

Parovarian cysts are also associated with myomata in a moderate number of cases.

The relation of the *bladder* to the myomatous uterus is also of importance from an operative standpoint. At times it is not at all altered in its position, but is often drawn upward and downward, being spread uniformly over the anterior surface of the tumor. In other instances it has early become adherent to the tumor at one point, and with the growth of the myoma has been drawn out into a long tongue or funnel-shaped projection. We have seen the bladder drawn fifteen or more centimeters above its normal attachment, and in a few instances it has extended upward as far as the umbilicus. The interior of the bladder is rarely, if ever, altered.

If the tumor becomes incarcerated in the pelvis and pressure symptoms develop the *ureters* are frequently affected. First, they dilate, giving rise to a hydronephrosis, sometimes reaching 1.3 cm. or more in diameter. Later on, they may become adherent to the myoma, and with its continued growth be carried up out of the pelvis. It is exceedingly important to remember this possible displacement when operating. Hypertrophy of the ureter is occasionally caused by the myoma and hydronephrosis may supervene.

Adhesions between the myomatous organ and the rectum frequently take place, especially where the growth tends to become incarcerated in the pelvis. As the growth rises up, it sometimes takes the rectum with it, making it taut and carrying the upper portion high into the abdomen. As might naturally be expected, the intestines which lie in direct contact with the tumor sometimes become adherent to it. As a rule, these adhesions are slight, but at times the intestine is so intimately blended with the growth that it is necessary to sacrifice a portion of the uterine wall in removing the organ. Occasionally kinks in the bowel follow as a result of adhesions, and the patient dies of intestinal obstruction. The appendix in many cases has dropped down and become adherent to the tumor, or to the right tube and ovary.

*Adeno-Myomata of the Uterus.*—We will now consider a variety of myoma, which until very recently has received little attention. In these cases we have, as a rule, a uterus, which is moderately enlarged, but which conforms to the normal contour, save for some small nodules scattered throughout its walls or over its surface. On microscopic examination we find that the inner muscular layers of the uterine walls have become coarse in texture, and converted into myomatous tissue. Into this coarse-textured tissue the uterine mucosa literally flows. We thus have myomatous tissue with islands and rivers of normal uterine mucosa scattered throughout it. With the gradual growth of the adeno-myoma portions of the mucosa are nipped off, and either become submucous adeno-myomata or pass to the outer surface, forming subperitoneal nodules. The islands of mucosa in the myomata still retain their natural menstrual function, and hence at each period pour out their quota of menstrual blood. Naturally where the nodule is subperitoneal, and the glands are surrounded on all sides by myomatous muscle there is no escape for this flow. It thus accumulates and eventually we have the myomata containing large cyst-like spaces lined by a smooth velvety mucosa, and filled with chocolate-colored fluid—the dammed-up, changed menstrual flow. In nearly every instance in which we find a large intraligamentary or subperitoneal myoma containing such cyst-like spaces and filled with chocolate-colored contents, we may ascribe it to an old adeno-myoma. Adeno-myomata of the uterus were found in nearly 2 per cent. of our cases. They are benign.

*Sarcomatous Degeneration of Myomata.*—Within recent years studies have definitely established the fact that myomata may undergo sarcomatous degeneration. Clinically, patients suffering from such growths usually give a history of several years' duration during which the growth has either lain dormant or increased very slowly. Suddenly there is renewed activity, and in a few months the myoma increases greatly in size, and more or less marked signs of cachexia begin to appear. Sarcoma usually develops in one of several myomatous nodules and may be subperitoneal, interstitial or submucous, although it was formerly thought that such growths were always of the last-named variety. If the sarcoma develops in a submucous myoma portions of it may from time to time be expelled through the vagina—the so-called "recurrent fibroids." The sarcoma may develop from one of two sources, the connective tissues or the myomatous muscle cells. If it originates from the stroma the sarcoma may be spindle-celled or round-celled; if from the muscle, it is of the spindle-celled variety. From the drawings which are being passed anyone will be able to convince himself that a sarcoma may develop in the centres of myomata, and from the histological pictures it is possible to trace all stages from the normal muscle fibres to those which show the typical ear-marks of sarcoma. We have had several cases in our series where the myomata became sarcomatous, and in some of them death soon followed from metastases. It is of extreme importance to remember these cases when weighing in our minds the appropriate mode of treatment.

*Carcinoma of the Uterus Associated with Myoma.*—In my work on cancer I reported several cases of carcinoma of the uterus occurring in conjunction with myomata, and in the three years intervening since the appearance of the book a goodly number of similar cases have come under my observation. Of course where squamous-celled carcinoma or adeno-carcinoma of the cervix exists it will, as a rule, be readily detected before the operation, and we will thereby be influenced in our mode of treatment. In the majority of the cases, however, where cancer of the body of the uterus has existed, it has not been suspected until the uterus had been opened after operation. Nor need such ignorance be unpardonable; for in all probability the only suggestive symptom has been hemorrhage, which naturally would be explained as belonging to the myoma. One would hardly deem it necessary or wise tourette when the myoma could be so clearly outlined, and considering the fact that the uterus is to be removed in so short a time. Nevertheless, when outlining the treatment one should always bear in mind the possible co-existence of a carcinoma of the body of the uterus and act accordingly.

*Symptoms of Myomata.*—The clinical features in cases of uterine myomata are mainly dependent on two chief factors:

First, the situation of the nodules; second, the size of the tumor. While these growths develop during the child-bearing period they may not make themselves manifest until late in life. A myoma may be as large as a fetal head and yet give no symptoms whatever and be only accidentally detected. On the other hand, a nodule not larger than a walnut may give rise to alarming hemorrhages. If the myomata are interstitial or subperitoneal, and so situated that they do not encroach on the uterine cavity, there will, as a rule, be little bleeding. On the other hand, if the myoma projects into the uterine cavity, thereby putting the mucosa on tension, there will undoubtedly be very free and troublesome hemorrhage. The amount of bleeding is usually in direct proportion to the surface area of the uterine mucosa on tension. We have had patients lose nearly two litres of blood at one time and in one case I was called in to see, the uterine cavity was 24 cm. in length and contained over a litre of decomposing blood-clots.

In the cases in which the myomata encroach on the uterine cavity the patient will usually give a history of prolonged menstrual periods for the last few years and will complain of some backache and often of a feeling of bearing-down pain in the lower abdomen. After suffering from these symptoms for a time she suddenly noticed a lump in the lower part of the abdomen. With this increase in size there may be an increased frequency in micturition or retention due to the bladder being jammed up against the symphysis pubis. With the continued growth of tumor constipation becomes marked and possibly pruritus ani develops, both due to the pressure of the growth on the rectum. Later on the woman suffers from pain and occasionally notices edema in one or both of the lower extremities. I recently operated upon a patient who had an interstitial myoma about the size of a child's head. The pressure symptoms were such that when lying down she had to be assisted to rise, although, when once on her feet, she had no difficulty in attending to her household duties.

With the continued enlargement of the myoma the abdominal contents will be forced against the diaphragm and shortness of breath will naturally follow.

In those cases in which submucous myomata exist, as evidenced by the prolonged menstrual periods or menorrhagia, the hemorrhage usually increases in amount and between the periods of bleeding there is a purulent or muco-purulent discharge. In some instances the submucous myoma is forced more and more into the uterine cavity, and after a time projects slightly through the external os. At this time there is often a loss of substance over the most dependent position of the tumor. Necrosis of the nodule now readily takes place, and we have in addition to the hemorrhage a continual watery and most offensive vaginal discharge, in odor and appearance often strongly suggesting that common in cancer.

The long drain on the patient's resources saps her strength, and she becomes sallow, or very anemic in appearance, and may have irregular elevations of temperature due to the damming-up in the uterus of purulent fluid or to a septic focus which has meanwhile developed in the Fallopian tubes or in a neighboring myomatous nodule. The hemoglobin at this stage is often below 30 per cent. There are hemic heart murmurs, and the patient suffers from a giddiness and fainting spells. Under such conditions she is now forced to spend most of her time in bed. Such is frequently the clinical history in the severe cases of myoma. In addition to these symptoms we must remember those occurring where intestinal obstruction or appendicitis supervene, or where the development of ovarian cysts or extra-uterine pregnancy add to the complications.

*Vaginal Examination.*—While much may be learned from the clinical history, nothing gives such a clear idea as the bimanual examination. In a simple case the finger in the vagina finds the cervix to be of normal size, while with the abdominal hand one or more hard nodules are to be felt rising up out of the pelvis, and on making pressure upward from the vagina we are able to determine that the mass is directly continuous with the cervix. This also enables us to determine the mobility of the tumor, and also sometimes permits us to say with a fair degree of certainty whether the growth is adherent or not. In not a few instances we find the cervix jammed up against the symphysis pubis, and the posterior vaginal vault bulging downward due to the choking of the pelvis by the tumor. If the growth be cervical, the cervix has often unfolded itself on the surface of the myoma, and is flush with the vaginal vault. In such a case the external os is often recognized as a semilunar slit 2 or 3 cm. in length.

Where a submucous myoma exists the cervix will often admit the finger, and the nodule can be felt plugging the cervical canal just above the external os. If the myoma has already partially escaped into the vagina, the finger comes immediately in contact with it, and on skirting it backward the cervical lip is felt as a tense band hugging the outer surface of the growth.

Where the myoma is necrotic and has been sloughing for a long time, we may find a tough, but soft, slimy mass projecting from the vaginal outlet. Such tissue bears a striking resemblance to raw beef that has been macerated in water for some length of time.

Gentleness should always be exercised while making vaginal examinations. In at least two instances on opening the abdomen I have found that during the examination, just prior to the operation, subperitoneal nodules had been torn from their pedicles, and from the rent there had been free hemorrhage into the pelvis. In both of these cases several persons had examined the patient, and evidently too much force had been used. Where the operation

was performed at once, as in these cases, the injury was of little consequence, but should such an accident have occurred during an ordinary routine examination, there would, in all probability, have been a fatal hemorrhage.

*Treatment of Uterine Myomata.*—The surgeon's first duty is to remove the growth. The second, equally important, is to sacrifice the reproductive organs as little as possible consistent with safety. Prior to opening the abdomen a catheter should be introduced to determine the confines of the bladder. If the viscus is high up, the abdominal incision should be commenced near the umbilicus, and carefully continued toward the pubes. After having entered the peritoneal cavity and carefully packed off the intestine, the operator should examine the tubes and ovaries, and if these are free from adhesions the question of a simple myomectomy should be considered.

*Myomectomy.*—Should the tubes be the seat of an inflammation hysterectomy should be performed, as there is a possibility of infecting the cavities left in the uterus after the removal of the myomata. Several years ago, over-enthusiastic for conservatism, I did a myomectomy, after having made artificial fimbriated extremities for both tubes. In a few days there were distinct evidences of infection of the uterus. I again opened the abdomen and drained from above and below. The patient lingered for a month and then died. In this case there was, in all probability, a latent infection lurking in the tubes, although no pus was detected at the time of the primary operation. The operation was a simple one, and had I performed a hysterectomy recovery would, in all probability, have followed.

After satisfying ourselves that the appendages are normal, and that there is no offensive vaginal discharge indicative of a submucous myoma or of carcinoma, we should carefully examine the uterus to see if it be feasible to do a myomectomy. Where the nodules are few in number and situated at accessible points, the uterus should be saved. In a few instances, we have removed interstitial myomata larger than an adult head, and yet been able to preserve the uterus. If, however, the uterus is everywhere studded with small or medium-sized myomata, there is a great probability that some would be left behind, and a subsequent hysterectomy become necessary.

It is not advisable to do a myomectomy where the nodule is situated in the broad ligament or deep down laterally in the pelvis. In these situations it is impossible to obliterate the resultant spaces and blood is bound to accumulate. These difficulties might be overcome by abdominal drainage, but here hysterectomy is preferable. Several years ago I removed a nodule the size of a small cocoon from the left broad ligament. The lower portion of this nodule extended far down beside the vagina. There was

little hemorrhage, and the tissues apparently fell together nicely. In a few days, however, the temperature rose to 104. Shortly after this there was a free discharge of pus from the bladder, and on examination much induration of the left side of the vagina was found. The abscess had opened into the bladder. After several weeks the abscess cavity closed and the patient is now, six years after operation, in perfect health. A similar case was noted by a colleague of mine; in this instance, however, the bladder was not implicated.

Should we decide on myomectomy, the easiest method of controlling bleeding is by means of a gauze rope applied around the cervix, and clamped with artery forceps, thus avoiding the necessity of tying. If the myoma be small, the incision is made directly over it, and as soon as the nodule is exposed it is grasped with a meso-forceps and twisted or shelled out. Where the nodule is large and partially subperitoneal, a lozenge-shaped piece of muscle is usually excised with the tumor. Care should be taken not to sacrifice too much muscle, as so much contraction may occur that it will be found almost impossible to bring the margins of the cavity together. After carefully palpating the uterine walls to be sure that no other nodules remain, and having turned in the mucosa and sutured with cat-gut, should the uterine cavity have been opened at any point, the various cavities are totally obliterated by cat-gut sutures, three or four rows being used if necessary. It is upon this total obliteration of all dead spaces that the success of the operation depends. Often there is bleeding from the stitch-holes on the surface. This is usually controlled by placing one or more cat-gut sutures at right angles to the others.

The operator need not be alarmed if the temperature rise to 100, or even to 102 or 103 a few days after operation. This we have noted very frequently. In such cases dead spaces have undoubtedly been left behind, and there soon occur a disintegration and absorption of the blood.

One should always remember that myomectomy is a much more dangerous operation than hysterectomy, and if the patient be weak or any other contra-indication exist the complete operation should be chosen. The latter operation is the one of choice after the menopause, myomectomy being applicable during the child-bearing period.

The operator should also bear in mind the possibility of leaving some myomata behind. I recently saw in the dispensary a patient on whom myomectomy had been performed nine years previously. She had been perfectly well for several years, but when admitted to the hospital a second time the uterus was fully five times the normal size and everywhere studded with myomata.

Where the resultant incision in the uterus is long, and it is necessary to hold the organ up on account of its large size intra-



abdominal shortening of the round ligaments is preferable to suspension. I am familiar with a case in which, following a myomectomy, the uterine incision became intimately blended with the abdominal wall over a wide area. Pregnancy followed, Cæsarian section was performed, and the patient died. Suspension in such a case is an entirely different problem to the simple operation for displacement as in the latter there is no raw surface whatsoever.

I would strongly advise giving the preference to myomectomy in all suitable cases, but in every doubtful instance hysterectomy should be performed.

*Hystero-Myomectomy with Preservation of the Ovaries.*—In those cases in which it is deemed safer to perform hysterectomy, if the patient has not passed the menopause, we should endeavor to save the ovaries. In the first place we have no right to remove normal structures, and in the second place preservation of the ovaries will relieve the patient, to a great extent, of the troublesome hot flushes and nervous phenomena naturally associated with the menopause. Thus, where the operation is performed on a woman, say, thirty-five years of age, these unpleasant phenomena are generally deferred until the usual time for the cessation of menstrual life, or for several years at least. We make it a point to preserve one or more ovaries wherever feasible. Spinelli and others are still more conservative, and whenever possible preserve, at least, the lower segment of the uterine cavity, in other words some of the mucosa from the body is left *in situ* and the menstrual function, although naturally limited, is still preserved. In the near future it seems probable that this plan of treatment will often be adopted.

In performing the ordinary hysterectomy with amputation through the cervix it is well always to remember the blood supply of the pelvic organs. From above downward we have the ovarian artery and veins easily exposed to the outer side of the ovary. Next comes the artery of the round ligament which, although small, often occasions much oozing if not tied. On freeing the folds of the broad ligament the uterine artery with its accompanying veins is seen skirting the side of the cervix near the internal os. On the opposite side a similar system of vessels is encountered. We may then roughly compare the hysterectomy with amputation at the cervix to an ordinary amputation with four main vessels, the ovarian and uterine on each side.

Where the growth is situated in the body of the organ and the cervix is long, the operation is as a rule quite simple. The round ligaments are first tied and the organ can be lifted still higher out of the abdomen. Portions of the ovarian vessels passing to the uterus are controlled at the uterine horn, and the uterus is freed on each side. After opening up the broad ligaments laterally

and separating the bladder reflection anteriorly, the uterine vessels are readily exposed and tied. Many operators employ only cat-gut for the uterine and ovarian arteries. We still feel much safer with silk, and always use it for the larger vessels. After tying the uterine arteries, taking of course good care not to include a ureter in the ligature, we cut through the cervix, encountering little or no bleeding, except from the tumor. We usually cup the cervix slightly, and then close with cat-gut sutures. Only occasionally is the cautery introduced into the cervical canal. The broad ligaments are then closed with continuous cat-gut sutures, care being taken to cover the stumps of the appendages. The bladder peritoneum is drawn over to that of the posterior surface of the cervix. The pelvis now presents a perfectly smooth surface, offering little opportunity for the subsequent development of intestinal adhesions.

*Hysterectomy with Removal of the Appendages.*—If it has been deemed advisable to remove the ovaries, the operation is carried out in precisely the same manner, save that the ovarian vessels are tied just before they reach the ovary instead of on the uterine side.

While many hystero-myomectomies offer little difficulty, others are by no means so easy. Sometimes the growths are exceedingly large and so distorted that it is at first hard to get one's bearings. Under such circumstances it is always advisable to seek out the round ligaments and sever them at once. This invariably renders the tumor more mobile. The left tube and ovary are then usually tied off, and the tumor rolled outward and to the right, as recommended by Dr. Kelly. The uterine vessels on the left side are now controlled and severed, and the cervix is cut across with the upright slant so that the cervical stump and consequently the uterine vessels left on the right side will be longer. Clamps are applied to the right ovarian vessels, and the entire tumor is removed *en masse*. It is astonishing with what ease an otherwise difficult operation is rendered comparatively simple by this "from left to right" operation of Kelly. Great care must be taken with the ureter, and if the operator has the least suspicion that one or both have been injured he should seek each ureter as it crosses the pelvic brim, and follow it through the pelvis and carefully outline it to its vesical insertion.

Several months ago I had a very difficult hystero-myomectomy in which the patient was exceedingly anemic, and the vagina was filled with a very vascular submucous myoma. While liberating a subperitoneal nodule adherent to the right pelvic brim I found it necessary to tie the ovarian vessels. There was only one point at which the vessels could be controlled, and that merely wide enough for a single ligature. After having emptied the pelvis I felt rather uneasy about the right ureter, although no suture had

been placed anywhere near the usual ureteral site. As a matter of fact the ureter had been included with the right ovarian vessels. It was released with ease, and the patient made a perfect recovery.

Sometimes the ureter is carried up out of the pelvic cavity by large tumors, and there is great danger of it being tied or cut. If, after tying the round ligaments and releasing the tube and ovary, the blunt dissection be carried down close to the uterus the danger is minimized. In some instances it may be necessary to perform a preliminary myomectomy, thus diminishing greatly the size of the uterus and allowing the ureters to drop back into their normal position. The same result may be accomplished by bisection of the uterus.

*Bisection of the Uterus.*—In not a few instances, on opening the abdomen, the operator is confronted with a very discouraging problem. The pelvis is filled with a nodular tumor glued everywhere to the omentum and intestinal loops or firmly wedged in the pelvis. In some of these cases it is next to impossible to gain a point of cleavage, and were it not for bisection of the uterus the operation would either have to be abandoned or the resultant injury to the intestine from the difficulty in the separation of adhesions would be so great that the chances of the patient's recovery would be minimized. In such difficult cases the uterus is firmly grasped with meso-forceps on each side, and the organ is boldly split in the middle. As the incision is increased fresh meso-forceps grasp the uterine walls on either side, and eventually the entire organ is separated into two halves or divided as far as the cervix. We would naturally expect to see injury to the surrounding parts, but by this operation we reach the adhesions from their under surfaces where they are lightest. You would also naturally expect much hemorrhage, but if the uterine halves are kept taut with the meso-forceps no danger from this source is to be feared.

With the uterus now in halves the respective portions are removed entire or amputated through the cervix, the vessels being controlled in reverse order to the usual method, namely, first the uterine, then the round ligament, and finally the ovarian vessels. The remainder of the operation is completed in the usual way.

*Abdominal Hysterectomy with Preliminary Amputation through the Cervix.*—In a certain number of cases, in which the adhesions are so great that bisection of the tumor is not feasible, it may be possible after severing the round ligaments to push down the bladder so that the cervix is exposed. The uterine vessels are then clamped on both sides, and the cervix is cut through. The cervix is then drawn strongly forward, and Douglas' sac is opened from below. The cervix is now drawn still further upward, and all the adhesions are gradually separated from the under surface. The ovarian vessels are clamped on each side, and the tumor is

delivered. In these desperate cases all vessels have been clamped and the organ is removed without a ligature having been applied. The vessels are tied with silk and the operation is completed in the usual way.

Where the intestines are densely adherent to the tumor, always sacrifice the part of the myoma or its overlying layer of uterine muscle, as the case may be, leaving it attached to the intestines. This raw flap adherent to the gut is now turned in on itself in such a manner that the bleeding is checked and a smooth surface left.

*Complete Abdominal Hysterectomy.*—While amputation of the cervix is usually preferable, first, because it is easier, and, secondly, on account of the remaining portion of the cervix forming a good firm support for the vaginal vault, still in not a few instances the complete operation is clearly indicated. For example, where a large cervical myoma exists there is often no normal cervix left and the growth has so encroached on the vagina that a small cuff of this must also be removed. In these cases after tying the uterine arteries low down near the ureter it is not very difficult to free the mass on all sides until the vagina is exposed. In every case, however, where there is great danger of injury to the ureters these should be carefully outlined to see that they are intact.\*

In all cases in which we suspect adeno-carcinoma or development of sarcoma in a myoma, splitting of the ureter should never be performed as we run the risk of not only implanting cancer and sarcoma cells upon healthy tissues, but also of setting up a general peritonitis as in these cases virulent pus organisms are very liable to be present. Knowing that we may at any time encounter malignant growths in the uterus, when we are operating for myoma, I have made it a rule where the uterus has been amputated at the cervix to always have the organ opened at once so that if, perchance, a malignant growth exists the cervix may also be removed before the abdomen is closed.

*Treatment of Myoma Complicating Pregnancy.*—If pregnancy occurs when the uterus is studded by large and small myomata which apparently encroach on the uterine cavity to such an extent that they almost preclude the possibility of the pregnancy advancing over a few months, hysterectomy should undoubtedly be performed irrespective of the ovum. In other cases in which the myoma is cervical and so plugs the pelvis that labor through the normal passages is impossible, the question should be laid squarely before the family and the alternative of complete hysterectomy at once or Cæsarian section at term followed by hysterectomy at a later period discussed. The uterus might possibly be removed

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\* Doyen's operation where Douglas' sac is opened, the cervix firmly grasped and drawn backward and upward and then freed from the vagina on all sides and the uterine vessels are clamped and cut is also a method of complete hysterectomy to be strongly recommended.

immediately after the Cæsarian section, but the parts are so vascular in the pelvic floor, and a large cervical myoma is often so difficult of removal that no fixed rule can be laid down, and the surgeon must use his own discretion in the individual case. Recently I saw a patient who was eight months' pregnant, who had a myoma as large as a child's head situated in the anterior uterine wall. Three surgeons were sure that Cæsarian section would be necessary; two considered normal labor possible. All preparation was made for operative interference, but the patient fortunately had a normal labor.

*Treatment of Submucous Myomata.*—Where the submucous myoma is small and situated far up in the body and no discharge exists, it will often be advisable to open the abdomen, split the uterus and remove the nodule, showing up the rent in the uterine mucosa, and then uniting the muscle. If the myoma project through the cervix where it can be grasped, it is often possible to bring it down and we can control the pedicle by two or three cat-gut sutures. If it be impracticable to reach the pedicle, the cervix may be split anteriorly until the necessary exposure is obtained. If the nodule is very large and fills the vagina, delivery by obstetrical forceps is at times feasible; but as a preliminary measure it may be necessary to incise the peritoneum to obtain the requisite space.

In a recent case the vagina was completely filled by the growth and the hemorrhages had been very profuse and frequent. I endeavored to build up the patient, but without success. We waited until within a few days of the next period so that she might rally somewhat. On attempting to wash up the vagina the hemorrhage was alarming. I accordingly desisted and opened the abdomen at once fearing that any more vaginal interference until the uterine vessels were tied would render her pulseless. After all the blood supply had been cut off, the nodule was readily drawn up through the abdominal incision with the accompanying multinodular myomatous uterus.

Where a sloughing submucous myoma exists, the utmost care is necessary. If there be little bleeding, it will be safe to delay operation a few days, and frequent douches of a 1 or 2 per cent. solution should be given. Where there are no other myomatous nodules and where the offensive discharge has ceased the myoma may be treated as a simple submucous nodule and removed. If, however, the uterus be large and studded with other growths, the cervical lips may be sewn together, the vaginal portion of the growth having been removed some days previous. The vagina is then thoroughly douched with a 2 per cent. formalin solution and bichloride and complete abdominal hysterectomy performed. Unless the chances of infection from the uterine cavity be reduced to a minimum, the probability of general peritonitis is great.

*When not to Operate in Cases of Uterine Myomata.*—It is only after studying many cases and following, as it were, their life history that we can get the true perspective and determine with any degree of accuracy when to operate or in what cases it would be better surgery to refrain from interference. This is especially the case when considering the treatment of uterine myomata. We all know of patients who have had myomata for many years and yet suffered no inconvenience whatever. Others have experienced some trouble, but not sufficient to interfere with their daily work. Judging from these cases alone we would naturally infer that no operation would be necessary unless the myoma attained very large proportions. From our work on the subject, however, we find that unpleasant consequences may follow ultra-conservative treatment. In the first place we have seen that uterine hemorrhages often become profuse and frequent, occasionally amounting to from 1 to 2 litres at a time. Then, again, the general health gradually yields under the constant loss of blood. After a time pressure symptoms not infrequently develop accompanied by gradual interference with locomotion. Again, we have to bear in mind that these growths may be so situated as to effectively prevent a normal labor. With the formation of adhesions there is some danger of intestinal obstruction, and an operation, where such a complication exists, is most unpromising. Finally, we must remember that in fully 1 per cent. of the cases sarcomatous degeneration of the myomata occurs,\* and in another 1 per cent. carcinoma complicates myoma; so that in practically 2 per cent. of all uterine myomata a malignant growth also develops at one period or another.

*The Operative Results in Myoma Cases.*—It is not many years since the mortality in simple myoma cases was excessive. To attempt removal of a large and adherent myomatous uterus was rarely undertaken. But during the last decade the technique has been so perfected that in some clinics the mortality in simple cases is not over 3 per cent., and in Naples last fall Professor Spinelli informed me that he had just operated upon 100 cases with a mortality of not over 1 per cent.

With such advances in surgery, bringing with them so marked a decrease in the mortality of these cases, have we the right to advise against operative interference with the possibility of hemorrhage, loss of health, pressure symptoms, septic infections, intestinal obstruction, staring us in the face, and even the remote likelihood of sarcomatous degeneration or carcinoma? And this is not all. When giving our verdict in this or that case, it is on the assumption that our diagnosis has been correct. Unfortunately we are not infallible. Less than seven weeks ago I saw

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\* This is a very conservative estimate as some have noted it in 2 per cent.

in consultation a patient complaining of slight hemorrhage, and with a uterus about twice the natural size, rather firm and feeling exactly like a small uterus containing a nodule the size of a small apple. To clinch the diagnosis were two small nodules each about 2 cm. in diameter, one on the posterior surface of the uterus, the other at the right cornu. She asked if it were cancer, and I informed her that it was without doubt a myoma. On account of bleeding I advised hysterectomy, and to my surprise the growth proved to be an adeno-carcinoma of the body of the uterus, while the two supposed small myomata were situated at points at which the cancer had extended entirely through the uterine walls, forming secondary growths on the surface of the organ. They were already adherent to the small intestines. With my eyes closed and that uterus in my hand I should undoubtedly have diagnosed the case as one of myoma.

Nor are these cases by any means rare. I removed a uterus the size of a four-months' pregnancy two years ago, and to my surprise on opening it I found it the seat of an extensive nodular carcinoma, no myoma being present. Two weeks ago one of my colleagues removed a uterus about the size of a four-months' pregnancy. Pregnancy, however, was absolutely excluded, and the specimen was sent to the laboratory with the supposition that the growth was a myoma. On opening the organ, we found a cancer just above the internal os. This had blocked the cervical canal, and the uterus was distended by fully 500 cc. of blood. On three different occasions I have opened the abdomen expecting to find myomata. In each the history was absolutely against pregnancy, but upon this we cannot rely in the majority of the colored race. In each of the three I carefully made an incision until the nodule was detected, and then a hysterectomy. These are but a few instances of the difficulties that arise in making an absolute diagnosis in cases in which myomata are suspected.

After a careful study of many cases and finding that the operative mortality is as low as or even lower than that which follows where patients are not subjected to operation, I feel that the only patients that should be advised against operation are those who exhibit no symptoms or where the myomata are very small and give rise to little or no trouble.

I am afraid my remarks have been too lengthy, but the subject is a very important one and merits, I feel, all the time you have so kindly allowed me to occupy.

**DIPHTHERIA.\***

BY J. J. MACKENZIE, B.A., M.B.,  
Professor of Pathology, University of Toronto.

WHEN I was asked by your Committee to prepare a paper on the subject of "Diphtheria," I was rather at a loss to know how to treat it. It seemed as if here, at least, was a subject upon which nothing new could be said. The etiological factor thoroughly well known, the epidemiology well understood, and the treatment resting upon a surer scientific foundation than any other infectious disease, what was there new that would be of interest to this Association? And yet, perhaps, it is well to study and restudy even those things which we think we know most about lest in the pride of knowledge we come to overlook matters. To the bacteriologist it is indeed a pleasure to discuss diphtheria, since to the science of bacteriology medicine owes all that it has in the prophylaxis and treatment of the disease. It is now just twenty years since Klebs gave the first description of the bacillus, and just nineteen years since Loeffler first described its appearance in culture; less than ten years ago Behring and Roux published their epoch-making discovery of the antitoxin, and to-day diagnosis and prophylaxis rest largely upon the microscopic recognition of the bacillus and treatment largely upon the use of the antitoxin. The importance of the knowledge derived from bacteriological sources is seen when we study the history of the disease and find that Bretonneau of Tours, in his classical work on the disease in 1826, had recognized all its various clinical forms and the sequelæ, understood its epidemiology, and, perhaps, was as successful in the treatment as we if we were without our knowledge of the bacillus and the antitoxin.

As I said above, it seemed to me difficult at first to select any questions which would interest the Association, but it struck me finally that it would not be without interest to discuss some of the questions which have arisen out of our more modern bacteriological knowledge, and to inquire for a moment as to what additional contribution we may hope for from experimental medicine in the treatment of this disease.

And first, perhaps, the most important question is in regard to the bacillus itself. With a closer study of the organism a number of observers have endeavored to set up as varieties a series of forms differing somewhat in their shape and staining characters,

\* Read at Meeting of the Ontario Medical Association, Toronto, June, 1903.



but the most thorough study has failed to connect these varieties with any special clinical types of the disease, and seems rather to point to their being due to an inherent pleomorphism in the bacillus which is readily brought out by cultural conditions. In regard to the so-called pseudo-bacillus the opinion of bacteriologists is practically unanimous in separating it entirely from the true form and without significance in the etiology of the disease. The organism is so characteristic that a moderate amount of training enables one to recognize it without the slightest difficulty. But in using the microscope in diagnosis the physician who takes the swab is not without influence, since upon the thoroughness with which it is taken depends often the success of the microscopic examination. Physicians should remember that all the bacteriologist can tell them is whether the organism was present on the swab or not. It is hardly necessary to emphasize the necessity of preserving the swab from contact with disinfectants, but a point that physicians sometimes forget is that mere drying has a distinct bactericidal action, and that the diphtheria bacillus is not among the most resistant to drying, not nearly so resistant as the staphylococcus, for instance, an organism which is often found in the throat; so that from a swab which, say, contained a good many staphylococci and a few diphtheria bacilli, after twenty-four hours' drying only the cocci might be obtained on culture. I do not say that this would always be the case, but it undoubtedly sometimes happens, and it accounts for the failure sometimes to demonstrate the bacillus where we would expect to find it.

A question of considerable practical importance is the occurrence of the bacillus in the healthy throat. Its occurrence there may be due to one of two causes; first, to a lessened virulence, that is, a lessened infecting power in the bacillus; or, second, an increased immunity on the part of the individual. It is impossible from the form or microscopic characters of the organism to determine which is the condition, but we may surmise that where the organism is found in the throats of individuals who have not been in contact with active cases of the disease, the former may be the case, while where it is found in the throats of those who have been associated with cases of diphtheria, but in whom the disease has not developed, that it is due to the greater immunity of these individuals. The proper handling of such cases is of the greatest importance from the public health standpoint, and a certain amount of judgment must be exercised in regard to them. It is probable that those which must be regarded as a menace are such cases as children in the same family in which the disease is present, or in school-rooms in which members of the class are infected, or nurses in attendance upon cases, and when the organism is found under such conditions in otherwise healthy throats the cases must be treated as cases of diphtheria.

A question of the very greatest importance is the length of time that cases of diphtheria must be isolated after the disappearance of the membrane. In the premicroscopic days this was an arbitrary period determined by experience, but to-day in many places it depends upon the direct evidence of a microscopic examination of the throat, which demonstrates that the bacillus is no longer present. Experience of numerous observers has been that a single negative examination is not sufficient to declare a throat free from the bacillus, and in those centres where the most careful bacteriological control is exercised, at least two consecutive negative reports are required, and in some places three are asked for. The results of the experience of a great many laboratories seem to point to a remarkably long persistence of the organism in the throat. I believe that the Toronto results would on the average make it about three weeks, and other reports confirm this. Corresponding so closely with that previously established by empirical methods, one is inclined to question whether our methods of treatment have in any way shortened the period of viability of the organism. If we consider for a moment what that treatment is we will see that we can hardly expect any better results than we have. The treatment is twofold: the injection of the antitoxin for the treatment of the general and local manifestations of the disease and the use of various disinfectant sprays and washes for the treatment of the local symptoms and the destruction of the organism. Now in regard to the use of the antitoxin there is no doubt as to its efficacy in the treatment of the disease as a whole, but it is to be remembered that it is an *antitoxic* serum, that is, a serum that is specially prepared for combating the toxine of the disease, and our most recent investigations show that there is a distinct difference between an antitoxic and a bactericidal serum. There is not the slightest doubt that with antitoxin the membrane disappears more rapidly from the throat, but there is no evidence to show that this is due to the influence of the serum on the bacillus itself. In fact we may doubt if yet we have any very clear knowledge of the conditions under which the organism disappears from a throat. We may surmise, however, from the results of investigations into other bactericidal sera that this is due to two substances, the specific immune body or amboceptor of Ehrlich and the complementary bodies which are normally present in the body fluid. We know that an immune body is produced in the case of every infection, and that the complementary bodies are normally present, and we know that these substances are present in the glandular secretions. The evidence of a bactericidal activity of the saliva was given a great many years ago, and it seems probable that in an otherwise untreated throat recovering from diphtheria the organisms disappear owing to the action of these factors. On the other hand, in the use of disinfectant sprays and swabs we hope to actually kill the organ-

isms that remain in the throat. Is this not a false hope? I do not believe that it is possible with the most thorough and efficient use of disinfectants to destroy all the bacterial life in the nasopharynx. The experiments of Miller upon disinfecting mouth-washes show what a difficult matter this is. The attempts to disinfect the bowel show how hopeless is the task. On the other hand, a chemical which can be depended upon to destroy bacterial life cannot be without serious influence upon the life of the cells of the mucous membrane, and we know also that dead cells or strong chemicals will utterly destroy those complementary bodies which Ehrlich has shown to be necessary for the natural destruction of infecting bacteria. It seems to me, therefore, that the results of modern experimental work show that the way to cause the rapid disappearance of the diphtheria organism from the throat is to restore that throat as rapidly as possible to a normal healthy state, to use in fact only the mildest and blandest lotions, and to in every way stimulate the mucous membrane to carry out its normal functions, and thus by natural methods lead to the disappearance of the bacillus. Just here I may be permitted to hope that bacteriological research will soon give us a bactericidal serum for diphtheria, which may be used to hasten the action of the natural agencies in the same way that the antitoxic serum has enabled us to combat the general symptoms of the disease. Within the past month I have seen in an Associated Press despatch from Paris the announcement that Martin, of the Pasteur Institute, has produced such a serum, but I have not as yet seen Martin's paper and cannot speak definitely about it.

The significance of mixed infection in diphtheria is a bacteriological question of very considerable importance, which has been given a good deal of attention. In regard to it I think probably too much weight has been given to the cultural evidence of the presence of the streptococcus in the throat. The presence of this organism in the throat is not in itself an evidence of mixed infection; it is only when it begins to invade the tissues that it is of importance and this will be demonstrated more clearly by the clinical course of the disease than by a bacteriological examination. It is in fact quite a common occurrence to find streptococci in throat cultures where there is not the slightest clinical evidence of an active infection. In connection with this matter of mixed infection, however, it is, perhaps, well for a moment to discuss the use of the antitoxin; there was a tendency at first when antitoxin was introduced to doubt its value in those cases in which there was an active streptococcic mixed infection. This was probably due to a wrong conception of the method of action of the antitoxin; since, however, we know that the action is a purely chemical one in the direct combination of the antitoxin with the toxin, there are no *a priori* grounds for doubting its usefulness in these as in simple

cases. In fact, clinical experience has fully shown that the antitoxin is just as useful in these cases, only that it must be used in large doses.

Perhaps here I may be permitted to refer for a moment to the antitoxin treatment, although this Association has in former years heard the subject so thoroughly discussed and the members have all had so much practical experience with it that it seems hardly necessary to more than touch on it. But I think that it is not right to let this opportunity pass without again insisting upon the necessity of adequate dosage in the use of antitoxin. I believe that the statistics of the first few years of antitoxic treatment must be largely discarded as of no value on account of the smallness of the doses. Two thousand units should be the minimum dose, and in severe cases, or in those which come late to treatment eight thousand, ten thousand or even more should be used. I was told the other day of the really wonderful results which they have had at the Isolation Hospital in Ottawa in the treatment of diphtheria, and these results are solely and entirely due to the thorough use of the antitoxin in large doses. In most of the large European hospitals in severe cases ten thousand units is a small dose. In the Copenhagen statistics we see that often they run up to twenty, thirty and fifty thousand units, with splendid results. The question of cost is here in Ontario an important one, which must be considered, and it seems to me that it is worth the consideration of this Association whether it would not be well for the Provincial Board of Health to undertake the manufacture of the diphtheria antitoxin for use in those cases where the patient is unable to pay for the serum; as it is at present it often happens that the physician who conscientiously uses antitoxin in a case is very much out of pocket.

Before closing I wish just for a moment to refer to the use of the serum as a prophylactic measure in situations where it is difficult to limit the chances of contagion. That the use of the serum for such a purpose has been successful is amply borne out by the experience of children's homes and hospitals where, before the introduction of the routine injection of the prophylactic dose, diphtheria was almost always endemic. This routine has been notably shown by the experience of the Hospital for Sick Children in Toronto, and it has been the experience of similar institutions elsewhere. Sometimes, however, it has failed, and the probability is that this is due partly to a more than usually rapid excretion of the antitoxin, but partly also to the fact that the serum is an antitoxic serum and not a bactericidal one, and consequently is not so fitted for conferring passive immunity as would a more purely bactericidal one. We may hope that the next thing that we may expect from experimental research is a serum which will be used

purely for prophylactic injection. Wassermann has lately announced that he has obtained a serum of this character, and no doubt it is of a similar character to the one announced by Martin.

Bacteriological research has given us our knowledge of the bacillus, and the treatment of the disease by the antitoxin, and to complete the scientific results of the research we must expect in the near future a serum which will enable us to thoroughly immunize against the infection, and which will enable us to rapidly eliminate the bacillus from the healing mucous membrane. When we have this we will have a body of results which will be a model for the treatment of all the other infectious diseases.

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### WAISTBANDS AND CORSETS IN THE GENESIS AND TREATMENT OF MOVABLE KIDNEY AND ASSOCIATED PTOSSES.\*

BY A. ERNEST GALLANT, M.D.

THE Twentieth Century woman, from training, custom and dictates of Madame la Mode is compelled to fasten her clothing around the waist. However injurious such a practice may be when these garments are put on over a corset, much greater harm will result if that article be dispensed with.

She may do without hats, she may do without hose,  
She may do without gloves, she may do without shoes ;  
She may do without lover, she may shorten her days,  
But only "Mary Walker" can do without stays.

At puberty, when the girl is rapidly increasing in stature and her menses begin to drain the system, relentless custom adds to the enormous strain by interdicting running, skipping, jumping and playing with boys; healthful exercise may no longer be indulged in; she must be compressed with a corset, her clothing no longer suspended from the shoulders, but hung from the waist by tightly drawn bands, the light, short skirts exchanged for long, heavy, trailing dresses—and we wonder that the health of the filly breaks down when thus hampered, haltered and harnessed. Ere long the plump, rosy-cheeked, vivacious girl becomes the tall, stately, sedate miss—anemic, dyspeptic, constipated, nervous, restless, sleepless; and parents and doctors wonder why, fearing that the heretofore lovely girl is about to be carried off by the "destroyer of happiness and severer of loved ones"—consumption.

As the spinal column lengthens, it should carry upward all the viscera attached thereto, but owing to the weight of clothing

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\* Synopsis of a lecture delivered before the New York School of Clinical Medicine November, 1902.

and compression at the waist-line this process cannot take place, stretching of the ligaments occurs, the viscera are thereby dislodged and hang at a level much below the normal. On examination, by inspection, we note more or less relaxation of the abdominal wall, flattening above the umbilicus, protrusion below; palpation demonstrates prolapse of one or both kidneys, dilatation of the pyloric end of the stomach with ectopy of the colon and small intestines, first clearly described by Glenard, in 1885, collectively as enteroptosis.

As a logical sequence, pouching of the stomach results in food retention, fermentation, gastro-intestinal indigestion, intestinal inactivity, and autoinfection from resorption of excrementitious matter too long delayed within the alimentary canal, manifested by coated tongue, hepatic torpor, dusky skin, dark, scanty urine, dysuria, frequent headache, general malaise, anemia, menstrual disturbance, defective vision, etc. After the eighteenth to twentieth year, we meet her as a woman, something over five feet high, with narrow chest, shrunken breasts and hips, fifteen to thirty pounds below the average weight; her clothes hanging to a slender body devoid of all graceful outlines.

Mentally and socially on the weather-vane order—alternately optimistic or pessimistic, grave or gay, laughing or crying, warmly confidential or abnormally suspicious; feverishly studious or detesting all study, b(u)oyantly athletic or lolling in bed, weeping over the woes of a Scott's heroine; symptoms so often by loving friends believed to be due to a hypodermic injection of an overdose of love-nitrate administered by Dr. Cupid.

Therapeutic consideration of this subject must include (a) the prevention of ptosis; (b) the restoration and support of prolapsed viscera; (c) the correction of functional derangements; and (d) the improvement of general nutrition.

Prophylaxis demands that the corset pressure be so applied and the weight of clothing so distributed as to prevent compression at the waist-line with its injurious traction downward.

When visceral ectopy has already begun or well advanced we must place the sufferer in such a posture as to bring about their replacement, and by orthopedic measures retain them in their proper relation to the diaphragm, etc.

Replacement can be attained by assuming the dorsal posture, and carried to an extreme degree by elevating the hips while lying upon the back, designated the semiopisthotonos posture.

For the support of the ectopic viscera, we have designed a corset to be made from measurements of the patient while in the dorsal posture, fitted and always put on while in the dorsal decubitus, and worn continuously when not lying down. The garment is so constructed that it exerts greatest pressure over the supra-

pubic area, to maintain the organs, moderately curving in at the waistline to hold the kidney well up under the ribs; being made loose and full above the waist to afford ample room for the stomach, and give full play to the heart and lungs. By this means the patient at once derives a sense of support and comfort, which heretofore she has been unable to attain from the use of belts, kidney pads or abdominal supports; and further, the modish outline of her figure is improved to a remarkable degree.

It would be well for every woman to wear a corset of this description: as a prophylactic measure, as a means of minimizing the harmful effects of tight waistbands, and to secure a healthful body poise. The same principle holds good in women who have borne children, with lax, flabby, abdominal walls; after childhood, laparotomy, and in those who suffer from an abnormal deposit of adipose tissue.

Where enteroptosis is associated with well marked neurasthenic symptoms, loss of flesh, etc., it will be necessary to put the patient in bed with the foot elevated, feed on easily digested food, give nerve, heart and general tonics, and daily massage with active and passive motions, until the more urgent symptoms subside, and nutrition begins to improve, when a corset can be put on and the patient get about. After such a seance, it is sometimes surprising what rapid improvement these individuals will show.

The operation of kidney fixation, nephropexy, in other than "surgical kidney" has shown so many failures to fix the organ, failure to relieve the most important symptoms, with a death-rate of from 2 to 5 per cent.; while our results in a large number of cases have been so satisfactory that we feel justified in claiming the corset as the best means of overcoming the deleterious effects of movable kidney and associated ptoses.

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### CUTANEOUS ANTHRAX.

BY WILSON Y. YOUNG, M.D., TORONTO.

CASES of malignant pustule or charbon being rather rare in Ontario I will give some details of one which came under my notice recently:

Mr. P., an able-bodied man who handled hides and leather for a large tannery, consulted me as to the nature of a swelling on his neck, to the left and about the level of the cricoid cartilage.

*History.*—On the evening of May 8th there was a minute red spot, or pimple, which had increased to the size of an ordinary boil on the 9th. He then poulticed it, which had no other effect than to make the swelling larger. Sunday morning, May 10th,

just two days after making its appearance, I saw him for the first time. Close examination revealed a slightly depressed, dry, bluish-black, central portion (looking something like what boys call a blood blister) of the size of a ten cent piece, but not quite circular. Surrounding this was a ring of greyish vesicles, the bases of which were about the size of a split-pea, while beyond them again was a red edematous swelling extending for a distance of two inches in all directions. There was only a hot or slight burning sensation, but no pain, as in speaking of the lump the patient took hold of it and pulled it from side to side, also up and down quite vigorously. The temperature was 104.2; pulse 125. Some headache and loss of strength. Though unaware of the serious nature of the disease at this time he seemed to be in a nervous, excited state. The night previous he was unable to sleep, and somewhat delirious.

Malignant pustule was diagnosed, and excision of the affected part advised as the only safe and sure relief for the condition. The little operation which was carried out inside of two hours from first seeing the case was performed thus: The patient was chloroformed and the skin washed with carbolic solution. An outline incision having been made of the size of a silver dollar, the whole mass was dissected up. Several spurting points had to be clamped. The raw surface was dried and thoroughly swabbed with pure carbolic acid, after which it was dressed with sterilized gauze. The temperature was subnormal the next morning at 10 o'clock, and the evening of the same day was 99 deg.

One of the lymphatic glands in the median line below the chin was enlarged, but this passed away and the patient is now well and at work, though the skin has not yet healed entirely. The hides came from Boston, and probably reached there from South or Central American ports, where the disease flourishes. In regard to treatment, ipecac internally and externally has been recommended, but early free removal and cauterization as above holds out the best results for this otherwise fatal disease.



# Proceedings of Societies.

## SEVENTEENTH ANNUAL MEETING OF THE AMERICAN ORTHOPEDIC ASSOCIATION.

BY B. E. MCKENZIE, B.A., M.D., TORONTO.

THE A. O. A., being one of the departments of the Congress of the American Physicians and Surgeons, met in May in Washington. The weather was ideal for the work and sight-seeing of such an occasion, the attendance large, and the programme of absorbing interest. Dr. Weigel, of Rochester, made a very acceptable presiding officer.

1. *Flat-foot Supports*.—Dr. W. R. Townsend, New York.

There is a general increase in the use of flat-foot supports which are freely advertised in the lay press, are even for sale in the departmental stores, shoe stores, and by instrument makers. There is a great danger, however, in this indiscriminate use of the plates, because a correct diagnosis is essential; otherwise the plate may do harm rather than good. Unless the plates be made specially for each individual, they will fit badly and fail in accomplishing the object in view. If there be an osteitis of the tarsus or ankle, inflammatory rheumatism, sarcoma, etc., instead of flat-foot, the result may be disastrous.

2. *The Surgical Pathology of Genu Varum and Genu Valgum*.—Dr. Wallace Blanchard, Chicago.

The skiagraph shows that the curve in knock-knee and in the opposite condition, is not a simple thing, occurring just at or above the knee-joint, but is made up of several elements, an exaggeration of the normal out-curve of the lower end of the femur, an out-bend of the upper tibia, and a distributed out-bend of the tibial shaft. In genu valgum the primary in-bend is usually in the upper part of the tibia, but afterwards becomes distributed throughout the shaft. Correction should be made at the apex of the deformity in the tibia. The author believes that Lorenz and Renier are wrong in advocating epiphysiolysis.

3. *Tendon Transplantation, Supplemented by Other Operative Procedures for the Treatment of Paralytic Club-foot*.—Royal Whitman, New York.

The favorable effects of tendon transposition are often temporary, and when good is accomplished it is due to the correction of

the pre-existing deformity, to the subsequent retention, and to the removal of the deforming force, rather than to a permanent gain in muscular power. The attachment of transposed tendons to those of paralyzed muscles should be replaced by direct transplantation into the bone itself. Arthrodesis of the medio-tarsal joint for the prevention of varus or valgus and astragalectomy are recommended in the case of insecurity at the ankle joint, particularly when it is of the calcaneus type.

4. *Acute Atrophy of the Bones and Joints Following Comparatively Slight Injuries.*—Joel E. Goldthwaite, Boston.

Slight injuries are often followed by long impaired function of the affected part, and frequently by permanent disability, the active stage, subacute swelling, pain on motion, with appearance at times suggesting a tubercular process, at other times, rheumatoid disease. X-Ray shows general atrophy of the bones and joints of the part affected and explains the permanent disability.

5. *Some Points in the Treatment of Hip-Joint Disease.*—George B. Packard, Denver.

(a) Traction and fixation of hip diseases are frequently too long continued. (b) After the acute stage has passed, massage and the protected use of the joints are likely to secure a better functional result. (c) The general treatment, meaning medicinal tonics and tissue builders, good diet, fresh air and sunshine, is of the utmost importance.

6. *Hip Disease with Reference to the Combined Treatment.*—R. Tunstall Taylor, Baltimore.

By "the combined treatment" is meant (a) treatment by recumbency to secure better protection of the joint; (b) such operative intervention and use of the antitubercular remedies as will facilitate the local eradication of the disease. Skiagraphic diagnosis is preferable to tuberculin. The anterior incision is made for the purpose of erosion and the tissues are freely treated with formalin. Joint function and the position of the cases reported last year are good beyond expectation. The course of the disease is made more favorable and its duration is shortened. To clear up the diagnosis, examinations are made from the open joint scrapings. Lorenz has criticised the too long traction practised by American surgeons.

7. *Forcible Reposition of Congenital Luxation of the Hip.*—Guilym G. Davis, Philadelphia; H. Augustus Wilson, Philadelphia; E. H. Bradford, Boston; Henry Ling Taylor, New York, N. Y.

The methods employed by Lorenz and encouraged in others by his example have been severe, and it is held that the lines laid down by Paci are safer.

Davis claims that the methods have been accompanied by severe traumatism, paralysis and deaths.

Wilson reported a girl of seven years having double, congenital dislocation, who died in twenty-two hours after the operation, probably from the shock. Much difficulty had been encountered in reduction. There was partial recovery from anesthesia, which was followed by complete consciousness; later there was delirium, collapse, and death within twenty-two hours. In this case, examination of the specimens revealed three fractures which had been produced in the bones about the acetabulum. The fragments, however, had not become displaced, and had the child lived, probably no serious injury would have resulted from the fractures.

Bradford points out that in the manual reduction the method is limited by the surgeon's power and the strength of the resisting tissues. Tenotomy of the ham-strings and adductors has been employed with advantage. Anatomical investigations along this line are required.

Taylor points out that since the visit of Lorenz, more force has been used to reduce dislocation, and to stretch the contracted tissues, and the position of retention is more extreme. In cases observed within the last four months, paralysis of the quadriceps has not been uncommon, and paralysis of the muscles supplied by the anterior nerve has been twice observed. These palsies are a common cause of the slowness in walking after the operation. The paralysis has usually been transient, and some observers have not noted it as a sequel of the operative work.

8. *Lateral Curvature*.—R. W. Lovett, Boston; G. G. Davis, Philadelphia; Joel E. Goldthwaite, Boston; Compton Reily, Baltimore.

Lovett has performed experiments showing that the human spine in its motion behaves as would any flexible rod, permanently bent in one plane. It cannot be bent to one side without twisting, and it cannot be twisted without acquiring a lateral curvature. Curvature to the left is acquired by twisting to the right, and the reverse by twisting to the left. These facts may be used in the treatment of the distortion.

Davis makes a plea for a careful record of personal experiences. He advocates (1) confinement of the patient to bed for a lengthy period of time; (2) weight extension and lateral pressure while in bed; (3) have the patient rise daily and take suitable gymnastic exercises; (4) in cases walking about employ exercises, and if the case is severe, braces.

Goldthwaite points out that the clothing should not be supported upon the tips of the shoulders as is commonly the case. This leads to stoop shoulders, and protusion of the abdomen and of the head, and frequently leading to curvature. Clothing should be supported upon the base of the neck, the shoulders being left free, and thus the muscular strain eliminated.

Reily exhibited a scoliotome, a device for directing in a very

precise and effective manner the great force acting in a corrective way as regards power, rotation and lateral curvature.

Great interest was manifested in the discussions which had any reference, near or remote, to the work done by Lorenz; and those who took part in the discussion, while candid criticism was expected and was made, expressed a hearty and keen appreciation of the valuable work which Lorenz has done, especially in the surgery of congenital dislocation of the hip.

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### THE SECOND QUARTERLY MEETING OF THE PROVINCIAL BOARD OF HEALTH OF ONTARIO.

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THE second quarterly meeting of the Provincial Board of Health was begun at the Parliament Buildings, May 29th, at 11 a.m., and was continued on the following day. There were present: Drs. Vaux (chairman), Cassidy, Kitchen, Oldright, Douglas and Bryce (secretary). After the minutes of the first quarterly meeting had been read and adopted, correspondence was read by the secretary:

Toronto Junction reported a severe siege of contagious diseases since December 1st. Scarlet fever had been responsible for thirteen deaths, a record that had not been equalled in any part of the province. The scarlet fever patients were kept in a tent at the Junction, which had proved satisfactory in preventing contagion. The tent had been used during March, forty-six cases having been treated in it. In apportioning the expense, the local Board of Health supplied the tent, bedding and fuel, while the parents of the patients supplied medical attendance, medicines, nurses and food.

Teeswater reported the failure of the local Board of Health to placard scarlet fever cases. There had been 100 cases since January 24th.

Minden wrote asking for literature dealing with contagious diseases. A serious outbreak of scarlet fever there resulted in thirteen deaths during March, April and May. The local board had been unable to cope with the outbreak.

Toronto City Council wrote protesting against some of the recently published regulations of the board respecting scarlet fever. Dr. Sheard, Medical Health Officer, Toronto, also wrote, objecting that Clause 5 of the scarlet fever regulations was mandatory and compelled a medical health officer to order the removal of a case of scarlet fever to an isolation hospital.

A report from Lindsay was received stating that they were unable to build an hospital for contagious diseases this year. Dr. Bryce said that it was strange that the town could not provide an hospital for contagious diseases in view of there having been given

a General Hospital free of any expense to the town by Messrs. MacKenzie and Ross.

He had experienced cases of obstinate local physicians who would send out children who had scarlet fever, as soon as they looked well, and then they went to school and spread the disease. He instanced a doctor in the town of Port Hope as one of the most pronounced offenders.

The afternoon session was devoted to the hearing and discussion of Dr. Bryce's annual report as Medical Health Officer for the Province, which was adopted. The report stated that the epidemic of smallpox, which broke out in Galt last autumn, and originated in a case coming from Cleveland, was accountable for 142 cases and 11 deaths, of which 86 cases and 6 deaths were in Galt. For twenty-one years isolation and vaccination had been the chief weapons used in combating smallpox. From 1882 to 1900 there were 135 outbreaks, 1,085 cases, and 170 deaths. In 1901 there were 199 outbreaks, 2,500 cases, and 12 deaths. In 1902 there were 1,800 cases.

No case has been heard of which was officially recognized as having been taken from Ontario into a neighboring State, all going to show the efficacy of vaccination.

Dr. Bryce also alluded to the anti-vaccination campaign now carried on in Great Britain, the United States and in Canada. He quoted extensively from the statistics of these countries, showing that physicians and health authorities had reason to be satisfied with the results obtained from vaccination, and that in view of the facts, no unprejudiced person could fail to recognize in vaccination and revaccination our principal weapon in preventing, and limiting the spread of, smallpox.

Scarlatina had prevailed seriously during the year, but the latest reports showed a decided decline. During the four months of 1903 there had been 350 deaths. Dr. Bryce said that the importance of the measure making the local medical health officer responsible for determining the kind of quarantine necessary had been well established, and its wisdom proved during the recent outbreak. This view was substantiated by the Mayor and Medical Health Officer of Ottawa, and the Medical Health Officers of Hamilton and London.

A table showing the percentage of cases of smallpox, scarlet fever, diphtheria and typhoid, treated in hospitals in various large cities, was given by Dr. Bryce. In reference to scarlet fever the percentages are: London, Eng., 78.7; Liverpool, 54.9; Birmingham, 80; Dublin, 100; New York, 7; Toronto, 40.7; Ottawa, 56.3.

In the hospitals of London in 1901, the percentage of admissions out of total cases was as follows: Smallpox, 97.2; scarlet fever, 78.89; diphtheria, 74.85; enteric, 45.34.

The available figures and facts, Dr. Bryce said, apart from experience in handling smallpox, scarlet fever, and diphtheria, in this Province seemed to settle effectually any question of the necessity for dealing with a serious epidemic disease in a thorough manner, and made it apparent that medical health officers must be empowered, as in smallpox, to provide means for separating cases of scarlet fever from their families.

After reassembly on Friday at 10.30 a.m., the board went into committee of the whole on two bills, which were to be brought before the Legislature, then in session. The first was Mr. Kribs' bill to do away with compulsory vaccination.

It was decided to furnish all useful information on the subject to the Provincial Secretary.

Dr. Pyne's bill to amend the *Public Health Act* was next taken up. The bill provides, first, that all meat, animals, poultry, game, flesh, fish, fruit and vegetables brought into a municipality shall be taken to such places for inspection as the Local Board of Health may deem necessary, and that persons selling such food shall have it inspected.

Dr. Bryce said the present Act provided for the inspection of animals without the unnecessary trouble to the farmers of bringing them to any special place. The inspection of fish and vegetables could not be carried out. The board was persuaded that such a measure would not pass the Legislature, because of its impracticability.

Another clause of Dr. Pyne's bill would give power to the medical health officer, or his inspector, to enter lodging-houses, tenement-houses, or laundries, in the municipality, at any hour of the day or night, in order to ascertain the number of occupants of such places, and whether each inmate was or was not provided with 500 cubic feet of air space. The board was of opinion that places such as those mentioned in this clause of the bill should be licensed and registered, and that their fitness for the purpose intended should be ascertained at the time when an application for a license was made. This is the system which is carried into effect in England under the *Lodging-house Act*.

In the afternoon the board granted the application of Ottawa East to discharge sewage into the Rideau River, just above its junction with the Ottawa River. Tiverton was allowed to extend its cemetery and to drain the same into a stream at a point lower down than an adjoining farm.

Dr. Cassidy read a report of the Committee on Epidemics, explanatory of the much-complained-of mandatory powers of the medical health officer mentioned in Clause 5 of the scarlet fever regulations. It is as follows:

REPORT OF THE STANDING COMMITTEE ON EPIDEMICS.

Your Committee on Epidemics, in order to render clear the bearing of the scarlet fever regulations, which became an order-in-Council on March 5th, 1903, begs leave to report that the regulations are only intended to make the operation of the Public Health Act definite and clear in several particulars, which have been hitherto somewhat imperfectly understood.

These several particular points are:

1.—That the medical health officer has clearly been placed in a position to carry out the Act relating to scarlet fever, and is required to report to the Provincial Board of Health failure to supply facilities therefor on the part of local boards of health.

2.—That the medical health officer, and not the attending physician, nor the local board of health, is placed definitely in a position to determine the character of the isolation of cases as called for by the Act.

3.—That he is empowered to isolate patients for a definite period of six weeks, or longer, if the circumstances require it.

4.—That the isolation to be provided is that defined under Section 106 of the Statutes, which has existed for twenty years in the Act, and which states that local boards of health must provide a temporary hospital for contagious diseases.

5.—That the regulations provide that greater stringency in the matter of the isolation of patients be insisted upon on the part of the medical health officer.

6.—That while the medical health officer is required under the regulations to utilize such hospital accommodation as is provided under the Act, he is, at the same time, allowed under the statute to use his judgment in the exercise of such power.

7.—That in order that any misconception as to the meaning of the regulations may be removed from the minds of the public, and of the medical health officers, your Committee would recommend that in the printed copy of the regulations issued by the board the following foot-note be inserted:

"It was not the intention of the Provincial Board of Health, in framing the regulations, to, in any way, limit the discretionary powers given the medical health officer under the Public Health Act, in Section 93, R.S.O."

8.—Your Committee would also invite earnest attention to the fact that efficient isolation, as facilitated by ample hospital accommodation, has materially lessened the death and sickness rates and effected immense savings in many ways. The statistics given by the Secretary in his last quarterly report admirably show this, and also show the great advances made in other countries in providing the municipal accommodation for which we are now striving:

9.—Your Committee would like that the opposite side of the

question should be presented to the public; the obligation of the body politic to provide facilities, so that the wage-earners may be allowed to carry on their work, without endangering the lives and health of other wage-earners.

All of which is respectfully submitted.

J. J. CASSIDY.

WM. OLDRIGHT.

P. H. BRYCE.

The report was received and adopted.

Dr. Cassidy also read an interim report of the Committee on Epidemics, respecting the hygiene of barber shops, stating that a final report of the Committee would be made on this subject at the next quarterly meeting.

The plan for providing water works for East Ottawa was approved of.

The following standing committees were appointed for the year:

Epidemics—Drs. Cassidy, Oldright and Bryce.

Water Supply—Drs. Douglas, Vaux and Bryce.

Sewerage—Drs. Kitchen, Bryce and Oldright.

School Hygiene and Ventilation—Drs. Cassidy, Oldright and Bryce.

Legislation and Publication—Drs. Bryce, Douglas and Cassidy.

Foods and Drinks—Drs. Vaux, Kitchen and Bryce.

It was intimated by the Secretary that the next meeting of the board would probably be held at Peterboro' early in September next, at which place and time the meeting of the Association of Medical Health Officers would also be held.

The board then adjourned.

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**A New Building for Messrs. Howards & Sons.**—Messrs. Howards & Sons, the well-known pharmaceutical house of Stratford (London), are erecting new works at Ilford in Essex, where they have acquired some thirty-three acres of land with excellent river and railway accommodation. They have already built a factory for their branch house, Messrs. Hopkins & Williams, of Hatton Garden, London, E.C., which is thoroughly up to date and fitted up with all the latest apparatus for the scientific preparation of all kinds of pharmaceutical, photographic and fine chemicals. Two new partners, Messrs. Geoffrey Eliot Howard and Bernard Farmborough Howard were admitted in 1902 to the firm, which still upholds the sound old principle that all work of whatever description should be carried on under the close personal supervision of the partners themselves. No market in the world is prized more highly by Howards & Sons than Canada, of whose men of business courtesy and loyalty are such strong characteristics.



# The Canadian Journal of Medicine and Surgery

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**Medical Jurisprudence and Toxicology**—ALTHUR JUKES JOHNSON, M.B., M.R.C.S. Eng.; Coroner County of York; Surgeon Toronto Railway Co., Toronto; W. A. YOUNG, M.D., L.R.C.P. Lond.; Coroner County of York, Toronto.

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Advertisements, to insure insertion in the issue of any month, should be sent not later than the tenth of the preceding month.

VOL. XIV.

TORONTO, JULY, 1903.

NO. 1.

## Editorials.

### VACCINATION AND SOME OF ITS SHORTCOMINGS.

THAT vaccination is the principal and all-important protective against smallpox may be said to be a truism. In fact, no person, whose opinion on health matters is worthy of the slightest consideration, holds the contrary opinion.

Cleanliness, sanitation and isolation are likewise excellent preventives. Unfortunately, however, for the gospel of cleanliness and sanitation, their very best exponents catch smallpox as readily

as the dirtiest inhabitants of the slums, if they are not protected by vaccination or a previous attack of smallpox. The practice of isolating a smallpox patient is excellent; but the attendants, if not immune, will catch the disease. Besides the isolation of an unprotected population without vaccination would be prohibitive, on account of the expense.

To limit the spread of smallpox in a populous centre no means is so effective as general vaccination. Another reason why people should be rendered immune to smallpox by vaccination is, that this disease is contagious before the eruptive disease has appeared, when the infected person is not an object of suspicion. It has been conveyed to unprotected persons by infected persons, who presented no skin lesions at all. If smallpox has been known to exist, and a patient has been exposed, and has the other symptoms of the disease, even though the eruption has not appeared, it is of the first importance that all unprotected persons should be vaccinated, segregated and kept under close observation until the period of twenty-one days is passed, when the danger may be considered as over.

As the members of the Provincial Board of Health have expressed strong opinions in favor of the vaccination of infants and school children, together with the vaccination of non-immunes, who have been recently exposed to smallpox, it is only fair that, as far as they can, they should see that vaccination is properly carried out. The reasoning in favor of the necessity of vaccination is beyond cavil, but the impurity of vaccine, the careless and even reprehensible manner in which the operation is sometimes done, and the neglect of obvious precautions to keep the vaccination wound clean give cause for alarm and oftentimes produce actual disease.

In regard to the first point, no vaccine should be put on the market until it has been tested on mice or guinea-pigs, and proved to be free from the agent of tetanus. If the boiled gelatine made from calves' feet can transmit tetanus by hypodermic injection, may not the Nicolaier germ be also mixed with vaccine pulp taken from a calf's abdomen? (*Vide* editorial note at p. 52.) We do not say that it is frequently present in vaccine, but contend that it is the duty of the manufacturer to look for it, and prove that it is not present in his product before he sells it. A vaccinator should be able to say: "This vaccine, which I am using is free

from tetanus. Should that disease appear in a person I vaccinate it is probably caused by post-vaccinal infection of the vaccination wound."

Improper methods of vaccination are common. A medical health officer, who vaccinates twenty persons of a morning cannot and will not attend to the cleansing of their arms as carefully as if he were vaccinating two or three persons. Besides he has not the time or the inclination to attend to the minutiae of careful aseptic vaccination. In Galt, Ont., where serious results followed the operation, it was stated that improper methods of vaccination were responsible for bad results. In the case of the employees of one of the leading manufacturers of Galt, who had been the greatest sufferers from vaccination, it was stated to the Provincial Board of Health by a prominent physician, that the operation was done at the noon hour, when the arms of the operatives were covered with dust and oil, and that the same towel was used to wipe the arms of the men. This act, it was supposed, had caused all the sickness, and it would be passing strange if such carelessness had not caused some sickness.

Assuming that the vaccine used in a given case is pure and that the operation is well done, instructions should be given to keep the vaccination wound in a clean condition. Done by parents or guardians for little children and infants this should not entail much difficulty—more difficulty will be encountered in dealing with adolescents or adults.

The boy who uncovers his vaccination sore for the edification of his playmates, or who exposes himself in gardens, fields or stable-yards, where the germ of Nicolaier abounds, may be inoculated with tetanus, be the vaccine used on him never so pure. A workman or workwoman is very much incommoded by a vaccination sore, which interferes with work, is rendered sorer by hard work, and which, unless kept clean, may be inoculated with the germ of some disease. If any evil results follow vaccination, they naturally redound to the discredit of the operation. Hence the paramount necessity of securing the three factors, which make for successful vaccination—pure lymph, careful vaccination and subsequent treatment of the sore. The first necessity—pure lymph—would really call for Governmental supervision of vaccine farms; the second—careless vaccination—should be punished by a penalty; the third—inattention to, or neglect of, a vaccination sore—

would not be so prominent an evil if vaccination were generally done during infancy and childhood. In all cases, however, it should be the duty of the vaccinator to inform the parents or guardians of a child he has vaccinated, or any grown persons whom he has vaccinated, that the resulting sore should be kept clean and treated until it is healed. Neglect to give this warning should be regarded as an offence.

J. J. C.

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#### FOURTH OF JULY LOCKJAW.

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TETANUS is becoming rather common in Chicago, seven deaths from that disease having occurred in five weeks, from April 25th to June 6th inclusive. The fatal accidents were traced to wounds caused by firearms, particularly to toy pistols, bits of percussion caps, etc.

From an account published in the *Bulletin of the Health Department*, of Chicago, it appears that only twelve cases of tetanus from similar causes had occurred up to the end of July, 1902, and only four in 1901, when a proclamation issued by the mayor of that city against the use of toy pistols, percussion caps, and other noise-making agencies was enforced. In 1901 there were twenty-four cases.

As our readers know the Nicolaier germs are both numerous and widely distributed. They are found in the earth (garden soil in particular), in manure, street dust and rubbish. The fact that these germs are anerobic explains why tetanus in man is a comparatively rare disease, and also why it is most apt to follow punctured and contused wounds. Anders says: "It may be assumed that an injury, however slight, serves as the portal of entrance for the poison."

When the germ is carried beneath the skin and buried in the flesh, as in the wounds caused by percussion caps, rusty nails and similar agencies, the air is excluded from the wound. The germs are roused to activity, attack the adjoining tissues, and develop the toxin, which "is carried mostly along the nerves to the spinal cord" (Stintzing).

The fact that the deadly poison of tetanus is developed at the site of infection gives to the local measures of treatment, adopted in punctured wounds of a suspicious character, supreme importance.

The agents employed should be brought into contact with every portion of the wound, so that punctured wounds must first be laid open. It may be necessary to excise the wound or even to amputate in some cases. It would certainly be in keeping with the rules of aseptic surgery, if a surgeon called to such a case, after an anesthetic had been given, were to open up the wound, and wash it with peroxide of hydrogen, followed by the application of pure carbolic acid. Wounds of the kind caused by toy pistols, percussion caps, or by rusty nails, should not be closed up. To do so is to invite the anerobic activity of the germs of tetanus, which may have been introduced into the wound by the foreign body.

J. J. C.

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#### TORONTO UNIVERSITY CONVOCATION HALL.

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THE following editorial appearing recently in *The News* so well expresses the feeling of all members of the profession, no matter whether they are Toronto or Trinity graduates, that we feel that we cannot do better than reproduce it *in toto*:

The announcement made at the meeting of the Alumni Association, that the Provincial Government had promised, through the Hon. Mr. Gibson and the Hon. Mr. Harcourt, to add \$50,000 to the \$50,000 subscribed by the Alumni and friends of the University to provide for a suitable convocation hall, will be warmly received, not only by the Alumni, but also by the people of the Province. The old convocation hall, which was destroyed by fire in 1890, was the chamber where all the stately and ceremonial functions of the university were conducted—functions which were striking events in undergraduate life, and it became in consequence to the Alumni of earlier years a spot on which was focussed, as it were, in later life, all the hallowed associations that gathered about student life in University College. The want of such a hall has been severely felt during the last thirteen years. The number of students is now at least three times what it was in 1890, and the number of functions which an enlarged university life has rendered necessary, has very greatly increased, while there has not been, nor is there now, an assembly room in the vicinity of the university which could at all accommodate them. The other university buildings, laboratories and lecture rooms have multiplied, but that provided only segregation and divi-

sion of the student body so long as there was no central spot to cultivate and foster associations which in after life inspire the deepest loyalty and sacrifice on the part of the graduates. The university is once again to have a noble Convocation Hall, a centre of common life, and, at the same time, a chamber for all the stately ceremonies, the memories of which will linger in the minds of the graduates to be as hallowing and ennobling influences.

For the result the fullest credit is due in the first place to the Alumni Association, which has impressed the Legislature with a sense of the importance of the university to the Province. The association also must find only satisfaction in the attitude of the leader of the Government and the leader of the Opposition regarding the claims of the university on the Province, and it must be doubly gratifying to the Alumni that they have achieved so important an object as the provision for a new Convocation Hall. No graduate or friend of the university ever doubted the sincere loyalty of the Hon. Mr. Gibson and the Hon. Mr. Harcourt to their *alma mater* or questioned their desire to do what was possible to aid the university. The public has been educated to larger views, and they have seized the occasion to do a great service to the university, the remembrance of which will last long after their day. And the Premier also should not be forgotten in this matter. In acceding to the proposition of the grant of \$50,000 he has earned the good-will of all friends of the university.

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#### THE ONTARIO MEDICAL ASSOCIATION.

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THE twenty-third annual meeting of our Provincial Medical Association, which convened in Toronto on the 16th, 17th and 18th of June, can be safely characterized as a success. The attendance was two hundred or a little over, and what the meeting perhaps lacked in numbers it made up in general enthusiasm and that spirit of *bon camaraderie* which should prevail at a convention of this sort. The increased attendance this year over that of 1902 was eighteen, and seventy-two over that of 1903. The papers were almost all good, many eliciting considerable discussion, a feature which is most welcome, and to be earnestly encouraged. The presence of Dr. J. H. Musser, of Philadelphia (now President of the American Medical Association), and Dr. T. S. Cullen,

of Baltimore, who is always welcomed back to his old home, added greatly to the enjoyment of the Association. The social features were not forgotten, and the Committee, who had charge, are to be congratulated upon the success of the smoker in St. George's Hall on the Tuesday evening, and the luncheon at the King Edward Hotel on Wednesday, and the cruise the same afternoon in the *Cleopatra*, which was kindly loaned by Mr. Gooderham for that occasion. The now-retiring President, Dr. Mitchell, and the General Secretary, Dr. Harold C. Parsons, filled their offices with the



SNAPSHOT OF THE RETIRING PRESIDENT AND GENERAL SECRETARY OF THE ONTARIO MEDICAL ASSOCIATION, ON BOARD THE S.S. *CLEOPATRA*, JUNE 17th, 1903.

greatest acceptance. We are pleased that Dr. J. F. W. Ross, of Toronto, was elected President for the ensuing year, and feel sure that he will fill the chair with the dignity that attaches to so high a position.

We regret that, owing to the *JOURNAL* being issued promptly on the first of each month, it is impossible for us to give our readers the full stenographic report, as made for us, but can assure them that what does not appear this issue will certainly have a prominent place next month.

The following officers were installed for the ensuing year: President, Dr. J. F. W. Ross, Toronto; Vice-Presidents, Dr. Burt (of Paris), Dr. Turnbull (of Goderich), Dr. J. C. Connell (of Kingston), Dr. J. H. Elliott (of Gravenhurst); Secretary, Dr. C. P. Lusk, of Toronto; Treasurer, Dr. A. R. Gordon, of Toronto.

W. A. Y.

#### EDITORIAL NOTES.

**Tetanus from an Injection of Gelatinized Serum.**—Professor Dieulafoy reports in *La Presse Medicale*, May 13th, 1903, a case of tetanus, which was traced to a hypodermic injection of gelatinized serum. The patient, who was phthisical, had hemoptysis, which did not yield to ordinary remedies, and an injection of gelatinized serum was made in the upper part of her left thigh. The solution had been carefully prepared at the hospital pharmacy, and had been boiled for over half an hour. The injection was also made with the usual aseptic precautions. Eleven days after the injection of this solution the patient was attacked with tetanus, and so violently that death ensued in twenty-two hours. Aerobic cultures made from the pus of an abscess, about the size of a filbert, found at the site of the injection in the woman's thigh, failed completely to reveal the bacillus of Nicolaier. When, however, the pus which had proved sterile in aerobic cultures was deeply sown in long tubes of gelose, not inclined, after the procedure of Liborius, and after twenty-four hours' sojourn in the oven and protected from the air, pure cultures of the bacillus of Nicolaier were obtained. Several animals which were subsequently inoculated with this pus, died of tetanus in less than twenty-four hours. From this case and twenty-two other cases of tetanus, reported in the continental medical press during two years, all of which have been traced to the hypodermic use of gelatinized serum, made from commercial gelatine, Professor Dieulafoy concludes that the latter product contains the germ of tetanus. This is certainly a rather serious charge to make against the hypodermic use of calfsfoot jelly. Administered per os it does not seem to be open to the same charge. As is well known the gelatinous matter of the feet is extracted by boiling. It appears that Merek, the German manufacturer, uses extra precautions, in order to obtain a pure gelatine. Fresh calves' feet are boiled for an hour at 248° F. The pure gelatine obtained is filtered and poured into tubes, which are sterilized on the two following days for an hour at 248° F. A great



quantity of this preparation is injected hypodermically into mice and guinea-pigs and, if the animals remain sound twenty days after the operation, a one per cent. solution of gelatine made from this gelatine is placed on the market. Professor Dieulafoy thinks, that the preparation of gelatinized serum ought to be regulated by the laws governing the preparation of therapeutic serums; but, even under such circumstances, he would not prescribe it.

**The Brain in the Hand.**—The difference in diagnostic skill between one surgeon and another is often due to a difference in the cultivation of the tactile function of the fingers. If this be true, the hand, that part of the body by which we come most frequently in contact with things outside of us, deserves a very attentive training, so that it may readily bring intelligence to the brain centre where its action can be recognized and appreciated. A writer in the *Indian Lancet* says: "Some time ago a *post-mortem* examination of the hands of a blind person demonstrated the existence, in the ends of the fingers, of convolutions of grey matter similar to that of the brain. The fingers had by their long-continued concentration of the consciousness upon their action developed, in a marked degree, the machinery by which the brain takes cognisance and acts intelligently. Truly there was a brain in the hand. What was found in this case must exist in the hand of every one in proportion to the training in intelligent activity." Mechanical workers learn to estimate by the fingers differences in thickness, not visible to the untrained eye. Thus when a letter is in the wrong box, the brain of the type-setter sends the fingers there; but the fingers discern the error and report to the brain by the hesitation or failure to act, bringing the attention of the brain from some vagrant fancy and securing its co-operation in setting the matter right. Teachers of clinical medicine doubtless consider this side of their office. Educationists, such as Chadwick, seem to have proved that the receptivity of the mass of students for direct class teaching was limited to three hours, and that whatever time above this is devoted to books is worse than wasted. Although when one considers the enormous amount of book-work now required of the medical student, it would be difficult to apply the three-hour rule to him; it may well be that a half-timer who worked conscientiously would make a better showing at an oral examination than a mere crammer. At all events the medical practitioner has to earn his living largely by the exercise of the brain in the hand. The obstetrician and the surgeon soon learn to rely with confidence on the trained touch. All surgeons

would do better and more conscious work, if they trained their hands more constantly and thoroughly in the estimation of the phenomena of the human body.

**Jonathan Hutchinson's Theory of the Cause of Leprosy.—**

The editor of the *Indian Lancet* gives no credence to the theory propagated by the English surgeon, Jonathan Hutchinson, that leprosy is bred from fish-eating. He says: "Professor Hutchinson proposes (1) to inquire into the trade in fish, the modes of curing, the quantity and destination. (2) To see whether the statement, that fish is not obtainable in certain districts is true or not. (3) To inquire of lepers whether lepers ever have been salt or dried fish eaters. (4) When denied, to inquire when leprosy began and under what circumstances. (5) To estimate proportion between high and low caste lepers. (6) To visit places where leprosy is said to be increasing. (7) To determine commensal communication from *de novo* development. (8) To inquire for sections or hill tribes free from lepra, who live adjacent to sufferers. There is one other inquiry, viz., to see whether the statement made by certain Brahmins, and so on, that they have never eaten fish, is trustworthy." The editor of the *Indian Lancet* continues: "We trust the Professor will be able satisfactorily to prosecute his inquiries; but after all it would be better to stay in India and make a permanent life business of the undertaking. The man who discovers the originating cause or causes of leprosy will be valued as worthy of a monument in marble in every city of the world, since with the discovery of the origin and cause, the application of a specific remedy or preventive method will follow. That man with all his boasted gifts has failed to discover them is also evident in the most painful manner, in this as well as in other directions." Experience in India is opposed to the influence of fish-eating in causing leprosy. The disease has been prevalent among vegetarians, as well as among fish and flesh eaters. In Russia inland tracts of country are as greatly scourged by this disease as any of the seaport towns and cities. In India it is considered to be hereditary, contagious and infectious.

**The Care of Milk in Hot Weather.—**Dairy companies should bind the farmer by contract to produce milk under hygienic and cleanly conditions, with facilities for sterilizing, aerating, cooling, bottling and delivering milk to the consumer free from contamination. It is also of the first importance, that the water supply on a dairy farm should be free from diarrheal or enteric poisoning. We

learn from the Medical Health Officer of Toronto, that several cases of typhoid, which occurred in this city last November, were, after careful investigation, traced to milk sent to Toronto from a farm the well water of which contained the bacillus of typhoid fever. The bacillus was also found in the milk supplied from this farm. This farmer was ordered to send no more milk to Toronto. There is no other way.

J. J. C.

**Toronto's Watery Grave.**—Toronto physicians no doubt have been aware, owing to several recommendations filed by Coroners' juries last year, that the various apparatus used in life-saving along the island and lake-front were worn out, lost, stolen, or strayed. The inspector of this department, Mr. W. C. Newman, has given recently a very alarming report. There are thirty-eight life-saving stations in all (mainland and island included), and at seventeen of these a part of the necessary outfit is missing. He also makes some valuable suggestions in reference to permanent ladders, made so by securely fastening uprights between the whale pieces of the wharf and using 5-8 inch round iron for steps. Where ladders are impracticable, chains of 1-2 inch iron looped along the wharf, securely fastened by ring bolts, Mr. Newman thinks, might aid in the prevention of drowning accidents. He also recommends a life-saving launch to patrol the Bay. It is to be hoped that this question will be taken up immediately by the city and an efficient life-saving equipment provided at each of the established stations.

W. A. Y.

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### PERSONALS.

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DR. G. S. RYERSON attended the Convention of United States Military Surgeons last month.

MAJOR DR. GEO. A. PETERS spent two weeks last month in camp on Niagara Common in command of his regiment, the Toronto Light Horse.

A DONATION of \$5,000 from Mr. D. D. Mann has been received by the committee of the University Alumni Association engaged in getting subscriptions for the convocation hall.

MUCH sympathy is felt for Dr. and Mrs. C. J. Hastings, of Wellesley Street, on account of the death of their little son, who died on June 3rd, owing to an injury resulting from a fall.

RICHARDSON-RUTHERFORD—In Aurora, on June 16th, 1903, by the Rev. E. A. Pearson, M.A., Dr. Chester Charles Richardson to Elizabeth Lauder Rutherford, daughter of J. R. Rutherford, M.D.

DR. JOHN CREASOR, who left Toronto about a year or more ago to practise in Owen Sound, has returned to the city, and received an appointment under Dr. Chas. Sheard, in the Medical Health Office, City Hall.

DR. AND MRS. J. H. COTTON, of 260 Spadina Avenue, will spend the summer in Germany and Switzerland. They sailed on June 27th, on *S.S. Tunisian*, and will return home about the first week in September.

DR. WM. NATTRESS was P. M. O. at camp last month, Dr. J. Milton Cotton taking his duties at Stanley Barracks in his absence. Among the other Toronto doctors at camp in June were Drs. J. T. Clarke, F. Fenton, and J. T. Fotheringham.

THE marriage of Miss Ethel Martin, daughter of the late Dr. C. E. Martin and Mrs. Martin, of Carlton Street, to Dr. Alexander Piree, F.R.C.S., of London, Eng., son of the late Dr. Piree, of Dundee, Scotland, took place on May 29th, at St. Peter's Church, Toronto.

THE following Canadians have received licenses from the Royal College of Physicians of London, Eng.: E. W. Allin, Trinity Medical College; M. R. Blake, Trinity University; O. C. Dorman, Dalhousie University; S. D. Mackenzie, McGill University; F. S. Pope, University of Toronto; E. G. H. Weir, University of Toronto.

IN our review of Dr. J. J. McGrath's *Surgical Anatomy and Operative Surgery*, appearing in last month's issue, we forgot to add the name of the publishers, The F. A. Davis Co., of Philadelphia, from whom the work can be obtained direct, or through any other firm of medical booksellers.

DR. FRED. W. MARLOW, who recently took the fellowship of the Royal College of Surgeons of England, is said to be the youngest candidate who has ever obtained that very high standing. Dr. Marlow is a recent graduate who was educated at Trinity Medical College, and is an M. D. and M. A. of Trinity University.

## News of the Month.

### GOVERNMENT AID FOR TORONTO UNIVERSITY CONVOCAATION HALL.

"It is too late to have legislation this year, but with reference to our interview with you, and having regard to our conversation with the Premier on the subject, we feel at liberty to give you the following assurance. On the assumption that at least \$50,000 has been raised by the alumni towards the new Convocation Hall, and on the further assumption that the cost of such new building finished in every respect, and equipped, will not exceed in all the sum of \$100,000, having in view the desirability of a new Convocation Hall for convocation purposes and alumni and other gatherings, in order that the work may not be delayed the Government, so far as they can do so, undertake to provide \$50,000, payable in five annual instalments, to be provided in the estimates from year to year during the next five years, commencing with \$10,000 in the estimates of next year. Yours very truly, J. M. Gibson, R. Harcourt."

This letter, addressed to Dr. McLennan, Secretary of the University of Toronto Alumni Association, was received with loud applause when read to the annual meeting on the evening of June 11th, and marks the completion of one of the great aims of the graduates for the past couple of years.

Dr. Reeve, President of the Association, who occupied the chair, referred to three important objects which the Association had accomplished, namely, the establishment of branch associations, thereby making the influence of the University felt throughout the country; the establishment of the Monthly, which is now on a paying basis, and the completion of Convocation Hall Fund, amounting in all to \$100,000. One thing remaining to be done is that the Association must educate the people to see that the University is indeed one of the most valuable assets of the country. He warmly thanked the Secretary, Dr. J. C. McLennan, for his exertions on behalf of the Association, and Mr. W. T. White, Manager of the National Trust Company, for enlisting the financial support of several men of means. They would also cherish always the names of Prof. Goldwin Smith and Mrs. Smith.

Sir W. R. Meredith, the Chancellor, took advantage of the occasion to speak plainly upon the University question. Leaving

aside the School of Practical Science, the University receives annually \$160,000 for doing similar work to the University of Michigan, which receives \$576,650; Wisconsin, \$539,656; California, \$472,304. The University of Toronto's income was actually only one-third of the lowest of these other universities. The Provincial University would possess a department of forestry. He trusted these obstacles would be speedily removed, for the claims of the Provincial University, with its allied college at Guelph, must be recognized in preference to Queen's, which has no claim whatever to the establishment of a school of forestry. The department of physics needs new quarters. Something must be done for instruction in botany. He thought the city of Toronto might very well join with the university in establishing a horticultural garden. The Chancellor urged the establishment of residences for women and for men, and hoped that some public-spirited men would join in raising the funds. He added that a department of research was also much needed.

He had nothing but the most friendly feelings towards Queen's, but he was glad to hear the Premier's declaration that there should be only one Provincial University. (Applause.) That policy was satisfactory, but he would be better pleased if there was not a plain departure from it, that was, the School of Mines at Kingston. The School of Practical Science, with 346 students, receives only \$17,400, while the School of Mines, with 130 students, receives \$23,500. That was a very unfair division. He strongly urged that the School of Practical Science should receive better treatment. This School of Mines means the duplication of the Provincial University in its most expensive part. It was a great mistake, and a departure from the policy of one Provincial University. He prophesied that within a year Trinity and its School of Medicine would be federated with Toronto. He hoped the Government would not hamper the trustees in the money required, for he was satisfied that the Legislature and the people would not begrudge a liberal supply of funds.

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### TORONTO UNIVERSITY FACULTY OF MEDICINE EXAMINATIONS.

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JUNE 5TH was a momentous day for hundreds of students in Toronto. As, in fear and trembling, they awaited the announcement of the results in the annual examinations, it seemed to many as though, as they entered the portals of the dear old building, they could see inscribed therein the ominous warning, "All hope abandon ye who enter here." The confidence with which the last paper had been written and folded and handed in had wilted away with the passing of days, and it was with anxious hearts that several

hundreds students craned forward, a surging, panting crowd of girls and men, as they listened and caught the names that Registrar Brebner had before him. And while so many went home with the whole world seeming less cruel than a short time before, there were also those whose hearts were left aching with the disappointment of failure, and whose only reward for night after night and day after day of bitter study and struggle was the buoyant, though sincere, handclasp of their more fortunate fellows, and their consoling, "Too bad, old chap, but better luck next time, you know." The newspaper offices, too, were favored with many an anxious visitor, and the morning's papers were also eagerly awaited by the hundreds of students who have already gone to their homes throughout the Province.

The Senate of the University of Toronto met and adopted the reports of the examiners in all faculties and departments, with but every few exceptions. The results in all four years in arts and in the fourth and third years in medicine are as below.

Under a recent regulation of the University candidates who have succeeded in passing in a majority of subjects of their year, together with any back subjects, are allowed standing in the subjects in which they pass, but are required before proceeding to a higher year to write off the stars, with the exception of two, which may be carried to a higher year.

Group I.—Medicine, Clinical Medicine, Pathology and Therapeutics—1, J. A. Oille; 2, G. E. Wilson, S. C. Yin; 4, W. E. Gallie; 5, F. C. Neal; 6, R. P. McLaughlin; 7, W. A. Graham; 8, J. Phillips; 9, J. D. Leeson; 10, E. M. Walker, M. H. Langs; 12, N. D. Buchanan; 13, C. E. Knister; 14, G. A. Winter, E. A. Gray.

Group II.—Surgery, Clinical Surgery, Surgical Anatomy and Pathology—1, J. A. Oille; 2, M. H. Langs; 3, W. A. Graham, S. C. Yin; 5, J. Phillips; 6, G. E. Wilson; 7, R. P. McLaughlin; 8, F. C. Neal; 9, E. A. Gray; 10, W. E. Gallie; 11, N. D. Buchanan.

Group III.—Obstetrics, Gynecology and Pathology—1, J. Phillips; 2, J. A. Oille, G. E. Wilson; 4, M. H. Langs; 5, F. C. Neal; 6, J. D. Leeson, S. C. Yin; 8, W. E. Gallie; 9, E. A. Gray, G. A. Winters; 11, W. A. Graham; 12, N. D. Buchanan; 13, J. H. Hamilton; 14, C. L. Constantinides; 15, T. D. White; 16, E. M. Walker; 17, F. A. Ross.

Group IV.—Medical Jurisprudence, Toxicology, Hygiene and Medical Psychology—1, G. E. Wilson; 2, J. A. Oille; 3, J. D. Leeson; 4, J. Phillips; 5, E. A. Gray, S. C. Yin; 7, W. E. Gallie; 8, Miss M. J. Hoyles, J. G. W. Hunt; 10, G. A. Winters; 11, W. A. Graham, S. Singer; 13, F. C. Neal; 14, J. L. Biggar; 15, P. F. Quinlan; 16, E. V. Frederick, W. B. S. Hunt, G. S. Wray; 19, C. E. Knister, R. P. McLaughlin, H. McLean; 22, A. McInnis; 23, A. T. Bond, M. H. Langs; 25, N. D. Buchanan; 26, T. W.

Walker; 27, T. H. McColl, G. F. Lamb; 29, G. W. Ross; 30, D. S. Johnstone, W. E. Somers; 32, T. D. White, J. H. Hamilton.

Degree of Bachelor of Medicine, with honors—1, J. A. Oille; 2, G. E. Wilson; 3, J. Phillips; 4, F. C. Neal; 5, W. E. Gallic; 6, W. A. Graham; 7, J. L. Biggar; 8, J. D. Leeson; 9, N. D. Buchanan; 10, C. E. Knister.

First Year.—Honors—1, J. H. Holbrook; 2, R. J. McMillan; 3, A. T. Ripley; 4, D. M. Kilgour; 5, C. A. M. Thrush; 6, N. D. Frawley, F. Manning; 8, A. S. Moorhead; 9, G. H. Gardiner; 10, W. H. Reid; 11, J. W. Counter, F. H. Mayhood; 13, R. H. Ruby; 14, C. W. Hurlbert, J. H. Storry.

Second Year.—1, R. H. Bonnycastle; 2, Miss M. McAlpine; 3, W. S. Lemon; 4, S. R. Dalrymple, G. Ford; 6, A. G. McPhedran; 7, C. C. Schlichter; 8, M. E. Gowland; 9, G. I. Black; 10, Miss M. E. Reid, W. Roberts; 12, C. E. Spence; 13, A. Sinclair.

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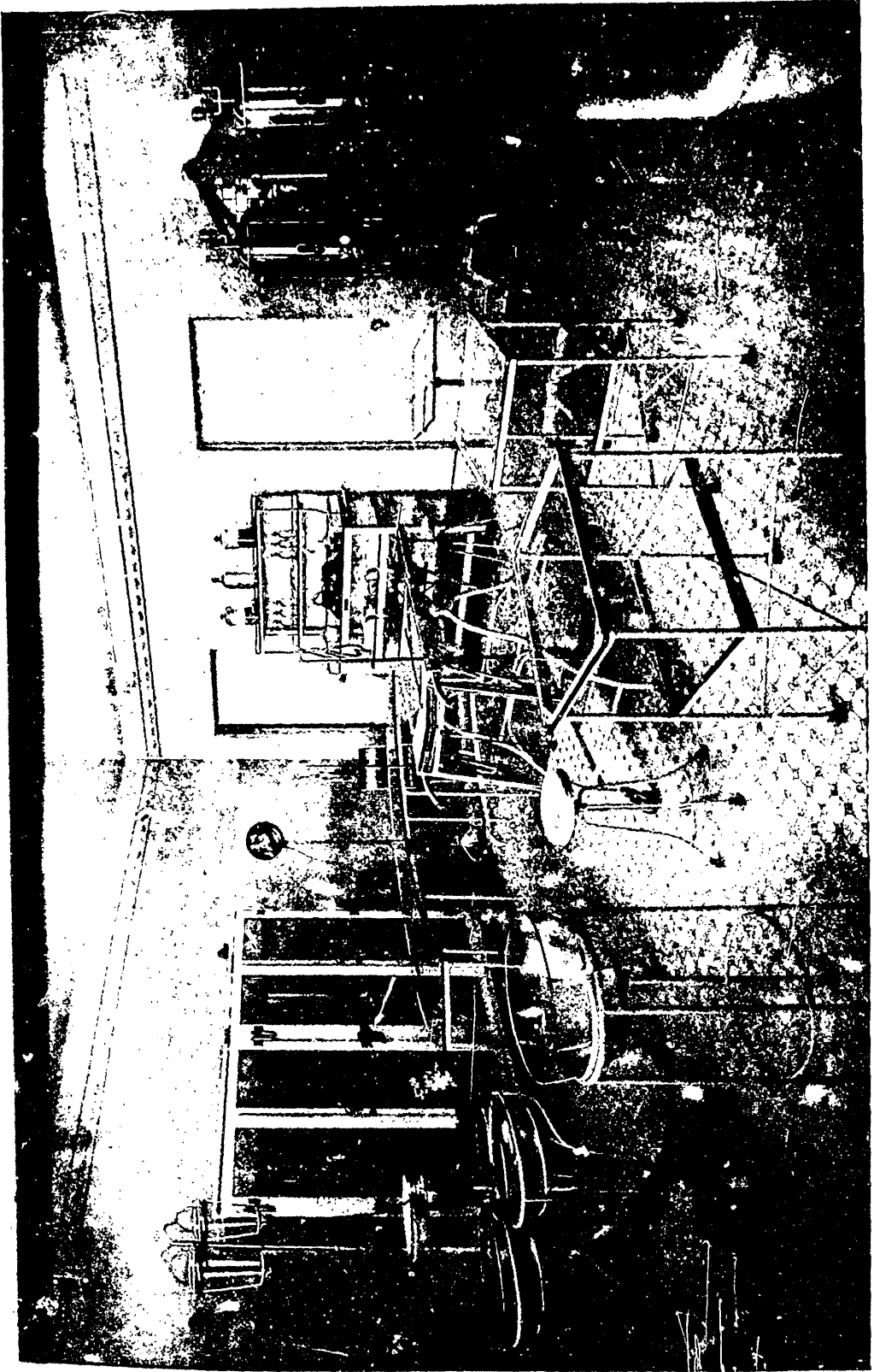
#### WING IN GRACE HOSPITAL OPENED BY GOVERNOR-GENERAL.

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His Excellency the Governor-General opened, on the 1st of June, the Pellatt wing for surgery in Grace Hospital, and unveiled a portrait of Lieut.-Col. Pellatt in the reception room, and Lady Minto presented the graduating class of nurses with their diplomas. The new operating room is asserted to be the most modern and best equipped in Canada. The ward comprises a dressing-room for the surgeons, then a wash-room. This opens into the operating-room, the floor and walls of which are tiled, and every arrangement is made for the most thorough cleansing and disinfecting. The equipment, tables, instruments, etc., are of the most improved character, manufactured by The Chandler-Massey Co., Limited, of Toronto, and the lighting and ventilation could not be improved upon. Off the operating-room is a sterilizing chamber and another room, where anesthetics are administered, and opening off the latter is a recovery room, with a cot, where the patient is laid after an operation.

The hospital entrance was draped for the occasion with two large Union Jacks. Among those present were: Edward Gurney, Chairman of the Board; Lieut.-Col. Pellatt, Mrs. Pellatt, Mrs. Wm. Christie, Lieut.-Col. Bruce, Lady Kirkpatrick, Mrs. J. B. Hall, F. Roper, Mrs. Geo. A. Cox, Mrs. F. G. Cox, Mrs. J. M. L. Forster, Mr. and Mrs. E. R. Wood, Mr. and Mrs. R. Tackaberry, Provost Macklem, Mrs. Arthur Massey, Drs. G. P. Sylvester, W. A. Young, E. H. Adams, H. B. Anderson, J. N. Anderson, C. J. Copp, J. M. Cotton, W. J. Emory, L. H. Evans, F. Fenton, W. F. Britton, J. T. Clark, E. J. Barriek, J. C. Patton, E. H. Hooper, J. B. Hall, E. A. P. Hardy, W. H. Harris, A. O. Hastings, C. J.





NEW OPERATING THEATRE GRACE HOSPITAL TORONTO

Hastings, W. J. Malloch, J. H. McConnell, D. W. McPherson, W. Nattress, L. L. Palmer, B. L. Riordan, G. A. Clendenan, H. Hunt, C. J. Currie, Mr. E. J. and Miss Towner, Mr. and Mrs. Niellar.

The company viewed the new ward with much interest, and then proceeded to the reception-room, where the oil painting of Lieut.-Col. Pellatt was unveiled. It is by Mr. J. W. L. Forster, and is an excellent likeness of the Colonel in the uniform of commander of the Queen's Own Rifles. Mr. Gurney briefly welcomed the distinguished guests, and His Excellency in reply expressed their pleasure in participating in a function of that nature. Lady Minto then presented diplomas to the following graduating nurses: Misses E. Cornell, L. Baird, I. Robinson, A. Chant, O. B. Hutchinson, E. Worden, M. A. O'Byrne, M. Selater, H. Macpherson.

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#### BANQUET OF TORONTO UNIVERSITY ALUMNI SOCIETY.

PRESIDENT LOUDON, of Toronto University, presided at the banquet of the Alumni Society, held in the gymnasium, on June 12th. Among those who surrounded him at the head of the table were: The Lieutenant-Governor, Chancellor Meredith, Hon. J. M. Gibson, Hon. R. Harcourt, Dr. Gilman, Dr. Hoskin, Dr. Reeve, Chancellor Burwash, Dr. Goldwin Smith, Dr. C. D. Massey, Mr. Irving H. Cameron, Prof. Ramsey Wright, Principal Sheraton, Mayor Urquhart, J. Herbert Mason, Principal Hutton, J. H. Nairn, J. H. Coyne (St. Thomas), Principal Galbraith, Principal Embree, Rev. J. A. Macdonald and T. Arnold Haultain.

The hall was handsomely decorated and covers were laid for 300 guests. The first toast, of course, was that to His Majesty the King, who is an undergraduate of the college. The toast was enthusiastically received.

Dr. Reeve, dean of the medical faculty, proposed the toast of "Alma Mater," a toast, he said, which aroused many emotions, many reminiscences, in the mind of every graduate. He dwelt on the great progress of Toronto University, comparing her to a mighty oak, which from the tender seedling had planted its roots deep into the soil, and spread its branches to all parts of the country, and was now a strong, vigorous tree, destined to be a landmark for centuries yet to come. He spoke of the financial clouds of the past, now so happily cleared away, and commented favorably on the intense loyalty of the alumni for their beneficent mother.

In replying to this toast, the Lieutenant-Governor grew reminiscent, and spoke of the University in 1859, when there was no medical faculty, no law faculty, and the growth of these powerful branches of the University had been for him a most interesting and delightful study. His Honor emphasized the axiom that the success of a university depended on the *esprit de corps* of its

alumni, and he said he had no doubt of the future of Toronto. There could be no reason for pessimism.

Hon. J. M. Gibson, who also replied, said that he had been a student in the King's year. He warned the University against looking to the Government for everything. There must still be effort by the friends of the institution, but if that effort fell short the Government would stand ready to prevent disintegration from financial embarrassment. Nor did the Government desire to claim any political credit in the matter. It was simply a case of reasonable and proper administration in regard to which there was no divergence whatsoever between the parties in the Legislature.

The speaker concluded by saying that any Government in Ontario, if properly approached from the front, not by a flank movement, would consider most favorably the University's needs.

Hon. Richard Harcourt said that the Government was convinced that only one university should be State-assisted. In this they were supported by the Opposition, and hereafter that question would not come up again. It would be a plank in the platform of whatever party might be in power. A generous response might be expected whenever any reasonable demands were made. The Act of the Legislature in setting aside a part of the public domain for the benefit of the women's residence was commented upon, and the intimation made that when the friends of the men's residence had done all they could to provide this so great necessity there would be a way found for completing the work.

When Dr. Goldwin Smith rose to speak in reply to the toast, "Our Guest," the diners rose *en masse* and cheered him and Mrs. Smith most heartily. They have been generous to the University, and made up the last \$5,000 for Convocation Hall. The doctor, after expressing his thanks, spoke of the growth of University federation. Now the consummation was at hand, and Toronto University could hold its head high among the great educational institutions of the world.

He had been sorry to see the residence abolished, but he hoped for another in the future, as something was needed to cultivate the social side of university life. That something was supplied in Oxford and Cambridge by the colleges, and in the American colleges by the Greek Letter Societies, which he believed did more good than harm.

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### BREFNEY ROLPH O'REILLY, M.D., C.M.

(Gold Medallist in Medicine, Trinity University, 1933.)

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At the recent final examinations in medicine at Trinity University, Toronto, for the degree of M.D., C.M., Mr. B. R. O'Reilly obtained the highest honor conferred in medicine, winning the gold medal and a certificate of honor. He also passed the final

examination for Trinity Medical College Fellowship Degree, taking first-class marks and certificate of honor; in his second year he obtained two certificates of honor, and in his third year obtained the highest marks in the class. Dr. O'Reilly was educated at Upper Canada College, from which institution he



BRIENEY ROLPH O'REILLY, M.D., C.M.  
Gold Medallist in Medicine, Trinity University, 1903.

matriculated before entering Trinity Medical School in 1899. During his course at Upper Canada, Dr. O'Reilly took prizes in natural science, history and geography; and in athletics in 1890 won the silver cup (first prize) in the twelve-year-old class for "hundred-yard race."

We congratulate Dr. Charles O'Reilly (Toronto General Hospital) on the high standing his son has taken in the profession, which seems almost hereditary in the O'Reilly family.

Dr. B. R. O'Reilly's grandfather, Dr. Gerald O'Reilly, practised in Hamilton from 1834-1861, and when a student was a room-mate of the late Sir Charles Lever, M.D., for many years in Dr. Stevens' Hospital, Dublin. His uncles are Dr. Gerald O'Reilly, of Guelph, and Dr. E. B. O'Reilly, Hamilton. His great-uncle, Dr. John O'Reilly, F.R.C.S.I., was a prominent surgeon in New York, and contributed largely to medical literature in his day. One of his great-great-uncles was surgeon-in-ordinary to George IV., and resided in Windsor Castle. On his mother's side the Rolphs have had many notable representatives in the medical profession, both in Canada and in England. His great-great-grandfather, Dr. Thomas Rolph, of Thornbury, England, became a member of the "Corporation of Surgeons," England, 1790, and practised at Vittoria, County Norfolk, in the old Long Point District of Upper Canada. Before settling in Canada, he practised near Dr. Edward Jenner, the discoverer of vaccination, with whom he was very intimate. His eldest son, the late Hon. Dr. John Rolph, was a distinguished and well-known practitioner and politician in Canada, and was also a member of the "Inner Temple," London (1821), practised both medicine and law in Dundas for many years, and was the founder and dean of "Rolph's Medical School" in Toronto.

Dr. O'Reilly occupies a very unique position, having been born within the precincts of the General Hospital, where he has lived continuously during his minority, and is, perhaps, the only man in the profession who has enjoyed the great privilege of residing so close to his practical work from his youth to the end of his medical course, which has just been completed with such honor to himself and credit to his teachers and his *Alma Mater*.

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#### UNIVERSITY FEDERATION.

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MORE than once within the past three or four years the federation of Trinity with Toronto University has been announced as practically an accomplished fact, but each announcement has been premature. Though time and again negotiations to that end when apparently on the eve of consummation have failed, the men who have had disinterestedly at heart the interests of higher education in Ontario have not been discouraged; they have continued to work steadily, and now again the successful conclusion of their labors appears to be only a question of a few weeks. This time the federation includes the faculties of art and medicine.

Last year the negotiations for the amalgamation of the medical faculties of Toronto University and Trinity College came to nothing, because the Trinity men thought the amalgamated faculty, as proposed by the Toronto representatives, was not fair and equitable. Negotiations were then undertaken for a closer union between Trinity University and Trinity Medical College, with the result that an arrangement was come to by which the medical college was to become the medical faculty of Trinity University, and the University was to raise \$250,000, with the principal portion of which a new building, with the finest modern equipment, was to be built for the purpose of the medical faculty in the vicinity of the General Hospital. Of the quarter of a million asked \$160,000 was raised, and on the strength of that an agreement was entered into between the faculty of Trinity Medical College and Trinity University, under which a certain time was allowed for the completion or abandonment of negotiations looking to the federation of the universities, in those negotiations the University to act, with some reservations, for the medical college. If federation was finally abandoned the University was to build for the medical faculty a new building, at a cost of \$100,000.

The erection of such a building, it was seen, would be a great obstacle in the way of federation. The knowledge of that, the increasing strength of Trinity, but still more the increased sentiment in favor of federation, led to the reopening of negotiations by the University of Toronto a short time ago. The matter was left to a Committee, composed of Mr. Byron E. Walker, Dr. John Hoskin, President Loudon, Provost Macklem, Dr. J. A. Worrell, Dean Reeve, Mr. I. E. Cameron, Dr. Sheard and Dr. J. A. Temple, now dean of Trinity Medical College. The draft of an amalgamated faculty of medicine was prepared, and was submitted to and approved by the Trinity medical faculty two weeks ago. It was submitted to the medical faculty of Toronto University a few days later, and though not officially announced as yet, we understand has been accepted. Members of both medical faculties are considered deserving of praise for the readiness with which they were prepared to make considerable personal sacrifice to further the cause of medical education in Ontario, as they will lose considerable by amalgamation. Ex-Dean Geikie, at the outset of the present negotiations, declared himself opposed to them, and sent in his resignation, which was accepted with regret.

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#### CANADIAN MEDICAL ASSOCIATION.

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AS ALREADY announced through the columns of this Journal, the thirty-sixth annual meeting of the Canadian Medical Association will take place at London, Ont., on the 25th, 26th, 27th and 28th

of August, with Dr. Walter H. Moorhouse, of that city, as President. Dr. George A. Hodge, Queen's Avenue, is Chairman of the Programme Committee, and Dr. Hadley Williams is Local Secretary, to whom or to the General Secretary, Dr. George Elliott, 129 John Street, Toronto, titles of papers may be sent. Arrangements for reduced fares on the regular Standard Convention Certificate plan have already been arranged for with the Grand Trunk and Canadian Pacific, while negotiations are in progress with the Intercolonial and Canadian Pacific officials west of Fort William. These arrangements will be published in full in due time. In addition to those who have consented to read the addresses, the following have signified so far their intention of being present and contributing papers: A. M. Rosebrugh, Toronto; Perry G. Goldsmith, Belleville, Ont.; T. Shaw Webster, Toronto; R. Ferguson, London; A. Laphorn Smith, Montreal; Henry Howitt, Guelph; Alexander McPhedran, Toronto; E. G. Wood, Nashville, Tenn.; C. W. Wilson, Montreal; George H. Aylesworth, Collingwood; Jennie G. Drennan, St. Thomas. This list is every day being added to, and the Programme Committee is desirous that those contemplating should send in their titles without further delay. Entertainment is in the hands of a strong committee, and London is quite sure to do itself proud in this direction. It is understood that Western Ontario is going to turn out very strong to the support of London, and there is every probability that the largest attendance ever recorded will be equalled if not eclipsed. A great many members in the western peninsula who have not attended the annual meetings for years will take advantage of the proximity of this meeting to renew old acquaintances. The meetings will take place in the Normal School Buildings, which are said to be the finest of their kind in Ontario.

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#### LADY MINTO VISITS THE WESTERN HOSPITAL.

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THEIR Excellencies Lord and Lady Minto, accompanied by Major Maude, paid a visit to the Western Hospital on the morning of June 2nd at 11 o'clock. At the entering in, Dr. A. A. Macdonald, the dean of the staff, presented to the vice-regal guests his confreres, and other guests assembled. Lady Minto met the Ladies' Board of Managers, consisting of Mesdames Todd, Baxter, and Dr. Stowe-Gullen, at the office, and was the recipient of a handsome bouquet of pink roses tied with a pink ribbon of silk. Passing on further into the institution, the several floors presented the appearance of vast hanging gardens, decorated with flowers and pennant.

Under the direction of Miss Fletcher the first floor had assumed the beauty of an Oriental court. Palms stretched out before the

eyes, palms rounded the niches of the room, and the table was embowered with palms and surmounted with the Union Jack. Placed here and there among the festoonery of green was Canadian mistletoe and the star-like embroidery of maple leaves. Flags were draped over the archways, and the grand entrance was en fete with the ruddy emblem. The same scene of taste and beauty was repeated on the second floor. The honored guests inspected all departments, and expressed unbounded admiration of all.

On the lawn comfortable tents caught the observance of the Lord and Lady, and especially delighted was her Excellency at the bracing air inhaled on the verandah of the hospital. The visit over the strains of "God Save the King" sounded and resounded throughout the spacious apartments, and their Excellencies departed, taking a last glance of the institution that had so well met their ideals of what a hospital should be.

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#### TRINITY MEDICAL EXAMINATIONS.

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THE results of the final examinations at Trinity University for the degree of M.D.C.M. are announced. The winner of the gold medal is Brefney O'Reilly, son of Dr. Charles O'Reilly, of the General Hospital. The silver medal goes to Mr. E. C. Beer. The other results follows:

Certificates of honor—H. E. Eagleston, B. F. Cowler, W. T. Gemmell, M. J. Perkins, A. A. Thompson.

Class I.—G. E. Chapman and C. H. Hair equal, G. P. Campbell, A. W. Canfield, B. H. Hamilton, J. M. Baldwin, T. J. C. Tindle, R. A. M. Cook and C. C. Cragg equal.

Class II.—J. H. Kidd, J. P. Cade, R. S. Conboy, R. E. Loucks, E. V. Smith, W. C. Arnold, F. R. Fursey, A. H. Campbell, W. W. Milburn, W. E. Mason, C. E. Duggan, D. Munro, A. C. C. Johnston, L. S. Pritchard, R. A. Fraser, C. B. Stone, J. A. Anderson, W. A. Lawrence, H. W. Coulter, G. F. R. Richardson, E. C. Dixon, F. W. Hill, B. D. Munro, A. H. Cook, F. J. Dodd.

Class III.—Miss E. F. Lucas, C. R. Learn, J. W. Rowntree, H. F. W. Vernon, P. W. Tuller, E. T. Curran, A. W. Hicks, Miss O. M. Rea, W. E. Ekins, Miss M. G. Bryson, Miss L. M. Paterson.

Conditioned—In pathology and therapeutics, J. A. Allen; in therapeutics, F. M. Crosby, G. O. Ireland; in midwifery, gynecology and pathology, W. E. McLean; in applied anatomy, A. E. Whitmore.



ITEMS OF INTEREST.

**Polk's Medical Register.**—The eighth revised edition of this well-known work is now under way, and will appear in due time. Send for descriptive circulars, and do not be deceived by imitators. Polk's Medical Register and Directory has been established sixteen years. R. L. Polk & Co., Publishers, Detroit, Mich.

**University of Toronto Alumni Dinner.**—The events of Convocation week at the University of Toronto were brought to a close on June 12th, in a very pleasant manner by the banquet to the alumni. Graduates from all parts of the Province were present, and these, together with the members of the graduating classes, renewed old acquaintances, and joined in singing the college songs.

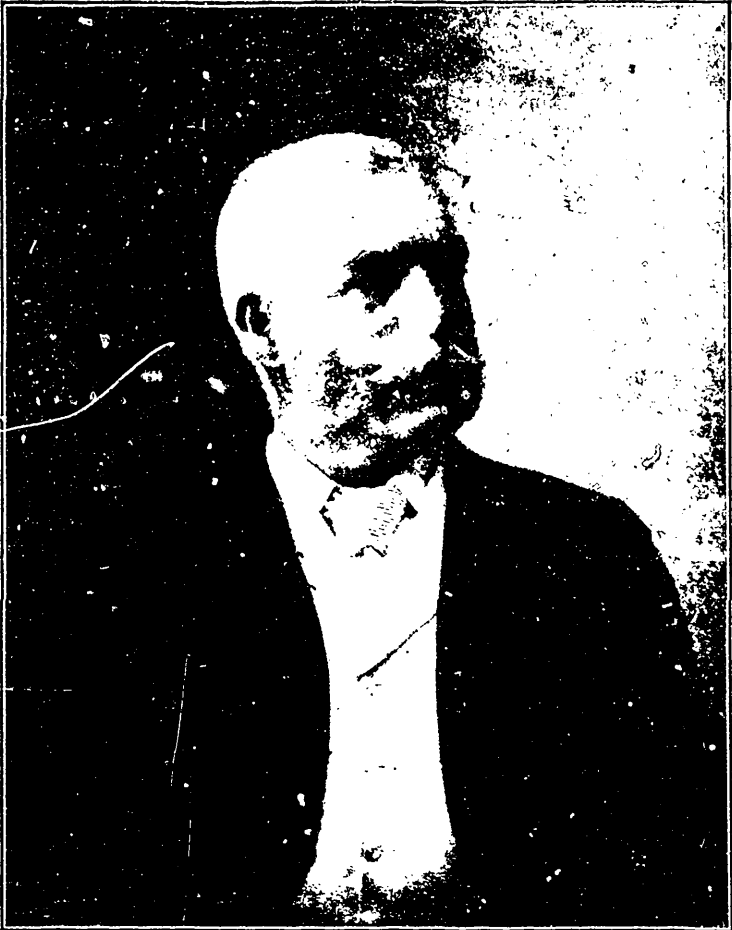
**Queen's Jubilee.**—Queen's medical faculty have finally decided to celebrate the jubilee of the college's foundation next October, at the same time as the principal's installation takes place. Some of the medical professors had proposed holding the event next spring, as the fifty years will not have elapsed till then, but it was thought better to have it take place at the beginning, rather than at the close of the session.

**Sale of Narcotics.**—A resolution calling upon the Ontario College of Pharmacy to take action in petitioning the Government to pass an Act placing the sale of narcotics on the same basis as that of spirituous liquors, was passed at a meeting of Districts Nos. 3 and 4 of the Graduates of Pharmacy, held at the college on the 11th ult. This resulted from a discussion on the alleged growing abuse of these drugs. It was asserted that in the State of New York over 500,000 people were victims to the "dope" habit.

**Toronto Western Hospital Garden Party.**—The Women's Auxiliary Board of the Toronto Western Hospital gave a garden party on June 20th, on the hospital grounds, 381 Bathurst Street, from 3 to 11 p.m. The 48th Highlanders' Band was in attendance during the evening. Refreshments were served. The funds will be used in aid of the new pavilion to be erected this summer, and for which the plans are now completed. The new addition will be forty by one hundred feet, three floors, and contain accommodation for seventy-five patients.

**Medical Men Dine.**—The medical class of 1903, University of Toronto, held their graduating dinner at the King Edward Hotel on May 23rd, Mr. E. A. Gray, B.A., presiding. Covers were set for ninety. The guest of honor was Dr. Adam Wright, Professor of Obstetrics, who spoke in kindly and well-wishing terms to the new-fledged doctors. Speeches were also made by O. T. Dinick, Eugene De Haitre, B.A., and S. C. Yea, B.A., and James L. Biggar sang. Many of the men said good-bye to each other after a fellowship of four years.

**A Chief Coroner for Toronto.**—A bill has been passed by the Ontario Legislature, at the session recently closed, providing a chief coroner for the City of Toronto. Dr. A. J. Johnson received the appointment, and we congratulate him upon this recognition of his abilities as a medical jurist. The salary is to be



DR. ARTHUR JUKES JOHNSON,  
Recently appointed Chief Coroner for the City of Toronto.

\$1,500 per year, one-half to be paid by the Government, and the balance by the city. The object of the bill is that all inquests shall hereafter go through one office, that of the chief coroner, who shall either hold the inquests himself, or apportion them to whoever he may see fit, making an equal division of the inquests among those who have been most active in the work.

**Dr. Kennedy's Success.**—John Alexander Kennedy, M.D.C.M., a graduate of Trinity Medical College, son of Daniel A. Kennedy, of 286 Carlton Street, has the unique honor of being the first Canadian to be appointed a Justice of the Peace in Zululand. Mr. Daniel Kennedy has received from his son the parchment of Sir H. F. McCallum, Governor of Natal, making the appointment. Dr. Kennedy is twenty-eight years of age and has been in Africa three years. He served as civil surgeon with distinction during the recent war, and is now medical officer in the Mveta Mounted Rifles.

**Banquet of Trinity Medical Graduates.**—The class of '03 had their final gathering at the Arlington Hotel on May 29th. Covers were laid for sixty-five, and at 8.30 o'clock the dinner commenced, with Dr. M. J. Perkins presiding. The following members of the faculty were present: Dean Geikie, Dr. Teskey, Dr. Temple, Dr. Sheard and Dr. Bingham. After the toasts to the King, country and college had been replied to Dr. Teskey and Dr. Bingham delivered special addresses to the graduates. Then followed speeches from the representatives of the other years: Mr. S. H. Hillis, fourth year; Mr. G. F. Milne, third year; Mr. E. G. Hodgson, second year, and all the members of the graduating class of '03.

**The Ontario Medical Library.**—Up till now, the profession of Toronto and elsewhere have subscribed about \$3,200 towards the purchase of a new home for the Ontario Medical Library. This amount there is every prospect of being increased to at least \$5,000, which, if added to a similar sum which has been guaranteed by Chester Massey, Esq., of Toronto, whose generosity is so well known, will place the Ontario Medical Library in a home of which it stands in need, and will indeed be proud. It is to be earnestly hoped that the scheme will be accomplished without any further delay, so that the building, wherever it may be, will be all ready for use by October 1st next, where the different societies will meet regularly, thereby giving new life to scientific medicine in Toronto.

**Women Doctors Dined.**—The annual banquet of the Alumnae Association of the Ontario Medical College for Women was held in the college, 291 Sumach Street, on Thursday evening, May 28th. This is a function now well established, and has as its object the welcoming of all recent graduates into the profession. This year there were five women graduates. Most of these were present, along with the majority of women practitioners in Toronto. The interest of the gathering was greatly augmented by the presence of Dr. Eliza R. Gray, of Owen Sound, and Dr. Jennie Hill, Mitchell, who recently returned from China. Favorable reports and messages of a congratulatory nature were received from members

of the society practising in several of the States of the Union, and in foreign countries.

**Addition to Mimico Asylum.**—The Provincial Secretary purchased for the Ontario Government on May 16th by public auction, held pursuant to the direction of the Master-in-Ordinary of the Supreme Court of Judicature, the McNeil farm of seventy-three acres, lying west of the Mimico Asylum property, for the sum of \$7,100. The reserve bid fixed by the court was \$7,000. This seventy-three acres will be added to the Mimico Asylum property for additional farming purposes, and will be of much advantage to the institution, furnishing employment for a number of patients whom it is desirable to keep employed, and at the same time providing a larger area of farm land upon which to raise supplies for the institution. The farm and grounds now comprise two hundred and ninety-one acres.

**Convocation at McGill.**—At the convocation of the McGill medical faculty on June 12th, Dr. Roddick, in the course of his remarks, emphasized the need for assistance to the medical faculty to make it able to compete with other colleges. He referred to the rumored amalgamation of the faculties of medicine of Toronto and Trinity Universities, and said that singly they were very powerful competitors, but if they joined forces their strength would be increased four-fold. Regarding the measure for medical registration, Dr. Roddick said that with a majority of the Provinces now in line, he thought it would not be unreasonable to ask the Dominion Government to grant permission to bring in an amendment to the original Act allowing those Provinces which wish Dominion registration to begin the work. He had reason to believe that this permission would be granted.

**Lord and Lady Minto at Muskoka.**—His Excellency the Governor-General and Lady Minto, after breakfasting in their private car with their party on June 4th at Gravenhurst, proceeded by the steamer *Medora*, which was placed at their disposal for the day, across to the Cottage Sanatorium for Consumptives, and to the sister institution, the Free Consumptive Hospital, which is a mile drive from the former. Their Excellencies have both for many years been warm and active supporters of the efforts being made to stem the spread of the white plague in Canada, and were most interested in the inspection. They were received at the former place by Dr. J. H. Elliott, physician in charge, and Dr. J. A. C. Grant, Mayor of Gravenhurst, who is also a trustee of the institution, and by Dr. H. S. Hutchison and Dr. C. D. Parfitt, at the Free Hospital, and accompanied throughout the inspection by Mr. Aemilius Jarvis, of Toronto. About noon they embarked again on the steamer and took a trip up the lakes, and returned to Gravenhurst in the evening to catch the train for Peterboro'.

**Fraudulent Substitutes for Phenacetin.**—Phenacetin made by the Farbenfabriken of Elberfeld is protected by patent, and druggists selling an article what is said to be phenacetin, but which does not bear the private mark of the company, are liable to be prosecuted. Last autumn anxiety to make a dollar without earning it induced certain druggists in the Southern States to give orders to a travelling salesman, who represented that he was able to supply phenacetin at lower rates through a Detroit wholesale house. To protect their patent the Farbenfabriken of Elberfeld Company instituted suits against the offenders. Certainly if the efforts made by this company to enforce its patent rights contribute to the placing of purer drugs on the shelves of the druggists, the company is entitled to the thanks of the profession and the public, even if the suits which it is prosecuting are only for its own pecuniary benefit.

**A Provision for Better Sanitary Conditions in the City of Toronto.**—In the Legal Committee of the Legislature on June 4th, Dr. R. A. Pyne's bill to amend the Public Health Act was cut in half. The first clause was promptly rejected; the second clause passed. The first half of the bill provides that the Local Health Board may direct that the carcasses of all animals, and that meat, poultry, game, flesh, fish, fruit and vegetables shall be brought to fixed places for inspection by a health officer, and shall not be sold until so inspected. Mr. Stratton objected that such a provision would be impossible to carry out, and the Committee agreed with him. The second half of the bill aims at securing better sanitary conditions in the Chinese and Italian quarters of the city. It provides that a medical health officer may enter lodging-houses, etc., wherever crowded or filthy and compel better sanitary accommodation. At least 400 cubic feet of air must be provided for each occupant in a sleeping room, and the rooms must be kept "in a condition fit for proper human habitation."

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### DIET IN DISEASE.

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"Good diet with wisdom best comforteth men."

—Tusser, 1520.

THE cardinal principles of feeding the sick involve, first, the avoidance of all articles that disagree with the condition present, and, second, the giving of food best adapted to relieve the digestive organs of unnecessary labor and to maintain nutrition. In addition, for certain special diseases there are classes of foods which have distinctly curative values—for example, the use of fresh fruits and vegetables in scurvy, fats and oils in scrofula and tuberculosis. Although

there is no curative food for fevers, it should be remembered that there is nothing so easily assimilated as water, and advantage must be taken of this fact to introduce other foods into the body with it, giving them, therefore, in fluid form. The former treatment of fevers by starvation and depletion, on the theory that the poison of the disease was soonest conquered by withholding all food and drink on which it might thrive, and starving out "a devouring flame of inflammation" has long been superseded by more scientific methods. It is now known that in fevers, by supplying the patient with abundant nitrogenous food, the tissues of the body are spared from consumption—in other words that the proteid matter of the food is burned up or oxidised instead of the proteid matter of the patient's muscles and other structures.

Fever patients commonly excrete much more nitrogen than they take in as foods. In doing so, it is believed that they first exhaust whatever reserve supply may be on hand in the food proteids previously absorbed and circulating in the blood, and subsequently draw upon the tissues, just as is the case in starvation. In chronic fevers with remissions, like tuberculosis, there is less rapid waste than in the continuous forms, such as typhoid.

Dr. W. Gilman Thompson lays down the following conditions as those to be met in the dietetic treatment of fever:

1. To save tissue waste by supplying sufficient nourishment.
2. To give semi-solid or fluid nourishment in a form which will not overtax the enfeebled digestive apparatus or leave a large residue for decomposition.
3. To give abundant fluid with the object of relieving thirst and to wash out through the kidneys the waste matter produced by the increased rate of metabolism.

4. In some cases to give alcohol as a food as well as a stimulant.

In all fevers presenting periods of remission it is desirable to give the greater part of the food while the temperature is lowest, so that it will be better digested and absorbed, for at this time the tissues appear to temporarily recover their assimilative power to some extent. In mild cases, with remissions, if the appetite holds out, it may do no harm to allow some little variety in the diet; but if the fever is brief and the appetite fails, it is unnecessary to force the patient to take food.

As a rule, in fevers which are protracted or severe, nourishment should be given in fluid form. To offer solid food in serious fevers is practically to place foreign bodies in the alimentary canal, which merely ferment and putrify, causing discomfort, with flatus, fetor and diarrhea. There are some exceptions to this, notably the fever of phthisis, some forms of protracted sepsis and ague.

Milk being the first and natural food of man, it would seem most appropriate that it should constitute the staple article of diet in fevers in which the digestive powers are temporarily greatly en-

feebled or wholly suspended. The danger from its continuous and exclusive use arises from its coagulating in lumpy masses, which act practically as solid food; but the many means which are at the disposal of the physician and nurse make it possible to overcome this difficulty almost completely, and by processes of artificial digestion milk may be given ready for absorption, so that nutrition is rendered quite independent of stomach and intestinal digestion. In a large majority of cases, therefore, milk is altogether the best food. The natural nerve food, as supplied by nature in mother's milk, is Lactalbumin, the soluble proteid of whey. This can be procured in three forms, Nos. 1, 2 and 3. The Lactalbumins are not to be confused with other products, which, though soluble proteids, are prepared by rendering casein soluble by treatment with chemicals. Lactalbumin No. 1 contains 99 per cent. proteid matter, but has not a trace of casein or sugar of milk, and is specially suitable in the treatment of phthisis, typhoid, diabetes, diseases of the nervous system, in fact for all cases where extreme wasting is taking place. As the patient recovers ground, a mixture of Nos. 1 and 2 may be given, No. 2 containing 50 per cent. Lactalbumin and 50 per cent. caseinogen. No. 2 can be used with great benefit where the patient is not in a very serious condition, such as the first stages of tuberculosis. Lactalbumin No. 3 is exactly the proportion of proteids in mother's milk, and makes an ideal form of diet in anemic conditions, and especially for rachitic infants. The Lactalbumins are nothing but soluble whey proteids, having a definite value as a food for the nerve centres, thus enabling the various organs to act for themselves. That they have a most important medical value also is shown by the fact that in a patient fed with only eight ounces per week of Lactalbumin, together with ordinary diet, the increase of weight per week is out of all proportion to the amount of Lactalbumin given, being ordinarily six or ten times as much.

For infant feeding, the Lactalbumins constitute a food of undoubted value.

They are not only pure, but free from ferment, and can be given to the youngest infant, containing (as they do) the exact constituents of mother's milk, less the sugar, which may be added in quantity according to age or direction of physician; or on the other hand, the infant may be fed this, the nursing mother partaking of the food, where her own milk supply is defective or deficient or her health below par.

The value of the Lactalbumins in the treatment of disease is shown in the following two cases, recently under notice:

A. G., aged 23, was seized with a chill about 8 p.m., May 2nd, 1903. He had a severe epistaxis on three occasions during the preceding four or five days, and a great deal of frontal headache for two weeks before. When seen the temperature was 100.2,

and the pulse about 88. His tongue was furred in a typical manner, and already a certain degree of tenderness showed itself in the right hypochondriac region. He was put to bed and soon developed typhoid fever. The course of the fever was practically normal, with the exception that the rise of temperature at night was not as emphatic as usual. From the very first, difficulty presented itself in the fact that he was unable to take milk, it having been, as he described it, always his pet aversion. He was therefore put upon Lactalbumin No. 1, in two or three teaspoonfuls at a time every two hours. It agreed with him well, and constituted his entire form of diet, or nearly so, for about four weeks. The diarrhea, which, for a short time was profuse and accompanied with abdominal distension, became less and less severe, with little of the frequent distress from borborygmus.

As the temperature came down he was put upon a mixture of Lactalbumins Nos. 1 and 2. Towards the commencement of the sixth week he took No. 2 altogether, when he was also allowed, besides calf's foot jelly and champagne, at frequent intervals, beef broths and such like. He rose on the forty-fifth day and is now "better than ever." This case, therefore, goes to show that there need not now be any trouble with patients who claim they are unable to take milk diet, as they can be, as Prof. Wm. Osler put it, fed upon whey, "or better still, in its concentrated form of pure Lactalbumin."

R. T., a few weeks ago, became anxious about a slightly irritating cough he had had, especially as he had an uncle who had died some years ago from pulmonary tuberculosis. Examination of his chest showed a slight hollowing under the right clavicle with prolonged expiration over the apex of the lung on that side. Microscopical examination of the sputum at first showed no bacilli at all, though later they were found fairly abundant. As soon as the diagnosis was established, he was put upon Lactalbumin No. 2 in doses of one or two teaspoonfuls every three hours, as it is now a well-recognized fact that in phthisis the clear indications are that the digestive organs are in such condition that they cannot carry out their chemical functions to any great extent, owing to the fact that the nerve centres are all deranged. This form of food, which was practically all he took, proved ample for all his bodily needs, and by the end of the first month he had put on seven pounds in weight (stripped). In the form of medicine, he took capsules of morrhual creasote, three times a day, and made a special point of taking a judicious amount of daily exercise, sleeping in a tent every night. At the present writing, this man is progressing, the cough is but slight, and, not only is his weight increasing, but the bacilli found in the microscopic field are becoming less and less, so that it is hoped that by the advent of the cold weather, when he goes south, he will be practically well.