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THE CANADA LANCET

VOL. XXXVI.

JULY, 1903.

No. 11

PRESIDENTIAL ADDRESS, ONTARIO MEDICAL ASSOCIATION,
23rd ANNUAL MEETING.

By J. C. MITCHELL, M. D., Physician to the Asylum for the Insane, Toronto.

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 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 educationalist, Dr. Edgerton 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 result of written examinations. He showed how a very large amount of the work done was simply cramming for examination and not true education, and 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 schools of the Province, thus making our systems 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 times.

We can also trust the efficient staff of each of our medical 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 amount 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 of 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 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 through 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 anaesthetist 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 12th 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 of rendering the bill operative. The reason for this action was that, under the present Provincial Act, Quebec graduates in McGill Bishops and Laval Universities who have passed four years in their studies and obtained their degrees are entitled, without further examination, to obtain a license to practice 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, still has 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, and 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 nor 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 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 the past few years may well be ascribed to our increasing carelessness in vaccination.

Unless we are occasionally awakened 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, Vitosophists, Osteopathists, etc, were they not such a menace by reason of their assumed 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 vaccination known in the world, and the result is that smallpox is almost banished from the Empire. In 1899, with a population of 54,000,000 there were only 28 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 then 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 highly 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 quite 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 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 the 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 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 at all 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 can-

not 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 to prevent any case of insanity being sent to the gaol, unless there is absolutely no room for them in asylums, as is sometimes the case.

A change also should be made in the law, so that two medical certificates would transfer a patient from the gaol to the asylum as they do 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 means 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 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. William 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 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 the 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 has been raised to \$5.

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 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 still pander 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 that 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 clear 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 border on 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 bring our paper to a 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 least, "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 seems 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.,

Associate Professor of Gynaecology in the Johns Hopkins University.

Mr. President and Gentlemen :—

I GLADLY accepted your very kind invitation, not only on account of the great honour 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 examinations.

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 gynaecological 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 pinhead. 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 the body of

*Address delivered at the Ontario Medical Association, June 17th, 1903.

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 by 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 furnishing 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 foetal head. This was attached to the uterus by a very delicate pedicle, while all the omental vessel plunged into its upper portion and supplied nearly all its nourishment. Associated with this partially parasitic myoma was an accumulation of 52 litres of ascitic fluid.

A few months ago, while performing a hystero-myomectomy, I saw nodule as large as a base ball 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 latter fluid on histological examination is found to contain large quantities of fat droplets and cholesterin 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 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 intra-ligamentary 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 faeces 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), hæmosalpinx, tubal pregnancy, salpingitis, tubo-ovarian cysts and adenocarcinoma, 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 adenocystomata, dermoids, papillo-cystomata, primary adeno-carcinoma and ovarian absces-

ses. 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 outward, 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 centimetres 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 become incarcerated in the pelvis and pressure symptoms develop the *ureters* are frequently affected. First they dilate, giving rise to a hydroureter, 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 through-

out 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, clogged menstrual flow. In nearly every instance in which we find a large intra-ligamentary 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 two 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 tissue 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, any one 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 such 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 haemorrhage, which naturally would be explained as belonging to the myoma. One would hardly deem it necessary or wise to curette 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. Secondly: 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 foetal 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 haemorrhages. 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 haemorrhage. 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 notices 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 the 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 oedema 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 upward against the diaphragm and shortness of breath will naturally follow.

In those cases in which sub-mucous myomata exist, as evidenced by the prolonged menstrual periods or menorrhagia, the hæmorrhage usually increases in amount, and between the periods of bleeding there is a purulent or muco-purulent discharge. In some instances, the sub-mucous 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 portion of the tumor. Necrosis of the nodule now readily takes place and we have in addition to the hæmorrhage a continual watery and most offensive vaginal discharge, in odour 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 anæmic 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 hæmoglobin at this stage is often below 30 per cent. There are hæmic heart murmurs, and the patient suffers from 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 bi-manual 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 semi-lunar slit 2 or 3 cm. in length.

Where a sub-mucous 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 that from the rent there had been free hæmorrhage 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 hæmorrhage.

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 *ciscus* 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 a 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 cocoa nut, from the left broad ligament. The lower portion of this nodule extended far down beside the vagina. There was little hemorrhage, and the tissue 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 sub-peritoneal, 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 the operation. This we have noted very frequently. In such cases dead spaces have undoubtedly been left behind and there soon occurs 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, Caesarian 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 both 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 always well 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 over 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 hysteromyomectomies 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 hysteromyomectomy in which the patient was exceedingly anaemic 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 mesoforceps on each side and the organ is boldly split in the middle. As the incision is increased fresh mesoforceps 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 haemorrhage, but if the uterine halves are kept taut with the mesoforceps little 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 broad ligaments are then clamped and the tissues cut. The cervix is now drawn still further upward and all the adhesions are gradually separated from the under service. 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 adhered to the tumor, always sacrifice 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 co-existent adeno-carcinoma, or the development of sarcoma in a myoma, splitting of the uterus should never be performed, as we run the risk of not only implanting cancer or sarcoma cells upon healthy tissue, 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.

*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.

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 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 sewing up the rent in the uterine mucosa, and then uniting the muscle. If the myoma projects 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 hæmorrhages 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 hæmorrhage 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 pulse-

less. 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% formalin 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 doused with a 2% 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 haemorrhages 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

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

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 hæmorrhage, loss of health, pressure symptoms, septic infections, intestinal obstructions, staring us in the face and even the remote likelihood of sarcomatous degeneration or of 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 in consultation a patient complaining of slight hæmorrhage 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 did 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.

THE TREATMENT OF PNEUMONIA *

BY J. H. MUSSER, M.D., PHILADELPHIA,
President of the American Medical Association, Etc.

MR. Chairman and Gentlemen of the Association: My object in presenting the subject of the treatment of pneumonia is two-fold; first, I wish to use it as a means of showing a scheme which I am very fond of and which, in all probability, is common to all. I mean to say that all of us should have some formula fixed in our minds when we take up the consideration of the management of a case which is so comprehensive that when we leave that patient for a time we are satisfied that everything has been done for the patient's welfare. That applies especially to those who are engaged in consultation work, but not only the consultant but the general practitioner, it seems to me, cannot be too precise in following out such formula. and the one which I wish to present to you has been to me rather satisfactory and comprehensive and is a good working formula, so that those who are teachers, I think, may find in it a practical way of presenting the subject of the treatment of any given disease. Secondly, I bring the subject of the treatment of pneumonia forward because it is a practical one—one that comes home to us almost daily—and therefore one that should invite discussion among all, and certainly it is one that we cannot think too much about.

The formula that I refer to, or the scheme that I have, is that when I see a patient suffering from any ailment whatsoever, I start out by

* An address delivered before the Ontario Medical Association, 17th June.

laying down plans for the management of the case in accordance with the indications which I classify under five major divisions ; first, indications derived directly from the diagnosis ; second, indications for treatment based upon our conception of the morbid process ; third, indications for treatment based upon the symptoms ; fourth, indications for treatment based upon the results of our examinations of the other organs and structures of the body, not related to the disease ; and fifth, indications for treatment based upon facts derived from the social history, the family history and the previous medical history.

Now I shall at once pass over the general plans of treatment of cases of disease that we have. I shall not take up the effect of good nursing, of diet and matters of that kind, but at once dwell upon the subject in accordance with the outline I have given.

1. Treatment based upon the diagnosis. Now, in some diseases—I need scarcely name them, malaria, syphilis, diphtheria and a few other diseases—as soon as the diagnosis of the special ailment is made, a line of treatment comes before us ; it matters not what the conditions may be, what the symptoms may be, what the state of either organs or structures. We know in the case of diphtheria we have to give anti-toxin. I know of no circumstance which should excuse its use. In malaria we must give quinine ; and in syphilis, mercury and iodides. This is treatment based upon the diagnosis. Is there any specific in pneumonia ? We have in modern days struggled after a specific, and tried to think that the serum is of some value. I have used it considerably, but am free to say that as yet I cannot see that it is of any special value, and therefore I cannot recommend the anti-pneumococcic serum. I must say, in justice to some of my colleagues who have used the specific remedy that they have felt they did see some good come out of its use. Two years ago I used it quite considerably, but last year I did not use it because my experience did not prove to me it was a satisfactory remedial measure. It is true, those who have studied it closely do not recommend it. They say a pneumo-coccus infection is of such a character, that we cannot well hope for a remedy that will counteract the toxins in the blood. With this expression of opinion as to the specific medication, I go at once to a treatment based upon our conception of the morbid process of the disease.

2. Of course it is an infection and in consequence of the infection there is an inflammation, and, in consequence of this, toxins are manufactured and a toxæmia rapidly develops. Our first thought is, as soon as we have a case of pneumo-coccus infection, whether we are sure or not of the localization of the seat of the infection in the lung ; but

the temperature, the cough, the sputa, and the phenomena which we know so well make it morally certain that we have to do with a pneumonia, although the physical signs are wanting. In such instances we should at once go at the lung, hoping that we may control or modify the extent of the inflammation. I am one who believes thoroughly that we can do a great deal by this means, and hence as soon as I feel that the patient has been infected, that the lung is the seat of the infection, I dry-cup my patient freely, even though I am not sure whether it is at the base or the apex. I do not hesitate when respiration increases to 40 or 50 to cup the patient. I not only do this once but repeat the cupping at the end of 12 hours, if there is increased respiration or other symptoms. I not only cup at the end of 12 hours but again the next day. I cup pretty extensively, and, as I shall explain later, it not only modifies the extent of the inflammation but also, and very largely, relieves many of the pulmonary symptoms.

There is with the infection, high tension pulse and all the general phenomena that attend an acute inflammatory process, so that if we limit blood pressure we are also going to limit the extent of the inflammation, hence I resort to mild purgation, and I give at once calomel, as soon as I am satisfied that the patient has a pneumo-coccus infection, with the object of securing a lower blood pressure. There is always in these cases a gastritis, as indicated by the vomiting and the furred tongue. If I administer it, I think I am also disinfecting the upper respiratory air passages and also modifying the infection; and, secondarily, limiting the manufacture of toxins. I think, therefore, we have the best grounds in the world, from the nature of the process, to give a dose of calomel and follow it by a saline, in order that we may, in the first twenty-four hours, secure a mild purgative effect, and then, too, for the reason I want to mention more particularly. I begin at once with the use of water. Probably the first twenty-four hours I use only water internally. I use a large amount. Apply the water externally in every febrile patient by means of a sponge bath, and even use the dip bath if the temperature is very high at first. In this manner the first object is attained that we think is suggested by our conception of the morbid process, namely, the inflammation is to a certain extent limited, and remember, I do not think it is limited by the first cupping, or the second cupping but I think repeated cupping is required in order to bring about a result. I am sure of this, at least, that if cupping is done vigorously we allay the collateral congestion that occurs around the inflammatory area, and thereby prevent an infection of that congested area, which will certainly take place if the congestion is not relieved, and that prob-

ably is all that is necessary to do in a large majority of our cases of pneumonia. From this on it is a matter of good nursing, the moderate use of purgation, the use of water and the proper diet that I have mentioned.

But there are other indications derived from our conception of the morbid process. The manufacture of toxins goes on. We must limit this manufacture of toxins as much as we possibly can, and we must aid in the discharge of these toxins, the liberation of them from the body, and, finally, we must neutralize the effect of the toxins.

Now we have limited the manufacture of toxins by lessening the amount of inflammation, or by an attempt at least to limit the extent of the inflammation. This, of course, limits the manufacture of toxins. In addition, however, we may limit the manufacture of the toxins by a thorough disinfection of the upper air passages, for there is no doubt that there are many of those micro-organisms which have a normal relation to the upper air passages and soon become pathogenic. Therefore, I start out at once to disinfect the upper air passages. I have said I give a dose of calomel—5 grains on the tongue—and let it slowly dissolve from the tongue to the upper air passages. I think that has a good salutary effect as a local disinfectant, but I am not content with that alone. I want the nurse to use mouth and throat washes. I think it of very great importance to disinfect the upper air passages, as much as we can, in order that we may limit, first, the occurrence of secondary inflammations, and, secondly, the manufacture of toxins in these regions.

However, the toxæmia has advanced in spite of our efforts to limit the extent of inflammation. It has been very virulent with extreme toxæmic areas. How are we to liberate the toxins? How are we to counteract their effects? The liberation of the toxins practically means the use of such measures as will keep up to the highest pitch free action of the kidneys. We know from investigation that the toxic qualities of the urine is enormously increased in cases of pneumonia, and we can modify this if we give our patient large amounts of water, if we introduce it into the system by the mouth and by other means. The amount of water that can be introduced into the system by the mouth is more or less limited. We cannot pour water into the mouth all the time. Far better if it is an alkaline water and a water that is mildly laxative. But there are limitations, and, therefore, I want water introduced by other ways. I want it introduced by the bowel, and the best way is to introduce normal saline solutions. Of course, introduce as large an amount as you possibly can, without the bowel being so distended by

the amount as to cause the discharge of the fluid. A pint and a half would be probably quite sufficient.

Then, I do not hesitate to use, and I think we cannot be too assiduous in the use of normal salt solution under the skin. Indeed, so valuable is this that I think the necessary instruments that are required for its use should be a part of the armamentarium of every physician. I do not see how in this present day physicians can get along without their use, and I am sure I have seen the patient's life saved by the frequent use of hyperdermic injections of normal saline solution.

Then, too, I use the water externally. Of course I use ice in the shape of the ice bag, particularly if I can localize the area of inflammation. If I cannot, I am not in a great hurry to use ice, but wait until I know whether it is the apex or the base. If I cannot, therefore, localize the inflammation, and want to use external applications of water, I apply them over the whole thorax, and I use the method of Baruch, and I think that method is one of the most satisfactory methods I know of. I am satisfied it produces beneficial results. I believe it does limit to a certain extent, or helps to limit, the extent of the inflammation: but far better, I am sure it does help to counteract the effects of the toxæmia, or, perhaps I am going too far, it helps to eliminate the toxæmia, because cold applied in the manner Baruch has described, intermittently or constantly, over the surface of the chest, produces a stimulating effect. Consequently, after the application of cold in the manner that Baruch has told us, we see at once that fuller respiration takes place, the cyanosis that has developed lessens, the heart's action, which has been running from 120 to 135, falls to 110 or 100, and there is increased tone in the pulse, so that, in consequence of this, we have better renal elimination. The cold is applied not alone for the local inflammation, but it is also applied because it does help, by virtue of its effect upon the respiratory and circulatory apparatus, in the elimination of toxines.

Limiting the manufacture of the toxines first, and secondly, eliminating the toxines in the way that I have suggested is really the principal suggestion that we derive from our conception of the morbid process. Those of you who want to go a little farther and give medicines, as many do, and I see instances over and over again where it is indicated, can, in addition, for the elimination of toxines use the cardiac stimulants in moderate degrees—strychnine, nitro-glycerine and spirits. In a large majority of cases it does not seem necessary to go much farther, but it may happen we are not satisfied with the renal secretion, or with the use of the alkaline waters that are employed, or the use of

the measures I have suggested, and we want to use something more stimulating to the renal function. Under these circumstances I would not hesitate to use sparteine. It is a perfectly safe remedy, while it can be applied by the mouth or hypodermatically, and we are thoroughly justified in using it with the object in view clear in our minds of what we are after, based on the conception of the morbid process.

But in spite of this, the toxæmia seems to be getting control, and we find sometimes it gets absolute control, becomes master of the situation, and it is our aim to counteract the effect of the toxins as much as we can. We have not any direct antidote for this purpose. We must keep up the strength of the patient, and particularly use the class of remedies that are required for eliminating the toxins, namely, the cardio-vascular stimulants that I have mentioned. As to alcohol, use large amounts or small, early or late, preferably not until specifically, definitely indicated, preferably in small amounts, of course, if possible. It is not necessary to give it because it is a food, because the disease does not continue long enough that the patient will waste away, as, for instance, in typhoid fever. Nor is it necessary to give it to cause an appetite, or for general reasons. When we want to give alcohol, give it only when you want to tide the patient over a critical point. Then I don't care particularly to use whiskey or brandy. I don't hesitate to use a small amount, and to use it frequently, so as not to get the toxic effects, as I am sure we do not get from champagne, using it every hour or every two hours during the 24 or the 48 hours of the disease when it is needed. I do not think it is needed through the entire disease in uncomplicated cases of pneumonia. I do not believe it is needed in ordinary cases, only in certain cases, and you want to give a preparation of alcohol that does not depress the patient, hence the use of champagne.

3. Indications suggested by the symptoms. The only symptom possible that requires treatment outside of our conception of the morbid process is pain. Now, pain is a harmful thing. I am satisfied that many patients are very seriously affected by the pleuritis that gives rise to the pain. They are unduly shocked, more or less, and hence I am satisfied it is our business to relieve that pain as quickly as possible. It is only severe within the first 24 hours, and in an uncomplicated case in a person under 45 (I may say probably over 55, because you are all so robust and healthy here) I do not hesitate to use morphine hypodermatically until the patient is relieved. I am satisfied that this within the first 24 hours is a good thing. It is not necessarily indicated unless the patient has pain. Of course, the ice bags employed may be sufficient, the cupping may be sufficient, and, therefore, the first 12 hours I

wait to see if there has been the least relief either from the dry cups or from the ice bag, but if there is not I certainly will not allow the patient to spend the next 12 hours suffering from pain under those circumstances, I am sure we are doing the best for the patient if we give morphine.

4. The next grouping which I shall consider gives us indications for treatment in case of pneumonia. We have made our diagnosis, but we are not content simply with making a diagnosis of pneumonia, it is absolutely necessary that we should know thoroughly the condition of the nervous system, etc. The symptoms that arise are, of course, usually due to the complications. If the pneumonia has occurred in an alcoholic subject, the probabilities are we see very early symptoms of delirium tremens; perhaps, further, we may see that condition called a serous meningitis. When we see the approach of these it puts an entirely different aspect upon the case, and indications for treatment are different. In delirium tremens, I do not hesitate to begin the use of alcohol, and to administer the form the man has been accustomed to. Approaching wet brain, serous meningitis, more or less stupor or coma suggested, probably difficult to distinguish from the comatose condition of toxæmia. This serous meningitis can be promptly relieved by spinal puncture. I have seen the most brilliant results from this treatment. In spinal puncture two or three ounces of fluid from the spinal canal will at once produce a delightful effect. There is no reason why it should not be repeated in 24 hours if necessary. In one of my patients I repeated it three times in 24 hours, and the patient got perfectly well. In other instances, it was not necessary to apply it more than once. You know perfectly well how safe the procedure is and how easily it can be employed, and without anæsthetics or any unusual procedure.

The cerebral meningitis is, of course, a pneumo-coccus infection, and this is the one which is the very best as far as prognosis is concerned. We know the patient is more likely to get well. We save a great deal of time when we employ spinal puncture, but I would not hesitate, I had it done once, to trephine the spinal canal, opening the spinal canal and draining it. It is largely a matter of pressure in these cases, and if you relieve it your patient will have a chance to get well. The pneumo-coccus infection of all the serous membranes is not by any means a grave infection as compared with strepto-coccus or staphylo-coccus, hence our fight is to gain time.

These are the chief indications which arise from an examination or a study of the nervous system. Where there is serous meningitis and we are satisfied this is associated with failure, or with lowered circulation,

as indicated by blood pressure, I don't hesitate to give digitalis. They are the only ones, save those with heart disease, that I give digitalis to. It is of service also, or helps us to gain time in pneumonia, when there is meningitis, that is, the serous forms of meningitis.

Now, as to the gastritis that is likely to occur. It will probably disappear after the first 24 hours. The ice bag, or mustard poultice may be sufficient, or probably cold water coil for a short time will be enough. We cannot give as much water as we would like to give to our patients, but the use of calomel as I suggested will help. If the vomiting continues, I don't hesitate to give some bismuth, etc. It, however, is not usually a grave complication, except in alcoholic subjects.

Far different is the colitis that occurs. I consider we are likely to find an examination of the gastro-intestinal tract this to be a very serious symptom in pneumonia, and one that gives us indications for active treatment. We must not neglect the slightest diarrhœa, the slightest mucous diarrhœa. Probably it will be enough to wash out the bowel with normal salt solution and again with boric acid, but in spite of this there may be three or four passages in 24 hours, there may be a little pain or gradually increasing tympany. That is the one symptom. It is probably an evidence of toxæmia. It is more an evidence of the occurrence of colitis. Of course, for its relief we must manage the colitis as well as we possibly can, and probably better by the measures I have spoken of, together with large doses of bismuth, and with moderate doses of opium.

Nevertheless, the tympany may continue and become the chief symptom. We may feel from the enormous distension of the abdomen, the upward rising of the diaphragm, the dislocation of the viscera and seriously impaired re-action of the heart, that our patient is going to die. The rectal tube may relieve somewhat, passing it high and leaving the nozzle of the syringe in the rectum may be of service. If not, I resort to a remedy which I think I can with great confidence recommend, and that is eserine. It is a powerful stimulant, and has afforded me very great satisfaction in cases of intestinal tympany due to the toxæmia, or to the colitis. I prefer to give it hypodermatically, but if we want to get a local effect in the stomach, we can give tincture of physostigma, or the eserine. From the cases in which I have employed it, and from some other cases of tympany in which I have seen it used, I feel satisfied we can place a great deal of reliance upon this drug, and don't hesitate to recommend its use in the management of these very disagreeable complications of pneumonia.

Treatment based upon the results of the examination of the kidneys. I watch the kidneys and renal secretion as much as I do the

lungs. In fact, I don't care very much about the lungs, except to know the respiration rate, but I want to know a great deal about renal secretion, about the amount of urine passed, and the composition of it, and whether there is present or not a nephritis. We want to know within the first 24 hours whether the patient is suffering from chronic Bright's disease, and has got an attack of pneumonia on the top of it, which may modify the whole aspect of the case. It certainly would modify our use of morphia. I would not want to use morphia freely in the case of a person who had a nephritis. I am sure under those circumstances the morphia would probably kill the patient. Therefore, in the first 12 hours, have the urine examination made: Bright's disease first, pneumonia secondarily, or if it is Bright's disease coming on in the course of a pneumo-coccus infection. If the latter, I am not so very anxious. I don't modify my treatment as to the liberation of the toxins. I go more vigorously from the very first. I give all the water I possibly can to that patient in every way I think of giving it. In addition to cupping over the lungs I cup over the kidneys also, and I don't hesitate once in 24 hours to apply a hot bag. I use either a hot bag or a hot bath. I certainly, as I say, watch the kidneys more closely than I do the lung, and I expect by such watchfulness over these organs to get better results than if they were neglected. Other than fearing, therefore, renal insufficiency I pay but very little attention to the nephritis that occurs in the course of pneumonia, because I feel that what I am doing in general is the best thing that I can do for the patient.

Of course, we watch the heart, and the indications arising from the examination of the heart vary with the period of the disease. Of course, I need not say that a person who started out with a bad heart in the beginning, or a patient who has a mild carditis is not managed with the same degree of vigor in a case of pneumonia as the one who had a perfectly sound heart, and yet I would not hesitate to cup such patient, or to bleed. In addition, I use cold sponges and the cold bath from time to time.

It has been shown us by statistics that in the latter part of the disease a time comes when there is dyspnoea. I have seen it occur before the crisis, I have seen it occur after the crisis, I have seen the temperature fall to the normal, the doctor congratulating himself that the patient is going to get well when this comes. There is increased extension of the pulmonary second sound, and you have to relieve the heart or your patient is going to die. He has weathered the storm of the infection, the storm of the toxæmia, but he has now this dilated heart.

Of course, prompt vigorous action must be employed. It is difficult to be quite sure whether you have a right-sided dilatation, or a failing heart from toxæmia, if it occurs before the crisis, and yet, I think, if you have kept a pretty close study of the case, you will be able to satisfy yourself that the dangers that have arisen are due to right-sided dilatation. Then it is I don't hesitate to bleed. I bleed from the arm, I bleed locally. I have used leeches, and have opened a vein. I not only bleed once, but I bleed sometimes a second time in the 24 hours. I take away 6 or 8 ounces, sometimes more. Nevertheless I have seen sufficient relief from 6 or 8 ounces. Relieve directly from a vein in the arm, and then the operation can be repeated if there should be a recurrence of the symptom. At the same time I give cardiac stimulants, strychnine, alcohol, nitro-glycerine and remedies of that character. It will be a considerable shock probably at the time. Two or three doses of atropine may be given. There are times when we have got to act vigorously, to have an enormous amount of faith in medicine, and I am sure we get brilliant results.

There are indications derived independently of the diagnosis of pneumonia. Not only do we have the local pneumo-coccus infection, but in many instances there is either a primary and often a secondary bronchitis, and I am sure we have to look after that particularly in older subjects. Bronchitis may require the usual expectorant remedies, though in a large majority of cases they are not required, but in some cases the use of iodide of ammonia or aromatic spirits of ammonia is valuable as a cardiac stimulant and for its effect on the stomach, etc. The secretion is much more free, but the patient is in danger of choking. I give more stimulating expectorants, such as creasote or that class of remedies that come in very well for the purpose that I am trying to indicate.

The pain of pleurisy and its management has been spoken of as far as we need go. And yet I want to say further that, if an effusion has occurred, as soon as the crisis is over I am one that believes we want to get rid of the effusion. I think it is not good for the chest. It is dangerous, and we ought to get rid of it, so I don't hesitate at all to remove this serum. Of course, if there is pus I not only aspirate but I have the chest opened at once.

5. Facts derived from the study of the social, the family, or the previous medical history. It is hardly necessary to say that the management of the disease is greatly helped by a knowledge of the habits of the patient. We know an alcoholic case, and the indications arise, but the social, the family and the previous medical history does not probably give us many facts upon which we base our treatment, as they do facts

upon which we base our prognosis. The prognosis is very much guided by what we learn in the disclosing of the social, the family and the previous medical history. Nevertheless, in this infection, as well as in other diseases, I do say we cannot keep up a line of treatment, unless we consider the data, not only for diagnostic but for therapeutic purposes that we secure by working up these parts of the history.

Now this brings us to the point, gentlemen, that we are really not treating a case of pneumonia. We are treating a patient who has pneumonia, and that is the most important thing after all. In the case of those of us who are teaching students, it is much more important that we try to impress them with the idea that they are treating patients with disease, rather than they are treating any disease at all; and if we do that, we can have them understand earlier in their career than they otherwise would that it is not necessary in probably 60 per cent. of all the cases of pneumonia to do anything at all except very good nursing, but that in the other 40 per cent. there is a great deal to do, so that it is a good thing to map out a plan of treatment, based upon the five main points I have given to you, and then I am sure they will treat the patient, which is the essential of therapeutics, and not treat the disease.

EXERCISE IN THE TREATMENT OF DEBILITY FROM CHRONIC DISEASES.

By ALEXANDER MCPHEDRAN, M. B.
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THE advances made in the treatment of disease in the last decade or two have been mostly of a rational character. Few remedies, or means, of an empiric nature, have been introduced and those that have been added are soon discarded unless they are found to prove of decided benefit. Remedies are sought out and applied because they have certain physiological effects, and the aim is to apply these effects to the diseased conditions for which we are seeking a remedy. The truth of these remarks is illustrated by the treatment of tuberculosis by fresh air, rest, and generous feeding. So much has the importance of fresh air in tuberculosis been insisted on, in season and out of season, that it has come to be regarded as of importance only in tuberculosis, and the fact lost sight of that it is quite as necessary in all diseases, especially those of a chronic nature attended by wasting and mal-assimilation. Fresh air promotes increas-

*Read at the Ontario Medical Association, 18th June, 1903.

ed metabolism and better nutrition, and therefore is essential in the cure of all diseases especially those characterized by wasting.

Similar observations may be made in regard to exercises. Through the enthusiasm of the Schott Brothers of Nauheim, systematic exercises have come to be regarded as a *sine qua non* in the treatment of chronic diseases of the heart, and the fact has been overlooked that they were of proportionately great importance in all chronic conditions attended by debility and mal-assimilation. I say proportionately, because many of these conditions are not dangerous to life, although they mar usefulness and render the sufferers more susceptible to the invasion of serious diseases. To appreciate the great importance of muscular exercise in the treatment of heart and other diseases of a chronic nature, it is necessary to have in mind, 1st, the state requiring treatment; and 2ndly, the manner in which exercise affects that state.

In most chronic diseases, there is weakness of the circulation with dilatation of the veins, and therefore an imperfect supply of arterial and a slow removal of the venous blood with the waste products that it carries with it. The lymph stream is also impeded, so that the products of metabolism are slow in being removed and interfere with the local tissue changes.

All the functions of the affected part are also made less active; and not only of the affected part; but also of all the organs—the heart, the organs of indigestion, of excretion, the nervous centre, etc. One cannot suffer without all being affected in some degree. Every organ in the body to be in a healthy state requires to have constantly a fresh supply of nutriment and to have the waste products removed with equal constancy.

This is true of the well no less than of those in defective physical condition. A good old rule says that "the lean should exercise *ad ruborem*, i. e. to glow-point, or until their bodies and spirits are heated, for that will flatten them; and the fat *ad sudorem*. The more luxuriously a man lives, the more active exercise he needs. Want of it, and the costive habit thus superinduced, may extinguish the divine flame of genius and seriously impair the intellectual powers. Hypochondriasis and hysteria are the special punishments of ease and affluence and indolence."

Exercise of a muscle means its contraction during which the bundles of fibres become thicker and fill, its sheath, press out the lymph lying in the space between the muscle and its surrounding fascia into the lymphatic vessel from which its return is prevented by valves. As the muscle relaxes, the space between the muscle and its fascia is re-formed,

and, to some degree, aspirates the lymph from the muscle fibres. At the same time the arterial supply to the muscle is stimulated increasing its nutrition, and the venous outflow is increased to a corresponding degree carrying with it also waste products.

The general effect of exercise is to stimulate the heart, so that the current of blood in the arteries becomes more rapid and forcible as shown by the larger and firmer pulse. The venous flow, receiving its impetus from the arterial, is stimulated to a corresponding degree. The general results of such improved circulation are; 1st, increased excretion of the waste products on account of the more rapid blood flow and the improved tone of the circulation in the kidneys; 2ndly, better digestion from the improved circulation in the stomach, intestines, liver, etc., and 3rdly, improved nutrition in all parts of the body from the combined influence of all these improvements. Exercise thus becomes of great importance under all conditions of health and disease, and judiciously taken, is of benefit to all, except those suffering from acute diseases.

The only condition in which exercise has hitherto been systematically resorted to as a therapeutic agency is in heart failure from chronic disease. At Nauheim so much has been done to place this treatment on a rational basis and demonstrate its efficacy as a therapeutic means that it is now accorded a prominent place in the treatment of chronic heart failure by all writers on the subject. The effect of exercise in such conditions is quite similar to that in any one "out of training." We have all experienced the breathlessness and the faintness and precordial distress caused by a sharp run of a hundred yards or so. This does not arise from anything abnormal in the heart, but only from a want of tone in it. The want of due exercise of a muscle leads to slow removal of its waste products. These products poison the muscle so that it fatigues and loses contractile power more easily. To increase its power it is necessary to gradually increase its work; so as to secure day by day an increased excretion, and therefore a better nutrition, until it has attained its fullest strength. This applies to the muscular system, whether its low power be due to want of exercise or to disease. In either case improvement can be secured only by a "course of training." Perhaps the best illustration of training that can be cited is the old classical story of Milo, the wrestler of Croton, who succeeded in carrying a full-grown bull upon his shoulders with ease by the simple plan of beginning with a young calf, and carrying it every day until it was full grown.

The good effect of graduated exercise in chronic heart disease is widely accepted and advised, but scarcely any reference can be found to the good effect in other debilitated conditions, and yet in none of these

conditions can vigour be regained without due exercise to stimulate general nutrition. In our enthusiasm for certain remedial measures for certain conditions we too often lose sight of the wider application of these measures. The "fresh air treatment" of tuberculosis is the most notable example of this at present; graduated exercises in heart disease is another, although somewhat lost sight of lately in the fervour for "fresh air" in tuberculosis. The necessity for fresh air and graduated exercises in the treatment of all chronic conditions of debility has been almost lost sight of even by the profession, the special application so fully engrossing the attention.

Of the great importance of judicious, varied, systematic exercises in all conditions of debility I am convinced after a considerable experience extending over some years. They should be judiciously applied to the requirements of each individual case, care being taken to avoid overstrain. They should be systematic and not haphazard, so as to call into play all parts of the body in due proportion; and varied as much as possible in order to prevent undue training of some parts at the expense of others, and to add zest to them and prevent as far as possible a feeling of monotony. Not more than a slight or moderate degree of fatigue should be induced, undue fatigue being easily prevented by the exercises being taken deliberately, so that the feeling of fatigue is readily appreciated as it develops.

In the ordinary routine of life the legs receive most exercise, the arms next, and the trunk least; the trunk, therefore, has greater need of attention. Walking is the chief form of exercise taken by most people. Walking as ordinarily done, on the street pavement or on a level road, possesses very little value as exercise. The movement is automatic, and affects scarcely more than the lower limbs. The muscles of the trunk are required only to maintain the body in an erect position, and therefore are little benefited by the exercise. Walking in the woods or over rough ground calls all parts of the body into play, and is, besides, attended by more or less mental exhilaration that adds greatly to the benefit of the exercise. Opportunities for such exercise are not often available, especially for city dwellers, and even to but few country people. Rowing, golf, bowls, horserbacking, tennis, etc, need be named only of course to be highly commended. But even they are only for the few, and to them only at special times. In the debilitated, regular and systematic daily exercise of all the body is necessary if they would make the most rapid progress and the most complete recovery. In chronic heart disease the graduated resistance movements of Nauheim are of great value, and may be followed later with advantage by Oertel's

method of walking up an incline, gradually increasing the distance and the steepness of the ascent day by day as the power of the heart increases and the exercises can be accomplished without a very great strain. Judiciously used, these methods are of great service in restoring tone to a large weak heart.

Of all the causes of general debility imperfect digestion and assimilation are by far the most common, and in their improvement no single means is more effective than proper systematic exercise. In all these cases the abdominal muscles are of poor tone and usually relaxed. The tone of the abdominal muscles regulates the pressure in the abdomen and thus greatly influences the circulation of the blood in the abdominal viscera. The veins in the abdomen are very large and capable of holding almost all the blood in the body. If the abdominal walls are relaxed these vessels will lack their normal support and therefore dilate, with the result that the blood flow will be less vigorous than it should be. Consequently both digestion and absorption will suffer, and, as a result, the whole body will suffer both in its nutrition and excretion. It requires no argument then to prove that every organ and function of the body is affected to a greater or less degree by the state of the abdominal circulation. It is further to be noted that loss of tone in the abdominal muscles favour prolapse of the abdominal viscera, which further impedes the circulation of the blood, and may also impede the onward passage of the contents of the stomach and intestines. We are probably safe in saying that material prolapse of organs never takes place unless the abdominal pressure has been lost through loss of tone of the abdominal muscles. Once the prolapse has taken place, restoration of the tone of the abdominal muscles may not restore the organs to the normal position, but it should, and, so far as my observation goes, always does restore the functions of these organs to a better, if not a normal, condition. As an illustration in proof of this I may cite the following case:—

Mrs. M., aged 45, complained of recurrent attacks of colic. She was very thin, might almost be said to be emaciated, weighing only 94 pounds. She was quite nervous. Her skin was sallow and relaxed; her muscular system was of poor tone. The abdomen was much relaxed and the muscles so weak that she was unable to raise the head and shoulders from the couch without the aid of her arms. There was marked splanchnoptosis, the lesser curvature of the stomach being at the umbilicus and the right kidney below that level, and "floating." Splashing sounds in the stomach were marked on palpating the abdomen. She was directed to take nutritious food of small bulk; to exer-

cise all the muscles, especially those of the abdomen, to the point of fatigue, morning and night ; to live much in the fresh air ; and to take water freely on awaking and retiring, after which the abdomen was to be well massaged and the exercises taken. Her medication consisted chiefly of strychnine and such an antiseptic as bismuth salicylate. She carried out the treatment most thoroughly and cheerfully. In a few months her weight had increased to 115 pounds and she felt equal to any duty. Her abdominal muscles had good power and her digestion was active and comfortable for ordinary diet, although the stomach and kidneys were little higher in the abdomen than they were the year before. She has continued well, but perseveres with the daily exercises, though to a less degree.

It is unnecessary to give other cases in illustration. There is no class of cases, not even the chronic cardiac ones, in whom systematic, judicious exercise should be more widely applicable and more beneficial than in those suffering from the various forms of defective digestion especially of the atonic type. It is quite reasonable that this should be so, seeing that they suffer from loss of tone, not only of the blood vessels and muscular structures of the body generally and of the abdomen in particular, but also of the walls of the digestive tract. Proper exercise will improve the tone of all these structures and will be found one of the most potent agencies in restoring the functions to a vigorous condition. And it is reasonable that such should be the case as the condition almost, wholly depends on a loss of tone, especially in the organs of circulation and digestion. In failure of the heart, exercise has a recognized and important place in treatment ; in loss of tone of the digestive system it should have an equally well-recognized and important place. Here it may seldom save the life of the patient, but it has quite as much power in restoring him to health, and the number to whom it is applicable and in whom it will give good results is as much greater as the number of cases of digestion failure is greater than those of cardiac failure. Dyspeptics, like the poor, are always with us, and any agency is important that gives positive aid to their relief.

The beneficial effects of exercise are by no means confined to the heart and digestive organs. In all debilitated conditions there is loss of tone, and therefore the stimulus of exercise to metabolism through increased supply of nutriment and more effective removal of waste cannot but be of great benefit.

As to the manner of taking the exercise, it is not necessary that anything should be said in this place beyond this, that it should never be such as to over-strain or over-fatigue, and that all parts of the body

should duly participate. The most effective exercise consists in somewhat protracted tonic contractions succeeded by rest, as best favoring the removal of waste products and the inflow of a richer blood supply. Many appliances are to be had to aid in carrying out various exercises but they are all open to the objection that they are not always available when needed. Exercise may be quite as effectively and easily taken without any appliances. All that is necessary to make exercise effective is that the muscles be deliberately and vigorously contracted, the vigor used being in proportion to the strength of the person, and increasing gradually as his condition improves. The details of such exercise are beyond the scope of this paper.

Proper exercise is a difficult prescription to have fulfilled, and it is still more difficult to secure perseverance in its use. It is, however, much less expensive than massage and much more widely applicable. Fresh air is desirable for all, for the well and the sick, however prostrate. Exercise is desirable for all but the acutely ill and the prostrate, and is, next to fresh air, the most important aid at our command in restoring to vigorous health.

151 Bloor St. West.

THE OPERATIVE TREATMENT OF GOITRE.

By GEO. A. BINGHAM, M.B.

Assoc. Prof. of Surgery and Clinical Surgery, Trinity Med. Coll.; Surgeon to Toronto General Hospital, St. Michael's Hospital, and the Hospital for Sick Children, Etc.

GENTLEMEN:—When your Committee did me the honor of asking me to read a paper before you on this subject I decided to confine myself to a brief account of the operation which I have gradually come to prefer. I shall therefore dismiss in a word such methods as dividing the cervical sympathetic, or the use of electricity, about which I hope others may have something to say.

At the outset I think we should lay down some guiding principle as to *when* we should operate. Certainly *all* cases of goitre should not come under the surgeon's knife. For instance, in anæmic girls, about puberty, we have seen rapidly-growing, ill-defined goitres, even producing pressure effects, which have gradually disappeared with or without medical treatment.

Again, no goitre should be operated on for purely æsthetic reasons. It is not a trifling operation, and should not be lightly undertaken by the novice. On the other hand no patient, however desperate her condition, should be denied the undoubted relief which follows the removal

of this obstacle to respiration. In all cases of benign goitre the patient should first be submitted to a course of medical treatment, unless, of course, the symptoms be urgent.

In 1898, Kocher made the statement that 90% of the goitre cases, coming into the hospital at Berne, were so improved by medical treatment as to require no operation.

To sum up, in all cases of benign goitre, solid or cystic, operation should only be undertaken for the relief of definite symptoms. In malignant disease of the thyroid, if an early diagnosis be possible, extirpation of the gland will be the patient's only hope. Unfortunately, early diagnosis is rarely made, and, when seen, the surrounding glands are involved and all hope of a radical cure must be abandoned.

In such advanced cases of malignant disease my rule has been to advise partial removal, only to relieve pressure from the continued growth, and to render possible the future operation of tracheotomy.

In exophthalmic goitre I have operated twice for the relief of urgent pressure symptoms, and have not regretted doing so. In both cases immediate relief was experienced, and the symptoms of the disease ameliorated.

In this class of cases there is greater danger of death from the anæsthetic; and yet, ordinarily, the patient is too nervous to submit to the operation under local anæsthesia. Here an expert anæsthetist is required to co operate with the surgeon. The convalescence is also likely to be decidedly eventful, and to demand watchfulness and keen judgment on the part of the attendant.

Nevertheless, in a case of Grave's disease, failing to respond to prolonged medical treatment, with steady increase of growth, the suffering patient should be given the benefit of operative interference.

Having laid down these working rules as to *when* to operate, the next question to decide is as to *how much* should be removed in a given case. Of course, if but one lobe is involved, only that lobe should be dealt with. I have removed the isthmus alone, when it alone was involved. But, in the ordinary parenchymatous goitre, usually both lobes are unequally involved. At first, it was my practice to remove the whole gland with the exception of a small portion of one lobe. This I now believe to be unnecessary; and, unless both lobes are enormously enlarged my constant practice is to remove only the larger lobe with the isthmus. Following this method, there has been almost invariably a fairly rapid diminution in the size of the lobe remaining: and, of course, all pressure symptoms are at once relieved.

A word as to the *Anæsthetic*.

The ideal in this regard is of course a thoroughly competent local anæsthetic. I know that many men on this continent and in Europe are using cocaine anæsthesia in this operation. But, so far, I have employed chloroform, administered by an expert.

In bad cases of dyspnœa, the anæsthetic is stopped as soon as the skin incision is completed, the operation being continued, with little or no further use of it, until the pressure is removed from the trachea and all danger of asphyxia has passed. I believe that by intelligent co-operation between surgeon and expert, a patient can thus be "nursed" along through the operation without suffering on his part and with the minimum amount of danger. At the same time, being so lightly anæsthetized, the patient, by his unconscious phonation, is able to give us assurance of the safety of the recurrent laryngeal nerve.

Now as to *technique*.

The best incision in the vast majority of cases is the transverse, or shallow U-shaped one, extending across the tumor from one sternomastoid to the other. The horn of the incision, corresponding to the lobe to be removed, may be extended upward and outward as far as necessary. This incision passes through skin and subcutaneous tissue, platysma and deep cervical fascia.

The two flaps are dissected up and down, and, if necessary, the anterior jugular is cut between ligatures. Next, the pre-tracheal layer of the cervical fascia is recognized and very carefully incised vertically in the median line. Immediately beneath this layer is the capsule of the tumor, and, if care is not taken, this capsule is opened up and the field of operation is flooded with hemorrhage, very difficult to control. In other words, the operation will be a practically bloodless, or a dangerously bloody, one, according as the surgeon is, or is not, extremely careful in working close to, but outside, the capsule.

The opening in the pre-tracheal fascia is enlarged as required, the finger introduced, and, by this means, any adhesions between fascia and capsule are readily broken down. The finger is then swept around the outer and upper margin of the tumor, forcing the pre-tracheal fascia and muscles over the edge of the mass, and the superior thyroid vessels are recognized and cut between clamps.

This usually releases the outer part of the lobe, which may now be drawn forward and still, with the finger as a blunt dissector, everything is stripped away from the posterior wall of the capsule, gradually rolling the lobe over to the middle line. If care is taken to strip everything clearly and completely from the posterior part of the capsule, the recurrent laryngeal nerve will necessarily be pushed away from the inferior thyroid vessels and all danger of injury to it removed.

The inferior thyroid vessels are tied off, close to the tumor, and the lobe is now completely freed, and we see the rings of the trachea to which the isthmus is adherent. Here there is a decided danger of injury to the trachea, the wall of which is probably atrophied by long-continued pressure. No violence must be used in separating the isthmus and, indeed, I have again and again left a small portion of the posterior wall of the isthmus, which was adherent to the trachea, rather than risk its separation. The junction of the isthmus with the opposite lobe is now transfixed with silk and tied off, and the mass cut away.

This ligating of the pedicle, while unnecessary so far as hemorrhage is concerned, still, I think, serves a purpose in preventing the escape of thyroid-secretion into the wound, which is the probable cause of some rather disagreeable symptoms which occasionally arise during convalescence. Every smallest bleeding point should be tied off with fine silk, and some means adopted to obliterate the huge "dead space," which, in cases of large tumors, is left behind sternum and clavicle.

This cavity is a serious menace to the patient's life from the accumulation and decomposition of secretions. I have found the following method of dealing with it to answer well. With a small fully curved needle, armed with fine catgut, I quilt the anterior and posterior walls of the space together by an over-lying series of running sutures. The first line of sutures will be at the bottom of the space, the next a little higher and so on until the whole space is snugly obliterated to the level of the top of the sternum.

I believe in temporary drainage and now use the method suggested by Cheyne. A button hole is cut through the lower flap, just above the sternum; and a small tube drawn through, the inner end of which lies in the lowest part of the wound, behind the sterno-mastoid.

A provisional suture is placed in this little wound and, when the tube is withdrawn (after 48 hours), is tied. If the pre-tracheal, or sterno-mastoid, muscles have been cut, they should now be carefully reunited and the wound in the pre-tracheal fascia closed. A running suture of fine silk closes the skin-wound, plenty of dressing applied, and the head is supported between two sand-bags. A very important precaution is to direct the nurse to control all violent movements of the head, while the patient is recovering consciousness, and to compress the dressings gently during vomiting. This latter may often be avoided by a hypodermic of morphia, just before beginning the operation.

The tachycardia and high temperature, which are sometimes so troublesome, may be controlled by digitalin and the local use of the ice-bag.

In case of adenoma or cystoma of the thyroid, the procedure just detailed is modified. When the gland is exposed, the capsule is carefully cut through and the tumor, solid or cystic, is enucleated. Of course, some hemorrhage from the capsule is unavoidable, but is readily controlled.

Partial or complete aphonia may follow the operation. It may result from (a) tranmatism of the recurrent laryngeal nerve; (b) traumatic tracheitis and laryngitis; or (c) hysteria. Usually the difficulty is only temporary. From a medico-legal point of view, it is interesting to note the history of one of my cases. She was a decidedly neurotic maiden lady, aet. 35 years. Complete aphonia followed the operation of removing almost the whole of both lobes in a very large goitre. The vocal cords were pronounced, by the laryngologist, to be cadaveric; and the patient went home improved in every other way, but quite voiceless. Her account was sent her, and, in reply, a rather nasty letter was received, and we looked for legal complications. Suddenly, one morning, *nine months* after the operation, she awoke with her voice fully restored and, among other results, a letter from a grateful patient and a cheque were not the least desirable.

As to the mortality of the operation, that as you know has been steadily declining of late years. I have notes of 33 cases operated upon, three of which were malignant, and two were cases of exophthalmic goitre. I have had no deaths directly following the operation. One of the malignant cases, an old lady of 70, insisted upon going home to the country two weeks after the operation, and, after a long railway journey, died suddenly at her own railway station, I judge from exhaustion. A second malignant case died some six months later from recurrence. The third was a case of sarcoma with very distressing dyspnoea. The operation was a desperate one, artificial respiration having to be carried out during the time she was on the table. She rallied nicely and felt much relieved, but died a week later from uremia. This patient was known to have Bright's disease, but was very anxious for the operation, expressing herself as delighted with the result.

IMPERIAL MEDICAL RECIPROCITY.

The bill, introduced by Gen. Sir J. Wimburn Laurie, M.P., to amend the Medical Act, is designed to enable reciprocal arrangements to be entered into with the Federal or Provincial Governments to facilitate the admission of colonially trained registered medical men to practice in Great Britain, and hold appointments in the Imperial service.

MEDICAL SOCIETIES AND GATHERINGS.

ONTARIO MEDICAL ASSOCIATION.

JUNE 16TH, 17TH, 18TH.

TUESDAY, JUNE 16TH.

Anæsthetics and the Open Air.

Dr. G. H. Carveth opened a discussion on this topic. He advocated open air treatment of all diseases, day and night, acute and chronic cases.

Most cases of anæsthesias are well arranged as regards light, but not as to fresh air. Bad air causes suffering to all parties concerned, and this is the general condition in most hospitals. The room is too hot in which the patient is anæsthetized, operated upon, and recovers in a similar atmosphere, with the result that the patient is exhausted and vomits more than is necessary.

The remedy is anæsthetize, operate and allow the patient to recover in the open air. It has been tried in many instances and works well. The nausea is diminished, or absent, the nurses and doctors feel better.

Dr. Carveth said this can be carried out underneath trees, on a verandah, or in tents. The patient must be clothed in accordance with the requirements of the temperature of surrounding air. The air can be made pure inside a building at the same time kept warm, thus avoiding shock by exposure to cold.

Diagnosis of Uncomplicated Appendicitis.

The diagnosis and operative treatment of Uncomplicated Appendicitis was the title of Dr. T. S. Webster's paper. He stated that there was much difference of opinion as to the possibility of palpating the normal appendix. Feeling with care usually was competent to exclude mistakes as to bundles of the abdominal muscles. The speaker was not misled by these. Under the anæsthetic he can map out the appendix just before operation. He protested against severe purging before operation. His rule was to make a short incision, and to avoid cutting the muscle fibres. He cautioned against tying the sutures too tight; and exhibited his method of putting in sutures, a form of crossed mattress sutures.

Uterine Myomata and their Treatment.

Dr. T. S. Cullen, of Baltimore, read a paper on this—see page 778. Mr. Cameron spoke highly of the paper and the excellent way in which the subject had been handled. He ventured to criticise the changes of myomata into sarcomatous degenerations on technical grounds, along histological lines. Drs. Bruce, Bingham and Temple expressed appreciation of the paper.

In reply to Mr. Cameron, Dr. Cullen stated that the authorities are agreed that there is a direct transformation from a muscle cell to a sarcoma cell by a gradual transition, which can be seen microscopically in its various stages.

The Kidney during Pregnancy.

The above was the title of Dr. Adam Wright's paper. His classification was:—1. Toxaemic Kidneys of Pregnancy; 2, Acute Nephritis; 3, Chronic Nephritis. Dr. Wright did not discuss the relapsing kidney of pregnancy. Special reference was made to acute and chronic nephritis. Albumen is found in from five per cent. to seven per cent. of pregnancies. When albuminuria is found early in pregnancy, it is due generally to nephritis; while in the later months, it is due to the general toxaemia of pregnancy. Dr. Wright asserted that eclampsia is not a result of nephritis, though it may be complicated with it. Mention was made of photophobia and retinal hæmorrhages, complicating nephritis. One case was cited where the woman remained blind for three months. The dangers are increased by keeping the patient for a length of time on a milk diet. Dr. Wright advocated a nutritious diet in such cases. He believed in prohibiting abortion, if possible, unless the mother's life is in great danger, even in the later months, unless absolutely necessary. In the treatment of these cases he advised epsom salts in sufficient quantity to procure four to six evacuations in twenty-four hours in the acute cases; and two or three in the chronic cases. Hot baths and skin friction should be used. The use of hot packs were not recommended. If indicated, give netroglycerin, or chloral compounds. Always use care in the administration of nitrolycerin if the arterioles are dilated. Water is the best diuretic, and should be taken frequently. Tonics are frequently indicated. Strong objection was taken to the indiscriminate use of iron in cases of nephritis, especially if the tongue is furred. In regard to diet, it should be somewhat restricted in acute cases, but it should be nutritious.

Harrison's nephrotomy and Edebohl's decapsulation have been performed. Pregnancy should not be considered a barrier to the operation, if it is indicated in certain cases.

The discussion was opened by Drs. Hunter and E. J. Hastings, both of Toronto. Dr. Hastings emphasized the treatment by Edebohl's operation, citing a case operated on by Edebohl.

Dr. Rice, of Woodstock, spoke of the importance of preventing eclampsia. He referred to the practical value of the paper, and touched upon the former treatment of eclampsia. He spoke of the fact that the condition became serious before the patient consulted her doctor. He strongly advised the free use of salines, claiming that in the past six years his patients have been prevented reaching the eclamptic condition. He believed the usual dose of morphine in the eclamptic condition is much too small. It should be two to four times as great as authors give. He resorted to bleeding when coma was present. Dr. Wright closed the discussion by referring again to the general toxæmia of pregnancy, stating that it was not due to the kidney alone, but rather the liver was first at fault, the muscles and kidneys being later affected.

The President's Address.

The President, Dr. J. C. Mitchell, then read his very able address, see page 767.

Septic Peritonitis.

Septic Peritonitis and its Surgical Treatment by Dr. J. F. W. Ross, was next taken up. He reviewed the history of the treatment of this condition, mentioning the treatment by rest, blood letting and leeches, and by Bates, and later by Dr. Alonzo Clark in their use of opium in such cases. He mentioned the former use of purgation. Most of these cases proved to be not true cases of peritonitis. Since the discarding of drainage in operative cases, the results have been much better. Dr. Ross cited his operations on general purulent peritonitis to show that the best results were obtained in those cases treated with opium, and washing out with normal saline solution, without drainage. Open the abdomen and remove the focus or foci of the trouble if possible. The various pouches off the peritoneum are flushed out with normal saline solution, by means of a trocar. Drainage is not necessary if the source of the trouble can be removed, if not, a gauze drain or glass tube should be introduced. Normal saline should be introduced under the breasts and a rectal injection of about three quarts also given. The object of the treatment is to remove the infective cause of the trouble by means of some chemical which will not have a detrimental effect on the system, and saline solution performs this function better than anything else. The drugs used should act as an antidote or delay absorption, or both. If the secretions of the peritoneal cavity are polluted to a certain extent, there

is more hope of a recovery under this method of treatment. Opium appears to possess this function of delaying the absorption of the peritoneal fluid. The surgical treatment should be followed by medical treatment. In the majority of cases, an operation is indicated, except in some cases of localized peritonitis.

Dr. Bingham acquiesced in all points, except in the results obtained by opium. He believed that death in many cases is due to exhaustion, and was not prepared to admit that death is due to absorption in all cases. He objected to the use of opium on the ground that it tends to paralyze the bowel which is already weakened. The intestines should be splinted by feeding per rectum, not per oram. He closed by saying, "I must object to the use of opium in these cases."

Dr. Hastings also made a few remarks, acquiescing in Dr. Ross' assertions.

Dr. Primrose remarked that it is impossible to render sterile the infected peritoneal cavity; but, to reduce the infection to such an extent that the poison can be combated, and a good result may follow. He cited some cases which recovered after the establishment of drainage, restraining undue movements of the peritoneum.

Dr. Webster made a few remarks confirmatory of those of Dr. Ross, and cited drainage through Douglas' pouch in cases of peritonitis in women.

Dr. Bruce objected to the use of opium, and advocated leaving things alone after operation. He also called attention to the nature of the infection. If the infection is mild, drainage may not be necessary, but in virulent cases drainage should be instituted. In support of this view, he cited certain cases, which did best when opium was not used, and in which purgation was resorted to the second day after operation.

Dr. Ross closed the discussion, mentioning that the results of his present treatment have been better than those of former methods. He believed the opium did good, and that its action was not that of a splint, but that it prevents absorption.

Abscess of the Antrum of Highmore.

A paper on (1) Abscess of the Antrum of Highmore, and (2) Mule's Operation on the Eye was read by Dr. Perry Goldsmith, of Belleville. The doctor thought in the case of the eyeball that evisceration would be necessary, but the contents were scooped out and the cavity washed clean with bichloride solution. Mule's operation was performed, and the patient made a splendid recovery with good movements of the eyeball.

The Smoking Concert.

The smoking concert in the evening in St. George's Hall was well attended and thoroughly enjoyed by all. The programme was good, the weather fine, and everyone present lauded the efforts of the committee which had the entertainment in charge.

The Committee on Nominations was elected as follows:—G. A. Bingham, Chairman; A. H. Wright, H. A. Bruce, N. A. Powell, J. A. Temple, J. H. Hamilton, H. C. Parsons, J. C. Mitchell and A. McPhedran.

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WEDNESDAY, JUNE 17TH.

Two Unusual Nerve Cases.

The first paper of the morning session was by Dr. Thistle, who reported two unusual cases of nervous diseases. The first was a case of facial diplegia. The only cranial nerves affected were the facial nerves, the other nervous mechanism being normally intact. The facial expression, with the exception of the eyes, is blank. The electrical reaction and the other symptoms point to an infra-nuclear lesion. No history of diphtheria could be obtained. The condition of both nerves followed simultaneously after a drive on a very cold day, and the subsequent symptoms were those of Bell's Palsy.

The second case was one of crossed hemiplegia from tumor in the lateral half of the pons and cerebellum. The nervous symptoms showed a spastic condition of the legs, with exaggerated reflex. The muscular power, especially of the arms, was considerably below par. The face bore the expression of cerebral tumor. Optic neuritis was absent, and the pupils reacted to light.

The autopsy disclosed a tumor involving the lateral half of the pons and the adjacent part of the cerebellum. The facial nerve showed partial involvement at its nucleus.

A few remarks were made by Dr. McPhedran, who enquired as to temperature and reaction of the pupils in the tumor case. In answer, Dr. Thistle said the temperature was slightly elevated before death. The pupils reacted to light and varied in size, usually being markedly dilated.

Exercise in the Treatment of Chronic Disease.

A paper on exercise in the treatment of chronic disease was then read by Dr. A. McPhedran. See page 806.

Dr. Hunter spoke of bicycle riding in cases of hæmorrhoids, varicocele and constipation, and cited the good results following, in four of his cases, the use of the bicycle.

Dr. J. Elliot, of Gravenhurst, spoke in favor of exercise in cases of wasting diseases, making mention of this treatment in the sanitoriums. He advised the more frequent exercise of horseback riding. Dr. Arnott, of London, asked of the older practitioners the results of too much mental strain, combined with exercise.

Dr. McPhedran closed the discussion by referring especially to the value of exercise in tuberculosis.

The Business Aspects of Medical Practice.

Dr. Powell read a paper on "The Business Aspect of Medical Practice." He said there were three requisites to success:

- (a) To be a thorough gentleman;
- (b) To be a thorough physician; and
- (c) To be a thorough business man.

The speaker first pointed out that a physician making \$4,000 a year, or more, should have a bookkeeper, in order that his accounts be properly kept, and in witty terms mentioned that a man's best bookkeeper is the maiden whom he chose to manage him. Secondly, he pointed out that bills over nine months' standing should be put in the hands of a competent collector. Thirdly, he recommended the typewriter and the card system. He believed that it is bad business to touch lodge practice at all. By accepting lodge practice a doctor loses his fee-earning power. He pointed out that the physician should be friendly with his fellow neighbor physician. Every medical man needs one or more fads. He defined fads as "mental antitoxins which overcome the poisons generated by cerebral over-activity." He referred to out-door sports, and in humorous terms to golf as "that game of senile decrepitude." In this connection, he referred to the good results of a holiday.

He urged his hearers not to fall behind in the keeping up to date of their libraries.

He pointed out the necessity for a thorough examination of all cases before reaching a diagnosis. Quickness and surety of decision are also essential requisites of a medical man. The physician's attitude should be "determine what is right and go ahead." Another thing that should be noted is a lack of well directed energy on the part of the physician. He referred to the colored preacher who said: "Brethren, what we want is sanctifigumption."

The true practitioner thinks first of his patients, and then of his home and himself. The practitioner's standpoint is that of a business man, not that of a missionary, but he must always have his profession

at heart, rather than any mercenary ends. He concluded by a quotation from Arnold, urging the practitioner to be energetic in his professional duties.

Significance of Albumen in the Urine.

Dr. J. Amyot read a paper on "The Significance of Albumen in the Urine" He pointed out that albumen in the urine is not necessarily an indication of disease in the kidney. The question of secretion of albumen by the kidney is still an open one. Certain of the albumens in the urine may be the nucleoproteids derived from the shed epithelial cells of the urinary tract. This is known as the physiological albumen of the urine. It has no clinical significance. Certain albumens are found in the urine which are not normally present in the blood. There is what is spoken of as an accidental albuminuria which is due, in many cases, to an abscess about the kidney or along the urinary tract. The excretion from the kidney is from the great quantity of blood passing through it and excreted by it are the various waste products of tissue metabolism and other foreign particles, such as bacteria.

The most important things in the urine are not these substances, but other toxins not yet defined. To these is due the trouble and to these belongs the significance. The albumen passes from the blood in proportion to the amount of damage done to the renal cells by these toxins, and the amount of albumen in the urine is an indication of the extent of the damage to the renal epithelium. The areas of degenerations occur in different parts, in some cases in the Malpighian bodies, in others in the tubules. If the toxine is not crystalloid, the Malpighian body is not affected. If it passes through the Malpighian bodies it is taken up by the cells in the tubules, and they suffer in consequence. The various kinds of albumens are:—Serum albumens, peptones and casts, due to inspissation in the tubes of various substances, including blood. The presence of peptones in the urine denotes the presence of tissue change, provided disease of the intestine can be excluded. This latter should be borne in mind when peptones are found in the urine. If pus cells, or epithelial cells, or casts, not formed in the kidney, are present, the significance does not refer to the kidney. The greater the amount of albumen, the greater the renal destruction and consequent loss of function, and the outcome of the case can be considered according to the quantity of albumen.

X-Rays in Sarcoma.

A paper on X-Rays in Sarcoma was read by Dr. C. R. Dickson, Toronto. Dr. Dickson opened his paper by citing a case of typhoid

fever with a number of boils following convalescence. A tumor was later observed below the second rib which was removed by Dr. Bingham. It recurred and the x-rays were tried at various intervals. The tumor was reduced in size one-third in a month. The tumor became softened and a slight erythema developed. The sarcomatous tissue broke down, and healing has resulted to a great extent. A slight discharge is still present. The raying is performed at intervals. The tumor was quite superficial in character, being unattached to the ribs.

A short discussion took place, in which Drs. Wilson and Milner participated. Dr. Milner cited the use of Coley's fluid and x-rays combined. Dr. Dickson was asked the result of the use of x-rays in the case of sarcoma in the deeper tissues.

In closing the discussion, Dr. Dickson stated that iodide of potash had been given freely, with no effect on the growth. He also stated that Coley's fluid had proven itself to be devoid of generally favorable results. As an adjuvant to the x-rays, he mentioned the ultra-violet light. The danger of auto-infection in these cases increases with the depth of the tumor from the surface. Dr. Dickson stated that in his personal experience x-rays in the deeper tissues were disappointing.

Dr. McPhedran made a few remarks about the tumor. He would not say it was malignant. He expressed the possibility of necrosis in the vicinity of the tumor, and the possibility of its being inflammatory must not be lost sight of. He stated that the general health of the patient seemed to point towards malignancy, however.

Otitis Media.

Dr. G. H. Burnham read a paper on the above subject. He spoke of catarrhal otitis media. In this form there is thickening, with some secretion. The ossicles are affected. Then there is a hyperplastic form. In this form the prognosis is bad, as it is not amenable to treatment, so far as hearing is concerned. In the early stage of otitis media, the nasal passages and throat should be kept clean. The Eustachian tube should be cleansed by means of the Politzer bag, or the catheter.

In acute otitis media, if relief does not come in 12 to 24 hours, the membrana tympani is likely to rupture. This should be avoided by making an incision in it. He spoke highly of the value of the combined treatment of pilocarpine by hypodermic injections, and the internal administration of potassium iodide and mercury. This treatment often aborted acute cases, and was of the utmost value in the chronic hypertrophic form. It brought about tissue change, and promoted absorption.

Dr. Price Brown spoke on the prevention of otitis media. Invasion comes through the Eustachian tube, and consequently it is necessary to

remove the cause, which is usually adenoid tissue. If this is removed in young children, many cases of middle ear diseases will be prevented.

Dr. Hunter prefers an application to the parts rather than the spray. Argylol or nitrate of silver may be used.

The discussion was closed by Dr. Burnham, who said, that judging by some articles that had appeared, their authors did not understand his combined treatment.

Appendicitis and the Country Doctor.

Dr. J. W. S. McCullough, Alliston, took up the subject of appendicitis from the standpoint of the country doctor.

After describing the forms and relations of the appendix, he recalled the symptoms. These were tenderness over McBurney's point, sudden acute colicky pains, nausea and vomiting, rigidity, usually also some fever, and pulse acceleration. If condition is due to the colon bacillus the fever is slight. Streptococcus infection increases the temperature. An enema should first be given; and for relief of pain, chloroform or chloroform water. Surgical treatment should be resorted to at the earliest possible moment. Few cases will become complicated if the practitioner is quick and skilful in his work.

Dr. Webster acquiesced with Dr. McCullough in his opinion that the treatment should be surgical in most cases.

In regard to purgatives in appendicitis, Dr. McCullough gives a dose of castor oil and has never found it do any harm.

Chronic Empyema.

Dr. Primrose read a paper on Chronic Empyema. This condition on the left side has been more fatal than when on the right side. Dr. Primrose cited cases where empyema pointed beneath the skin and still remained as a pure pneumococcic infection.

In the treatment of a case the loss of the drainage tube into the cavity must not be overlooked. When tubercular phthisis is present, operation should not be resorted to, but in chronic cases, otherwise hopeless, extensive resections may be made. Free drainage was instituted in all cases. Much is not to be gained by irrigation. By the use of free drainage the comfort of the patient is greater, and there is less likelihood of the condition becoming chronic.

Dr. Ferguson acquiesced in the opinion of free drainage. Care must be taken to avoid mixed infection. He also believed in not operating upon tubercular cases, except for the relief of urgent symptoms. He dissented from Maguire's opinion of not opening in a case of pyopneumothorax. The operation should be thorough, the diseased tissue

being removed freely. In performing Schede's operation it is necessary to remove enough of the ribs to permit the chest wall to fall in upon the collapsed lung. If this is not done a pus cavity will remain.

The Luncheon.

On Wednesday at 1.30 p.m. the Association's luncheon was held at the King Edward Hotel. The handsome green and gold dining room was filled with the members present. A most enjoyable time was spent. The toasts of "The King" and "Our Guests" were proposed and heartily responded to by Drs. Musser, Cullen and Barkey. The venerable old Dr. Harrison made an eloquent address and was warmly applauded. Rev. Dr. Sparling also addressed the members. After the luncheon the members of the Association were the guests of Mr. Albert Gooderham and the owner of various yachts. A most enjoyable time was spent on the "Cleopatra" and the smaller yachts, and the kindness extended the members of the Association was greatly appreciated.

The Treatment of Pneumonia.

Dr. J. H. Musser, of Philadelphia, gave an address on the above subject—see page 796.

Dr. McCallum, of London, expressed approval of the lines of treatment mentioned. He advised the use of strychnia at once and not to wait till it is specifically indicated. He spoke of the great value of nursing in this disease. He believed a true use of serum therapy was to promote the action of the secretions.

Dr. N. A. Powell spoke in praise of the address, and the pleasure Dr. Musser's presence had given the association. He stated Dr. H. O. Marcy, of Boston, had been a guest of this association and was then elected president of the American Medical Association. In like manner, Dr. J. A. Wyeth, of New York, had been our guest and then president of the American Medical Association. This year we invited Dr. Musser, and shortly afterward he was elected president of the American Medical Association. A number of members took part in the discussion and asked a number of questions.

In reply, Dr. Musser answered the various questions that had been put. He stated in many cases little else is required than the routine treatment by cupping, calomel, salines and strychnia. He believed in the importance of good nursing, which includes isolation and free ventilation. He carefully watched the pericardium and aspirates as soon as symptoms indicate pressure from the presence of fluid. Treatment by incision is necessary in some cases. Ice is used intermittently, not con-

tinuously. He thought the cupping and ice application act as stimulants through the peripheral nerves. The reason he uses them is because his results have been good under such treatment. Blood letting may relieve the symptoms, but he does not see how the toxæmia is reduced by such a course.

In regard to the use of oxygen, he stated that he has never seen more than a mental satisfaction result from its use. He was not opposed to mild purgation from the first, as it might aid in the freer flow of bile, which is quite probably a factor in the elimination of the toxins. He prefers to use strychnia rather than atropine. The action of the latter he classes with adrenalin, as temporary in action.

It was moved by Dr. Powell that Dr. J. H. Musser, of Philadelphia, and Dr. Thomas S. Cullen, of Baltimore, be elected honorary members of the association. This was unanimously carried.

THURSDAY, 17TH JUNE.

Surgical Treatment of Goitre.

The Surgical Treatment of Goitre, by Dr. G. A. Bingham, was the first paper Thursday morning—see page 812.

Dr. Bruce followed with record of four septic cases, upon which he had operated successfully. The treatment in all these cases consisted in excision, disinfection and drainage. Electricity was also used. Dr. Bruce stated that in these cases Dr. Stevenson, who is an expert anaesthetist, preferred ether to chloroform. He concluded by referring to the dangers arising from allowing thyroid secretion to pass into the wound.

Dr. Paul, of Liverpool, has advanced the theory that squeezing the thyroid gland causes the thyroid fluid to pass into the wound, where it is absorbed by the lymphatics, with the resultant symptoms of thyroidism, which, in some cases, proves fatal.

In the discussion which followed Dr. Dickson stated that electricity was only of benefit in a limited number of thyroids, those which were not cystic, malignant or fibroid.

Dr. John Ferguson followed, and stated his belief that the symptoms of Grave's disease were due to thyroid intoxication of the system, in opposition to the view of Sir William Gowers, that it is due to sympathetic nerve centre affection. Some of these cases should be operated upon, leaving enough of the gland to prevent the occurrence of myxedema. Most cases of cystic degeneration and fibroid enlargement, with troublesome pressure symptoms, and nearly all instances of malignant disease, should go to the surgeon.

Drs. Hunter, F. N. G. Starr, Powell, Bruce Smith, Anderson and McCallum joined in the discussion.

Dr. Bingham, in closing the discussion, referred to the excellent results of Kocher of Berne, in the cases of goitre. He again emphasized the fact that the anaesthetist should be an expert, and that the anaesthetic should be stopped after the skin incision is made, till pressure is removed from the trachea. He expressed regret that his method of obliterating the dead space was not discussed. He advocated the use of the ice-bag to the heart.

Dr. Bruce followed by making mention of certain points in the technique. He emphasized the fact that the thyroid gland should be manipulated as little as possible, thus decreasing to a marked extent the possibility of thyroidism.

Arterio-Sclerosis.

This subject was taken up fully in a series of papers. Dr. H. B. Anderson, of Toronto, discussed the artiology and pathology; Dr. T. W. G. McKay, of Oshawa, the cardiac aspects; Dr. John Caven, of Toronto, the renal aspects; Dr. Hugh McCallum, of London, the cerebral aspects; Dr. J. C. Connell, of Kingston, the ophthalmic aspects; and Dr. J. L. Davison, of Toronto, the therapeutics. These papers and the discussion upon them, will appear in the August issue of THE CANADA LANCET.

Diphtheria.

Prof. J. J. Mackenzie reviewed the discovery and subsequent history of Klebs-Löffler Bacillus, and referred to the discovery of the antitoxin. He also referred to the culture of the bacillus, and spoke of the ætiological insignificance of the pseudo-bacillus in the causation of the disease. He stated that the time had come when the physicians of the country should depend upon themselves in the culture and examination of the swabs by the use of incubators. He pointed out that failure is sometimes due to the drying of the swab before the culture has been attempted.

He also referred to the presence of the bacillus in the healthy throat, without the presence of any symptoms. This he attributed to the lessened virulence of the bacillus, or the increased antitoxic condition of the throat in such healthy persons. He dwelt upon the use of disinfectants in the throat, and stated that the disinfectant necessary to destroy the bacillus would cause damage to the mucous membrane of the throat. It is essential to bring the throat back to its normal condition, and this is best accomplished by means of bland lotions and washings.

Prof. Mackenzie emphasized the fact of adequate dosage in the use of antitoxin, and he considered 2,000 units the minimum dose; and in

severer cases 8,000 to 10,000, or much more, if so indicated. He stated, in support of this, the excellent results of antitoxin treatment by the Ottawa Isolation Hospital authorities.

He also discussed the prophylactic administration of antitoxin, and expressed the hope that a prophylactic serum would soon be obtained, which would insure perfect immunity.

Drs. Ferguson and McMahon referred to the dosage of the antitoxin, Dr. Ferguson having given as much as 20,000 units. Dr. McMahon hoped the Association would bring to bear some declaration urging the city council, or government, to give better facilities for the antitoxic treatment of diphtheria. He advocated the early use of the antitoxin, even before the bacteriological examination has been made.

Dr. Bryans asked Prof. Mackenzie whether antitoxin should be used in cases where the bacteriological examination shows the presence of the bacillus, while the clinical symptoms do not permit a diagnosis of diphtheria?

Drs. Wilson and Carveth also joined in the discussion, the latter stating that antiseptics did not kill the germ.

In answer to Dr. Bryan's question, Prof. Mackenzie stated that in those milder cases the administration of the antitoxin should be left to the judgment of the physician. He also emphasized the fact that the city should take action in providing antitoxin for the poor.

A resolution was then unanimously passed supporting this view.

The Medical Witness.

The next paper was that of Mr. W. R. Riddell, K.C. on "The Medical Witness in the Witness Box." Mr. Riddell referred in witty terms to the former treatment of diphtheria, as well as its diagnosis and prognosis, and stated that medical men agreed only on the one point, that "if you get a costly medicine the more of it administered the better," even though they disagreed on all other points.

There is said to be three kinds of liars, the liar, the damned liar, the expert witness. There are two kinds of witnesses: 1, the common witness who speaks of facts; 2, the expert who gives opinions.

In this latter it is not surprising that there is differences among expert medical witnesses. Among all classes and professions there is always a difference of opinion in regard to the nature of things.

The object of cross-examination is to elicit the truth, and to determine this in two ways; first, to ascertain whether he is telling the truth or not; and, secondly, to find out how far his knowledge of the subject entitles him to the respect of the court.

The first thing of importance in a witness is his ability to comprehend the question ; secondly, his capacity to say what he means in such a way that he can be thoroughly understood and convey no false impressions. He said cross-examination was one of the most valuable methods of eliciting the truth. A medical witness has two duties : 1. He must tell the truth ; 2. He must tell it in such a way as that the people will believe him.

A witness box is no place for jesting or frivolity. When a witness has taken the oath, he is under a serious obligation, and it is his duty to prepare himself for all questions which may be asked.

Physical preparation is also essential, as an aid to the mental strain. The personal appearance is an important factor in the eyes of the judge and the jury. All these things assist in the important object of making the truth tell.

Rules for answering questions : 1. Don't answer a question till you understand it thoroughly. It is your privilege to have it repeated. 2. Answer as briefly and concisely as you can, consistently with the truth. If it cannot be answered 'yes' or 'no,' then refuse to answer it that way. 3. When you get through answering a question, 'shut-up.' If a man keeps his mouth open wide enough he is going to put his foot in it. If the answer is going to be misleading, say so, and ask that the question be put in a clear way.

If these rules are applied, much time will be saved and the witness will hold a higher place with both judge and jury. Do not be 'smart' in the witness box. It will count against you.

Don't go and talk outside of the questions, and don't get too gay.

Any medical man, behaving properly in the witness box, need not fear his position, if he only answers the questions in a clear and concise manner and acquits himself like a gentleman.

On motion by Dr. Bingham, a vote of thanks was tendered to Mr. Riddell for his splendid address, and also that he be elected an honorary member of the Association. Dr. Powell seconded the motion in a few witty remarks. It was unanimously carried.

The Medico-Legal Autopsy.

Dr. Silverthorn read a paper on "The Medico-Legal Autopsy." He spoke of a few points in reference to the medico-legal autopsy. The first thing to be considered is the identification of the body. Its surroundings should be examined for blood stains, foot marks, signs of a struggle, the clothing for blood stains and should be removed before the post mortem is made, the body for injuries and all its orifices. He referred

to two cases of autopsy, those of poisoning, and those of wounding. In regard to wounds, the direction, condition and extent of the wound must be examined carefully and minutely. In cases of poisoning, there must be a careful examination of the person internally and externally. The viscera should be ligatured and carefully removed and placed in labelled clean glass jars, mentioning whether preservative or embalming fluid has been used. He emphasized the importance of a careful examination of all cases, and gave a report of two cases: One a case of bullet wound, which is reported in a recent number of *THE CANADA LANCET*, the bullet entered the aorta and was found in the left femoral. A second case was that of a man dying from a fall through a high building in the course of construction. A piece of wood had been cut by the upper teeth from one of the joists on the man's passage downward and this was found lodged in the trachea, below the vocal cords.

He also outlined a method of determining whether a blood stain is human or that of a domestic animal. This is known as the serum theory, which will be outlined in a further description on a future occasion. It consists essentially in the introduction of the blood of the suspected species into the peritoneal cavity of a rabbit. To the rabbit serum obtained from this rabbit after some days, is added a solution of the suspected stain. If a precipitate is thrown down, the evidence is conclusive as regards that species.

Drs Anderson and Ferguson expressed the hope that the doctor performing the autopsy would be better paid, and that the examinations should be thorough.

Mr. Riddell acquiesced in the views expressed by the previous speakers.

On motion by Dr. Anderson the two following papers were taken as read:

1. Contagious Diseases in the Economic Aspect, by P. H. Bryce Toronto.
2. *Impetigo Circinata*, by Graham Chambers, Toronto.

Contagious Diseases.

Dr. P. H. Bryce's paper takes strong ground on the need for thorough isolation of those afflicted with infectious diseases. His paper points out the importance of the family, the physician and the municipality co-operating in the suppression of contagious diseases. He pointed out the economic value of the time and lives saved by such means.

Impetigo Circinata

Dr. Graham Chambers, in his paper on this subject spoke of the role played by pus organisms in the various forms of *impetigo*. The author

of this paper thought there were three forms of the disease: The impetigo contagiosa of Tilbury Fox, the impetigo of Bockhart, and impetigo circinata. The latter is usually a disease of the adult, and is generally contracted in barber shops. The lesions are found on the face, forehead, ears, neck and wrists. They are usually discrete, and vary in size from a pin's head to that of a quarter of a dollar. They are in circular groups. The staphylococcus is the usual germ. The treatment consists in the use of antiseptic lotions.

Business Session.

The meeting then went into business session, and the reports of the various committees were heard and accepted.

The Treasurer's report was presented and unanimously adopted.

The following resolution was passed:

"That in the opinion of this Association it is desirable that a supply of diphtheria anti-toxine be kept at the various isolation hospitals and supplied without charge to indigent patients on prescription of the medical attendant, and that a copy be sent to the Boards of Healths in Ontario."

It was moved by Dr. Uren and seconded by everybody, that the hearty thanks of the Association be tendered to Dr. Parsons, who executed his duties so unselfishly and successfully.

Dr. Parsons replied.

On motion by Dr. McKinnon, seconded by Dr. Ross, a grant of \$100 was made to the Ontario Medical Library.

A hearty vote of thanks was tendered to Dr. W. P. Caven, Chairman of Committee on Papers and Business, and to Dr. Riordan and Dr. King on the Committee of Arrangements.

A hearty vote of thanks was extended to Mr. Albert Gooderham and the owners of the various yachts, as well as to the Minister of Education, for the use of the hall.

Mr. Cameron gave notice of motion that at the meeting of 1904, the by-laws of the constitution be amended so that this Association shall become the Ontario branch of the British Medical Association.

The installation of officers then took place, and President Mitchell in a few brief words called upon the new president, Dr. Ross, who spoke in appreciative terms of the honor done him.

On motion by Mr. I. H. Cameron, the retiring president was tendered a hearty vote of thanks and appreciation on the part of the Association.

Toronto was selected as the next place of meeting.

The following officers were elected :—President, Dr. J. F. W. Ross, Toronto ; Vice-Presidents, Dr. Burt, Paris ; Dr. Turnbull, Goderich ; Dr. J. C. Connell, Kingston ; Dr. J. H. Elliott, Gravenhurst ; Secretary, Dr. C. P. Lush, Toronto ; Treasurer, Dr. A. R. Gordon, Toronto.

TORONTO MEDICAL SOCIETY.

The final meeting was held May 21st, 1903, the President, Dr. Hay, in the chair. Dr. W. J. Wilson read a paper, "Notes of a few Cases of Diabetes." Dr. G. Chambers said that he had seen two cases in children, who died in coma. In adults, he had seen one case with sp. gr. 1016, and sugar present. In another, sp. gr. 1028, the urine diluted with five parts water, no reaction with Fehling's test ; but undiluted, reaction positive. The treatment, he said, was first to watch the weight. If there was loss, the proteids were wasting. If di-acetic acid was present, do not diet, but if Gerhart's reaction (ferric chlor.) be absent, diet. Dr. A. Fletcher asked if there was any relation between tuberculosis and diabetes? He related a case in a family of marked tubercular tendencies. Dr. Hunter enquired regarding the eye symptoms in diabetes. Relating a case in point, he said that the number of cases in children at the Infants' Home were very few. Dr. Bryans asked Dr. Hunter what the disease of the eye was, and in reply was informed some inflammation. Dr. Webster said that lean patients did badly. Diet made no difference. Dr. Wilson in reply said, one case, sp. gr. 101½, showed sugar. He had noticed the history of tuberculosis in a number of the cases and thought it should be investigated. He had seen inflammation of the eye in one case, the whole uveal tract being involved.

Dr. Graham Chambers read a paper entitled "Some notes on Gastroptosis with special reference to its relations to pregnancy." He said that among the causes of gastroptosis in women, pregnancy, and especially repeated pregnancies, is one of the most active. This causal factor is more marked when the pregnancies occur at short intervals. The process by which pregnancy tends to produce this displacement of the stomach is probably in some cases complex. Abdominal flaccidity, following parturition, preceded by intra-abdominal tension during pregnancy, must, I think, be looked upon as the most active factor in these cases. But there are, no doubt, other causative agents, such as emaciation, flat chest, congenital weakness of the nervous system, and tight lacing, which act concomitantly with it. Although after parturition there is a tendency to downward displacement of the abdominal organs

it is a common observation that, when a patient suffering from gastroptosis becomes pregnant, the condition of the gastric digestion is improved. The subject under consideration may therefore be conveniently discussed under two headings; (a) Pregnancy as a cause, and (b) Pregnancy in the treatment.

Pregnancy as a cause of Gastroptosis.—According to the reader's experience, downward displacement of the stomach is a cause of a considerable proportion of the cases of indigestion in women who have borne children. The gastroptosis, in these cases, is usually accompanied by downward displacement of other abdominal viscera which, no doubt, increases the digestive disturbances. The subjective symptoms referred to the stomach, in this type, are very variable, and are of very little use in determining the nature of the disease. The functions of the stomach are frequently disturbed. In the majority of cases, the gastric secretion is increased; but normal, or diminished, secretion is not uncommon. The motility of the stomach is probably always lessened.

In this type, as in all cases of gastroptosis, the physical signs are the most important in diagnosis. The abdomen is flaccid, and the right kidney and often the other organs can be made out with great ease. In two cases, he had been able to feel the head of the pancreas very distinctly, and in many others indistinctly.

The most important physical sign is the recognition, by inspection, of the position of the stomach, both curvatures of the stomach being lower than normal and the lesser being frequently visible. The character of the movements can readily be made out by inspection after inflation of the stomach. All that is necessary, in many cases, is to have the patient drink a glass of soda water and then breathe deeply, when the distended stomach may be seen moving up and down in the abdomen. The position can be determined by the splash and auscultatory percussion. Thinness, emaciation, and neurasthenia are nearly always common symptoms of the condition. Under treatment, if the patient increased in weight, even if the indigestion continued, the treatment was successful, as the deposit of fat increased intra-abdominal tension and aided in the further treatment of the disease. The nervous symptoms are very marked and are referred to the brain, spine, kidneys, pelvis, heart, and other organs. Frequently it is for the relief of these that the patient seeks advice. It was on this account, he thought, that mistakes were sometimes made in the treatment of these cases. He had had cases suffering from downward displacement of the abdominal organs, who had been operated on for movable kidney, diseased ovaries, laceration of the cervix, etc., without benefit. In some, he thought the symptoms

were greatly aggravated by the operation. With regard to the relation of the nervous manifestation to the stomach, a vicious cycle may be said to exist, as the downward displacement of the abdominal organs tends to produce indigestion and neurasthenia, and the latter disease augments the digestive disturbance. Of such a sequence I have frequently obtained clinical evidence, as the application of a perfectly fitting abdominal support relieved not only the gastric, but almost immediately the neurasthenic symptoms. This is particularly true of gastropptosis of recent origin.

Pregnancy in the treatment of Gastropptosis.—A pregnant uterus increases the intra-abdominal tension, and one should expect that when a woman, suffering from gastropptosis, becomes pregnant the condition of the patient improves. Such is the case. Patients have frequently stated that during their pregnancies, the condition of their digestion was greatly improved. In one case he had noticed this and by lengthening the period of convalescence in bed after the labor as well as by careful bandaging, attempted to retain the advantages in the health gained during gestation, with excellent result.

The following officers were elected for the next year:—President Dr. Silverthorn; 1st Vice President, Dr. J. Hunter; 2nd Vice Pres, Dr. Bryans; Cor. Sec., Dr. Beatty; Rec. Sec., Dr. Ashton Fletcher; Treas. Dr. Carveth; Auditor, Dr. Machell; Executive Committee, Drs. Hay, Macdonald and McIlwraith.

THE PROVINCIAL BOARD OF HEALTH.

At the recent meeting of the Provincial Board of Health there were present Drs. Vaux, (Chairman), Cassidy, Kitchen, Oldright and Bryce.

Attention was directed to the severe outbreak of scarlet fever at Toronto Junction. There had been 13 deaths, and one case had retained the infection for a period of eleven months. Many of the cases had been satisfactorily treated in a tent.

In Teeswater there had been 100 cases since January. The local Board of Health had failed to placard the cases.

There had been an interesting dispute between Ottawa and Hintonburg. The patient lived in Ottawa and his parents in Hintonburg, where he was sent for this reason. His case was recognized as smallpox in the latter place, when he was sent back to Ottawa. The board held that Ottawa should have footed the bill, and that the doctor who ordered the patient's removal to Hintonburg had rendered himself liable to a fine of \$40.

A very severe epidemic of scarlet fever had occurred at Minden. There had been 13 deaths during March, April and May. The local authorities had asked for literature dealing with contagious diseases.

A report was received from Lindsay to the effect that it was unable to build a hospital for contagious diseases this year.

Attention was called to the fact that in some places doctors were in the habit of allowing their patients to go out too soon after scarlet fever, and that the disease was spread in this way. It might be necessary to take drastic means in some of these cases.

The Board of Health condemned Mr. Kribb's bill to abolish the law making vaccination compulsory.

With regard to Dr. Pyne's bill providing for the inspection of fish and vegetables, the opinion was expressed that it could not be carried out, and that the bill would not pass the Legislature.

The outbreak of smallpox in East Toronto had been completely checked. The last three cases were free from infection.

Dr. Bryce's annual report was adopted. The report stated that the epidemic of smallpox, which broke out in Galt last autumn, originating in a case coming from Cleveland, was accountable for 112 cases and 11 deaths, of which 86 cases and 6 deaths were in Galt. For 21 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 had yet 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.

Scarlatina has 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 health officer responsible for determining the nature of quarantine necessary had been well established, and its wisdom proved during the recent outbreak.

The available figures and facts, 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. It is apparent that medical health officers must be empowered, as in smallpox, to provide means for separating cases of scarlet fever and diphtheria from their families.

CANADIAN MEDICAL ASSOCIATION.

As already announced through the columns of this journal, the thirty-sixth annual meeting of the Canadian Medical Association will take place at London, Ontario, on the 25th, 26th, 27th and 28th of August, with Dr. Walter B. Moorhouse of that city as President. Dr. George A. Hodge, Queen's Avenue, is Chairman of the Programme Committee, and Dr. Hadley Williams, Park Avenue, is Local Secretary, to either of whom, or to the General Secretary, Dr. George Elliott, 129 John St., Toronto, titles of papers may be sent. Arrangements for reduced fares on the regular Standard Certificate plan have been already completed with the Grand Trunk and Canadian Pacific Railways, while negotiations are now in progress with the Intercolonial and the Canadian Pacific officials as to transportation rates from the Maritime Provinces and points west of Fort William. These arrangements will be published in full in due time. In addition to those who have consented to read the regular addresses, the following have signified so far their intention of being present and contributing papers: A. M. Rosebrugh, Toronto; Perry G. Goldsmith, Belleville; 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.

CORRECTIONS IN DR. WEBSTER'S PAPER.

In Dr. Webster's paper in the June issue of THE CANADA LANCET there occurred the following errors: On page 712 "Calpocoeliotomy" should be colpocoeliotomy. On page 713 read colpocoeliotomy and not "colpocoeliotomy"; for "rectify" read verify; "bathe" should be both. On page 715, "on the hand" should read or, and omit "nor" after "ticket-of-leave". On page 716 read daily for eight months for "eight minutes daily," and "dose" should be do so.

UNIVERSITIES AND COLLEGES.

TRINITY UNIVERSITY MEDICAL EXAMINATIONS.

The results of the final examinations at Trinity University for the degrees of M.D.,C.M. The winner of the gold medal is Mr. 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 follow :—

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. Rowtree, 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. Patterson.

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

The results of the primary examination for the M.D.C.M. degree are as follows :—

First Silver Medal.—R. R. B. Fitzgerald. Second Silver Medal.—T. C. Brereton.

Certificates of Honor.—G. H. Carlisle, R. R. Smale, M. J. C. Naftel.

TRINITY UNIVERSITY FEDERATION.

The joint committee which is conducting the negotiations between Trinity and Toronto Universities with a view to federating the two institutions, has been holding more frequent meetings of late, and definite progress is being made.

As Trinity Medical College had become the medical department of Trinity University, the scope of the committee's negotiations had to be widened so as to include the medical college in the scheme of amalgamation.

CLOSING EXERCISES, TRINITY MEDICAL COLLEGE.

The annual commencement at the close of the 32nd session of Trinity Medical College was held 27th May, and was very largely attended. The medals, honors and certificates were distributed, and the final or "fellowship" degrees conferred by Dean Geikie, who was very happy in his remarks to the various recipients.

The valedictory address by Dr. H. E. Eagleston, gold medallist, was clever and witty. He urged the faculty to insist on third-year students being required to pass an examination in clinics, a more equitable division of work between the third and fourth year, and giving more time for the final examinations, which as at present conducted are crowded into three days, thus putting a most severe and unnecessary mental strain on the students.

Dean Geikie in the closing address said the suggestions of the valedictorian would be favorably considered, and that the standing of the college was one of which all might well be proud.

The choir led in singing "God Save the King," and the session of 1902-3 became a memory of the past.

UNION OF TRINITY UNIVERSITY AND TRINITY MEDICAL COLLEGE.

The complete union of Trinity Medical College and Trinity University was announced at the convocation held 28th May in Trinity University Convocation Hall on the occasion of the matriculation of and the conferring of degrees on medical students.

Owing to the absence in Britain of Chancellor Robinson, Provost Macklem, Vice-Chancellor, presided, and almost all the members of the faculty were present. A very large number of visitors were present.

In a short address after the conferring of degrees, Provost Macklem expressed the earnest hope that Canada would make an effort to retain the best and brightest of her sons, so that they may not have to go to other lands to secure the due reward for their great abilities. He was glad to know that the Union of Trinity Medical College and Trinity University was now complete.

Short addresses were given by Prof. Clark, Dr. Bingham, Dr. Grasett and Dr. Sheard, each of whom expressed great pleasure at the announcement made by Provost Macklem relative to the merging of the Medical School in the University.

TRINITY MEDICAL COLLEGE GRADUATES DINE.

The class of '03 had their final gathering at the Arlington Hotel, 29th May. 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.

PROVINCIAL AID TO THE UNIVERSITY OF TORONTO.

The Government of Ontario has decided to give the University substantial aid in two ways:—First, by declaring that there shall be only one Provincial University; and, second, by money and land grants. It has been made quite clear that the Government will give \$50,000 towards the Convocation Hall Fund. Land is to be granted in aid of the Women's Residence. It was intimated at the Alumni Banquet by Mr. Harcourt that when the friends of Men's Residence had done all they could that some way would be found for completing the work. The Chancellor, Sir W. R. Meredith, has pointed out that the University is doing the same amount of work on an income of \$160,000 a year, as some other universities are on incomes three times as great.

THE UNIVERSITY OF TORONTO CONVOCATION.

The commencement exercises of the University of Toronto were exceptionally successful. Eloquent speeches were made by Chancellor Meredith, President Loudon and Prof. Goldwin Smith, and the attendance was very large. The chief topic of the speeches was the improved financial position of the university.

UNIVERSITY OF TORONTO MEDICAL EXAMINATIONS.

Doctor of Medicine.—T. McCrae.

The following have completed the examination for the degree of Bachelor of Medicine.—P. Anderson, J. L. Biggar, A. T. Bond, R. S. Brewster, J. V. Brown, N. D. Buchanan, T. A. Carson, K. Colbeck, C. L. Constantinides, E. K. Cullen, J. E. N. DeHaitre, T. B. Edmison, J. Ferguson, R. O. Fisher, J. G. FitzGerald, E. J. Foster, R. F. Foster, E. V. Frederick, C. W. Freeman, W. E. Gallie, W. A. Graham, E. A. Gray, G. E. Greenway, W. A. Groves, J. H. Hamilton, E. L. Hodgins, K. H. Holmes, Miss M. J. Hoyles, J. G. W. Hunt, W. B. S. Hunt, R. Ingram, H. C. Jamieson, D. S. Johnstone, D. P. Kappelé, W. J. Kerfoot, C. E. Knister, G. F. Lamb, M. H. Langs, F. Large, J. D. Leeson, W. R. Mahood, W. N. Meldrum, T. H. McColl, P. F. McCue, A. McInnis, W. T. M. MacKinnon, R. P. McLaughlin, H. McLean, H. C. McLean, N. K. Macleod, W. McTavish, F. C. Neal, J. A. Oille, J. M. Park, J. R. Parry, J. Phillips, A. D. Proctor, P. F. Quinlan, J. M. Robb, F. A. Ross, G. W. Ross, V. Ross, A. A. J. Simpson, D. A. Sinclair, S. Singer, W. E. Somers, N. H. Sutton, D. J. Sweeney, H. M. Torrington, W. S. Turnbull, E. M. Walker, T. W. Walker, B. Weir, T. D. White, G. E. Wilson, G. A. Winters, W. A. W. Woolner, S. C. Yin.

The following must pass supplemental examinations before completing the examination of the fourth year:—Medicine—W. D. Beaton,

J. A. Kane, W. W. Medley, C. M. Mackay, A. L. Russell, N. F. Sutton, D. M. Sutherland. Clinical medicine—D. J. Cochrane, W. W. Medley, G. S. Wray. Surgery—D. J. Cochrane, C. H. Gilmour, A. L. Russell. Surgical anatomy—O. T. Dinnick, D. Evans, C. M. Mackay, A. L. Russell, N. F. Sutton, R. Hacking. Pathology—J. W. Cook, R. B. Harris, L. R. N. Hess, C. F. A. Locke, A. L. Russell. Gynæcology—W. W. Medley, N. F. Sutton, D. M. Sutherland. A. L. W. Webb. Obstetrics—W. D. Beaton, W. S. Fawns, D. M. Sutherland. Therapeutics—A. L. W. Webb. Medical psychology—W. D. Beaton, J. A. Kane.

Medals.—Faculty gold medal, J. A. Oille; first faculty silver medal, J. Phillips; second faculty silver medal, S. C. Yin. third faculty silver medal, G. E. Wilson; Starr gold medal, T. McCrae.

Scholarships.—First year—1. J. H. Holbrook; 2. R. J. McMillan. Second year—1. R. H. Bonycastle; 2. W. S. Lemon.

Post Graduate Scholarship.—The George Brown memorial scholarship in medical science. For this scholarship G. E. Wilson, J. A. Oille, J. Phillips, F. C. Neale, G. A. Winters and W. E. Gallie ranked in the order named.

The Reeve Scholarship in Medical Science. In this scholarship G. E. Wilson, J. A. Oille, S. C. Yin, J. Phillips, M. H. Lang and F. C. Neal (equal) in the order named.

Prizes.—The Daniel Clark prizes in medical psychology.—1. G. E. Wilson; 2. W. B. S. Hunt.

CONVOCATION HALL FUND, UNIVERSITY OF TORONTO.

The fund for the erection of a convocation hall in connection with Toronto University now slightly exceeds the \$50,000 which it was the original intention to raise. The committee in charge, however, are anxious to receive additional subscriptions in order to insure the erection of a first-class building, and the lists will not be closed in the meantime.

The alumni of the university undertook to raise the amount, and Dr. J. C. McLennan, B.A., President of the Alumni Association, took a very active personal interest in the securing of the subscriptions. Dr. McLennan visited all parts of the Province and called upon friends of the university to secure contributions, and it is to a great measure through his personal efforts that the fund has been so largely subscribed to. Mr. D. D. Mann, of the firm of Mackenzie, Mann Company made the handsome donation of \$5,000. This is one of the large subscriptions, the others being those of Mr. Massey; Mr. Goldwin Smith, Mr. Clergue, and Mr. Ames.

Additional contributions that bring the fund over the \$50,000 mark are Mr. and Mrs. Goldwin Smith, \$5,000; Messrs. Barber & Ellis, \$500;

Alexander Nairn, \$200, and T. D. Delanere, \$25. Mr. and Mrs. Goldwin Smith had formerly contributed \$2,000, so that their entire subscription amounts to \$7,000.

UNIVERSITY OF TORONTO ALUMNI OFFICERS.

The election of officers resulted as follows:—Hon. President, James Loudon, M.D., LL.D.; President of the University; President, R. A. Reeve, B.A., M.D., LL.D.; Vice-President, I. H. Cameron, M.B., F.R.C.S., M.A.; A. H. McDougal, B.A., Ottawa; Hume Cronyn, B.A., London; E. B. Edwards, M.A., Peterboro'; A. Bartlett, B.A., Windsor; Col. W. N. Ponton, M.A., Belleville; W. H. Ballard, B.A., Hamilton; Secretary and Treasurer, J. C. McLennan, Ph.D.; Executive Committee, A. R. Bain, M.A., LL.D., E. F. Blake, B.A., J. S. Carstairs, B.A., Miss Chown, B.A., Harold Clark, D.D.S., J. M. Clark, B.A., LL.B., H. J. Crawford, B.A., Miss E. M. Curzon, B.A., J. T. Fotheringham, M.B., C. C. James, M.A., M. H. Ludwig, LL.B., W. H. Moore, B.A., Bruce McDonald, B.A., A. McPhe-dran, M.B., A. C. Macdonald, M.B., Rev. John Neil, B.A., Rev. T. R. O'Meara, W. Pakenham, B.A., J. B. Reynolds, M.A., T. R. Rosebrugh, B.A., Andrew Smith, V.S., F.R.C.V.S., S. C. Smoke, B.A., J. H. Squair, B.A., J. R. L. Starr, B.A., Rev. Father Teefy, LL.D., F. H. Torrington, Mus. Doc., R. S. Waldie, B.A., W. T. White, M.A., J. McGregor Young, B.A., R. J. Young.

UNIVERSITY OF TORONTO WOMAN'S RESIDENCE.

Representatives of the Woman's Residence Association of Toronto University, headed by Dr. Hoskin, Miss Hamilton, Miss Cole, Miss Patterson, and others, asked Premier Ross for a grant of \$50,000, to assist them in erecting a woman's residence. They have already raised by subscriptions \$6,500.

WOMEN DOCTORS' ANNUAL BANQUET.

The annual banquet of the Alumnae Association of the Ontario Medical College for Women. was held in the College, 291 Sumach street, on 28th May. 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 fields.

MCGILL UNIVERSITY MEDICAL GRADUATES.

The following gentlemen, 100 in number, have fulfilled all the requirements to entitle them to the degree of M.D., C.M., from the University.

R. Allan; A. W. Allum; C. W. Anderson, B.A.; J. J. Andrews; *G. A. Bishop; *L. C. Bishop; A. K. Blair; *J. H. Boulter, B.A.; *O. Boyd; R. M. Boyd; J. E. Brooks, B.A.; A. S. Burns, B.A.; *W. G. Campbell; *H. B. Chamberlain; E. C. Chandler; H. L. S. Chaplin; H. C. Church; H. H. Cowperthwaite; *L. V. Croft, B.A.; W. G. Cumming, B.A.; *A. J. Dickson, B.A.; W. H. Donnelly; F. C. Douglas; F. H. Doyle; P. L. B. Ebbett; R. Elder, B.A.; R. H. Ellis, B.A.; J. M. English; W. H. Ferguson; *R. D. Forbes; C. E. F. Fortin, B.A.; E. H. Freeze; A. C. Frost; W. P. Gale; *C. R. Gilmour; N. C. Hansen, M.A.; R. H. M. Hardisty, B.A.; F. L. Horsfall, B.A.; W. T. Hynes; R. W. Kenny; R. King, B.A.; J. W. Kissane; W. V. Lamb; Ernest Laurie, B.A.; J. A. Lundie, B.A.; W. S. Lyman, Ph.B.; *A. L. Lynch; R. St. J. Macdonald, B.A.; W. A. Mackenzie; J. W. MacKinnon; *J. M. McCulloch; C. A. McDiarmid; P. A. McDonald, B.A.; S. H. McDonald, B.A.; *J. W. T. McEachern; J. R. McEwen, B.A.; F. C. McGrath; J. D. McGuigan; *D. W. McKechnie; H. H. McIntosh; *J. A. McIntosh; *D. D. McLaren; E. M. McLaughlin; *Thos. McPherson, B.A.; W. J. Maby; *C. F. Magee; *A. G. Meindl; I. E. Mitchell, B.A.; C. H. Montgomery; S. C. Morris; *H. B. Munroe, B.A.; *H. E. Munroe; *J. H. Munro; J. S. Murray; J. S. Nelson; W. E. Nelson; C. W. O'Brien, B.A.; J. M. O'Neill; N. D. Parris; F. S. Patch, B.A.; H. L. Pavey; *G. R. Peterson; B. A. Puddington; W. N. Reh fuss, B.A.; W. E. Saunders; W. Scott; *W. H. Secord; D. Le B. Shaw; M. R. Slack; E. O. Steeves; F. E. Stowell; N. W. Strong, B.A.; E. A. Taggart; S. B. Thomas; R. H. Townsley; W. Truax; G. H. Turner, R.A.; J. G. Warren; S. G. White; A. Wilson.

Holmes gold medal, for highest aggregate in all subjects forming the Medical Curriculum, E. M. McLaughlin, Winona, Minn. Final prize for highest aggregate in the Fourth Year subjects, F. S. Patch, B.A., Montreal, Que.

Third year prizemen: J. L. Robinson, of St. Marys, Ont. Sutherland medallist, J. Graham Willmore, of Montreal, Que. McGill medical society senior prizes: D. W. McKechnie, first prize. W. G. Campbell, second prize.

Second year prizemen: H. C. Mersereau, Doaktown, N.B. Senior anatomy prize, H. C. Mersereau, Doaktown, N.B. McGill medical society junior prizes: D. L. S. Likely, B.A., first prize. L. DeC McIntosh, second prize.

*From Ontario.

First year prizemen: C. S. Williams, of Tyne Valley, P.E.I. Junior anatomy prize, P. A. McDonald, Alma, N.B.

LAVAL UNIVERSITY GRADUATING LIST.

The following have received their diplomas in medicine from Laval University:—André Brisset, J. C. Bourgoïn, D. Bergeron, J. R. Belisle, George Etienne Bedard, Albert Cleroux, D. Chagnon, L. P. Dorval, W. G. Drouin, Edward David, W. N. Godin, J. C. B. Godbout, Joseph Guertin, Horace Gervais, Josaphat Isabelle, Hormidas Larose, J. Lapointe, Albert Larose, A. P. Lachance, J. P. Laporte, Arsene Labarre, Eugene Letreille, L. P. Marleau, Jos. Melançon, J. H. Meunier, A. Mailler, J. L. Mauffet, W. Ouimet, Lachance Perron, Henri Prevost, Edouard Pelletier, Philippe Quesnel, J. A. Rousseau, J. A. M. Riopel, P. E. Riopel, J. A. C. Riopel, J. E. Racicot, J. A. Robinson, Edgar Smith, J. A. Sabourin, E. Touchette, W. Tetrault, Alexandre Thibaudeau and Hector Viau.

MANITOBA UNIVERSITY.

Convocation was held June 5th, when the Degrees were conferred and the following results given out.

M.D.

Robert Brodie Anderson, William John Andrew, B.A., Wilfred A. Bigelow, Herman McLean Cameron, B.A., Lewis James Carter, B.A., James Forbes Creighton, B.A., Robert Donald Fletcher, M.A., Thomas Glendenning Hamilton, Howard Harvey, B. A., Stephen Frederick Hepworth, Warren Hastings Lang, Josiah McKee, Richard McRae Oatway, John Angus Perrin, Andrew James Slater, Maxwell Wallace, Joseph Wark, B.A., Alexander Robert Winram, B.A.

C.M.

Lewis James Carter, B.A., James Forbes Creighton, B.A., Robert Donald Fletcher, M.A., Alexander Robert Winram, B.A.

Medals.

University Silver Medal—Robert D. Fletcher, M.A.; University Bronze Medal—James Forbes Creighton, B.A.; O'Donnell Medal in Sanitary Science—Robert D. Fletcher, M.A.

Scholarships.

Third Year: Nelson George Cooper, \$65.00; Sidney S. J. Pierce, B.A., \$65.00. Second Year: Harry Wigmore McGill, \$80.00; Herbert Samuel Sharpe, 50.00. First Year: Roslyn Brough Mitchell, B.A. \$80.00; William Alexander Cluff, \$50.00.

The following Doctors obtained *Licenses*: W. J. Beatty, Mary E. Crawford, H. J. Hassard, A. J. Hunter, J. C. Little, J. G. Munroe, E. Pernet, J. A. Wellwood.

THE CANADA LANCET

VOL. XXXVI.

JULY, 1903.

No. 11.

EDITORIAL.

THE CAUSATION OF INSANITY.

There are few problems in medicine that have more thought about, and been the subject of more discussions, than insanity in its varied forms and their etiology. While much that has been said has been of no value in itself, it has led to the formation of more correct views by keeping the professional mind open for further information, and stimulating it to further research. The whole question of etiology in insanity is as yet a much discussed one, and one in which there are many differences of opinion. There are many factors entering into the causation of insanity in its different forms. One fact stands out prominently however, that, no matter what these causes are, the results of treatment have been far from encouraging. It is safe to say that not more than one-third of all cases of insanity recover, and of these three-fourths have relapses.

The importance of heredity cannot be overestimated.

“Tis law as steadfast as the throne of Zeus,
Our days are heritors of days gone by.”

So sang Aeschylus in his *Agamemnon*. The tendency of many diseases runs in a family for generations. This is true of pulmonary, skin, joint, digestive, arterial and nervous diseases. For some reason there is an inherent weakness in some organ or system, and under the stress and strain of life disease sets in. In other words, it fails before its fellow organs. A person has a certain amount of business worry, and he becomes sleepless, and finally insane. Following a confinement there is some septic trouble, and the unstable nervous system gives way; not so when there is no such vulnerability. An inherited predisposition to insanity can be found in a very large percentage of all cases. The average of this influence cannot be put at less than 60 per cent., and by some is placed as high as 90 per cent. But in addition to heredity there are many exciting, or determining causes. Of these we shall note some of the more important.

The first, as it is the most important cause of insanity, after heredity, is the abuse of alcohol. The abuse of alcohol causes degeneration in

many organs of the body, but very specially of the nervous system. It is a conservative estimate to put the insanity, due to this cause, at 30 per cent. of the total number admitted into the asylums of the United States, Great Britain and Germany. When it is borne in mind that this is a preventable cause, it would seem that special efforts ought to be put forth to enlighten the public on the evils of intemperance on the one hand and to control the consumption of alcoholic beverages within safe bounds. But the insanity caused by the abuse of alcohol does not represent the whole of the evil arising from this cause. The children of alcoholics are often degenerates, though they may not become insane.

Among the important causes of insanity, syphilis takes a prominent place. About 5 per cent. of the insane suffer with that form of mental derangement known as general paralysis of the insane, or parietic dementia. This form of insanity is in almost every case due to a previous attack of syphilis. Add to the above, cases of insanity due to syphilis, other than parietic dementia, and it is safe to say at least 8 or 10 per cent. of all cases of insanity can be attributed to syphilis.

With regard to injuries it may be said that they are not frequent causes of insanity. When injuries do cause mental derangement there is usually a history of alcoholism or a neurotic habit. Not more than 1 or 2 per cent. of all the insane owe their disease to injuries.

It would appear that there is a definite relationship between insanity and tuberculosis. A large percentage of the insane die of tuberculosis. This amounts to at 12 or 15 per cent. It may be that life in asylums tends to produce tuberculosis; but there is good ground for believing that those with a tendency to consumption first lose their reason, and, after being confined in asylums, become tubercular. The debility, anæmia, cohexia, etc., which are usually present in those with a tendency to consumption, are also important factors in the etiology of insanity. The children of the tubercular often go insane, and the children of the insane often die of tuberculosis.

Some forms of insanity are peculiarly degenerative in their nature. Some of these forms appear during the growth of the body. For some reason, inherent in the nervous system, there is an arrest in the development of the brain, and mental evolution is faulty. Such forms of insanity are met with at puberty, and during adolescence, paranoia is a type of these. Then there is the degenerative insanities of age, the senile insanities and dementias. The vessels become hardened and the convolutions atrophy. With the progressive changes the reason gradually fails.

Sufficient attention has not been given to the study of the condition of the kidneys in insanity. So far as researches in this interesting field have

gone, they go a long way to show that there is some form of renal disease, or derangement, in a very large percentage of the insane. The incidence ranges all the way from 30 to 60 per cent., according to different writers.

Among the causes of insanity overwork, overstudy, worry, loss of sleep, disappointment, etc., must be ranked as of considerable frequency. These causes, however, must first cause physical changes. The nerve cells are exhausted beyond their power to recover themselves, and permanent damage is the result in many cases. The changes in disposition and in the moral characteristics of these cases are in all cases preceded by physical changes.

Poisoning of the system is one of the potent causes of mental derangement. This poisoning may arise out of attacks of such diseases as malaria, influenza, typhoid fever, or acute rheumatism. The poisons may be introduced into the system in the form of drugs of various kinds, or they may arise within the system, the so-called auto-intoxication. Ptomaines and putrefactive products are produced in the digestive canal by bacteria, under certain conditions. Toxæmia in some form is now regarded as a real cause of many cases of insanity. It is here that the main hope for recovery is to be found. Acute cases of insanity, due to toxæmia, yield most of the recoveries.

THE HOSPITALS OF ONTARIO.

The report on hospitals for the year 1902 gives a list of 55 of these institutions. The number of patients in the various hospitals on 1st October, 1901, were 2,287. The number admitted during the year covered by the report was 29,833, making a total of 33,113. There were 1,705 deaths in these hospitals, and the total number of day's stay in them were 817,822. The total revenue of these hospitals was \$673,909.21, of which the Provincial Government grant was \$110,000. The average cost of patients per day was 84 cents. In the report of 1901, the Government grant was 19 per cent. of the total cost of maintenance, while in the report for 1902, it is only 16 per cent. The income for all the hospitals last year was \$58,591.53 in excess of that for the year 1901. This came either from the payments of patients or the donations of friends, as the Government grant remains the same, \$110,000.

The Government grant this year is about 17 cents per diem, per patient. Some years ago it was 30 cents per day. During the past years, the numbers of patients admitted to hospitals have been steadily increasing, while the Government grant has remained stationary at \$110,000.

The most that any municipality pays for the maintenance of an indigent patient is 40 cents per diem. This, with the Government grant of 17 cents, makes 57 cents as the amount received by hospitals for the maintenance of these patients. The report shows, however, that it requires 84 cents per diem for the care of these patients.

The demand of the hospitals that both the government and the municipalities should increase their grants is a reasonable one. The indigent poor are wards of the state, and should be allowed enough to maintain them in times of sickness, or when laid up with an accident. The Province of Ontario has no greater asset than the hospitals. They are doing an enormous work for the saving of life to the Province. The people get the benefit of this, and should be more generous in the support of these institutions. Too much is left for the willing worker and the generous minded. In this matter the various municipalities should allow 50 cents per diem, and the government 30 cents per diem for the maintenance of pauper patients. This would about defray the cost to the hospitals for the care of this class. The public owes this much to the hospitals as a duty. It is no favor to the hospitals to receive these grants, as they bring with them a class of patients that cause a loss to these institutions of about 30 cents per diem. No time should be lost in remedying this state of affairs.

LONDON'S WOMEN PHYSICIANS.

At the present moment, London has about ninety lady doctors. They are taking a very active interest in the bazaar which Princess Christian and Princess Louise Augusta are organizing in behalf of the Royal Free Hospital, where these lady doctors obtain their training. Recently, a number of important appointments have been made out of the ranks of these lady doctors. The new hospital for women is to be entirely officered by lady doctors. They also fill positions in other hospitals, in the poor law infirmaries, in the post office to look after the health of the girls employed, in mission fields, as medical officers in friendly societies, as government examiners for proposers for annuities and in various important capacities in South Africa and in India.

DR. RODDICK ON DOMINION REGISTRATION.

In his address to the graduating class of one hundred at McGill Medical College a short time ago, referring to the subject of Dominion Registration, Dr. Roddick said:—

Regarding the measure for medical registration, with a majority of the provinces now in line, 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. There was reason to believe that this permission would be granted.

This is the position which THE CANADA LANCET has urged on several occasions.

THE HOME FOR INCURABLES, TORONTO.

It is a matter of much gratification to the friends of the above institution to learn that the management has been able to make such a complete answer to the attacks that have been made upon it. As a matter of fact, we took the trouble to look into this matter and came to the conclusion that a very deserving charity was being seriously maligned. The institution has been vindicated by a full statement signed by the following: Rev. H. M. Parsons, D.D., president; Rev. Chas. L. Ingles, M.A., acting vice-president; Mrs. Wm. Mortimer Clark, first directress; Bruce L. Riordan, M.D., secretary medical staff.

These names are ample guarantee for the accuracy of the report, which must be accepted by every fair-minded person as finally settling this matter.

FUNDS FOR THE COUNTESS OF MINTO'S HOSPITALS.

While attending a meeting in Toronto of the National Council of Women, the Countess of Minto briefly reviewed the good work done by her cottage hospitals, the idea of establishing which she had been imbued with three years ago. Several of these institutions had organized themselves into training schools for nurses, and that of Revelstoke proposed to teach Indian women. She was gratified at the increasing demand for these hospitals, and at the responses that had been made to her appeal for money for the endowment fund. Towards this fund \$50,000 had already been contributed by Toronto, \$36,000 by Montreal, and \$7,000 by Ottawa people, but there still was required about \$30,000 to make up the full amount. She concluded by appealing to the audience for help in collecting money for the cause.

THIS ISSUE OF THE CANADA LANCET.

Owing to the meeting of the Ontario Medical Association having been held rather late in June, and the desire to have a full report of the meeting in this issue, the July number has been delayed a few days.

It was felt that the delay would be more than compensated for by the fact there would be so full a report of the proceedings, and a number of the leading addresses and papers. This issue contains 96 pages in addition to a beautiful frontispiece. The August number will contain the papers and discussion on arterio-sclerosis; Mr. W. R. Riddell's address on the medical witness; a paper by Dr. A. H. Ferguson, of Chicago; one by Dr. A. Haig, F.R.C.P., of London, Eng.; and other matter of much interest.

OBITUARY.

Dr. Erastus Gillen died at Belleville recently.

Dr. E. H. Hurlbert died at Brockville 28th May.

Dr. L. R. Morse, of Lawrencetown, Annapolis, died on May 13.

Dr. J. A. E. Ouimet, registrar of the County of Laval, died 9th June.

Dr. Charles S. Haultain, surgeon Northwest Mounted Police, died in Battleford in the latter part of May.

BOOK REVIEWS.

Saunders' Medical Hand-Atlases

ATLAS AND EPITOME OF HUMAN HISTOLOGY INCLUDING MICROSCOPIC ANATOMY.

By Privatdocent Dr. J. Sobotta, of Wurzburg. Edited, with additions, by G. Carl Huber, M. D., Junior Professor of Anatomy and Histology, and Director of the Histological Laboratory, University of Michigan, Ann Arbor. With 214 colored figures on 80 plates, 68 text-illustrations, and 248 pages of text. Philadelphia and London: W. B. Saunders & Co., 1903. Toronto: J. A. Carveth & Co. Cloth, \$4.50 net.

This work combines an abundance of well-chosen and most accurate illustrations with a concise text, and in such a manner as to make it both atlas and text-book. The great majority of the illustrations have been made from sections prepared from human tissues, and always from fresh and in every respect normal specimens. The colored lithographic plates have been produced with the aid of over thirty colors, and it is evident that particular care was taken to avoid distortion and assure exactness of magnification. The text is as brief as possible; clearness, however, not being sacrificed to brevity. The editor of the English translation has annotated and altered very freely certain portions of the sections on the adenoid tissues, blood and the blood-forming organs,

muscular tissues, special sense organs, and peripheral nerve distributions, making these parts conform to the latest advances in the study of these tissues. The work will be found useful as an atlas, text-book, and book of reference for student and practitioner. We strongly recommend it.

American Edition of Nothnagel's Practice.

DISEASES OF THE PANCREAS, SUPRARENAL CAPSULES AND LIVER.

By Dr. L. Oser, of Vienna; Dr. E. Neusser, of Vienna; and Drs. H. Quincke and G. Hoppe-Seyler, of Kiel. The entire volume edited, with additions, by Frederick A. Packard, M. D., late Physician to the Pennsylvania and to the Children's Hospitals, Philadelphia; and Reginald H. Fitz, M. D.; Hersey Professor of the Theory and Practice of Physic, Harvard University Medical School, Boston. Handsome octavo of 918 pages, illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Toronto: J. A. Carveth & Co. Cloth, \$5.00 net; Half Morocco, \$6.00 net.

This book combines in one volume the sum of our knowledge concerning diseases of the Pancreas, the Suprarenal Capsules, and the Liver. Any contribution on these subjects is of great interest to the profession, and these monographs, proceeding from such distinguished investigators, will be found of unusual importance. In the sections on the Pancreas and the Suprarenals, the numerous experiments upon animals cited will be of the greatest value to the pathologist, the clinician, and the pathologic anatomist, affording an insight into the more deep-seated processes, and offering an opportunity of comparing the disturbances of function produced by morbid conditions experimentally induced, with bedside and autopsy observations. In editing these sections the editor has availed himself of the writings of Korte and Mayo Robson, especially the latter's important treatise on the etiology and treatment of chronic pancreatitis. An editorial addition to the section on the Suprarenal Capsules, which seems especially noteworthy, is the investigations and discoveries on the active principles and therapeutic properties of suprarenal extract.

The excellent article on the Liver is as thorough and complete as those on the Pancreas and Suprarenals. Dr. Packard's careful clinical work, and his interest in the diseases of the Liver, mark him as the most suitable person to edit this article. A survey of this work shows numerous critical additions, embodying the very latest contributions, besides expressions of his own views regarding subjects under discussion. He has devoted special care to diagnosis and treatment, including the surgical procedures that have recently found their place in this field. With these numerous editorial additions the articles are brought fully up to date, and have no equal in our language.

A TEXT BOOK OF DISEASES OF THE EYE, FOURTH EDITION,
REVISED, ENLARGED, AND ENTIRELY RESET.

A Handbook of Ophthalmic Practice for Students and Practitioners. By G. E. De Schweinitz, A. M., M. D., Professor of Ophthalmology in the University of Pennsylvania, etc. Fourth Edition, Revised, Enlarged, and entirely Reset. Octavo volume of 773 pages, with 280 text-illustrations and 6 chromo-lithographic plates. Cloth, \$5.00 net; Sheep or Half Morocco, \$6.00 net. Philadelphia and New York, W. B. Saunders & Co. Agents J. A. Carveth & Co. Toronto.

When a book reaches its fourth edition in a short time there must be something of decided value in it. This work, written by an active teacher of ophthalmology, certainly deserved the popularity given the former editions. General optical principles and refraction occupy 174 pages and these subjects are written in a very clear manner, enabling the student of ophthalmology to gain a clear and full insight of this important part of his work. The two pages directed to "spectacles and their adjustment" are of distinct value. The correct setting of lenses is too often disregarded, for a correct lens may be unsatisfactory because it has been badly placed before the eye. The chapter on diseases of the lids is profusely illustrated. In the chapter devoted to diseases of the conjunctive (55 pages) more than usual space is devoted to treatment and only those drugs and measures that have been found of real service have been mentioned. In connection with diseases of the cornea the author insists that the nose and naso-pharynx should have strict attention. The author says "the lacrymal passage must be kept clear in cases of suppurative keratitis." This is sometimes a very difficult matter and in cases of old dacryocystitis abrasions of the cornea are nearly always followed by a most severe suppurative keratitis. In these cases one is safer to ligate the canaliculi and thus shut off the supply of poison. Of the chemical caustics used in corneal ulcers tinct. iocine has given the author the most satisfaction. In children, the author has frequently found the corneal inflammation to be due to faulty teeth.

The chapter devoted to glaucoma is unusually good and the directions for the management of this dangerous disease are very clearly and fully given. Diseases of the retina and optic nerve are illustrated by a number of colored plates. An unusually large amount of space is given to the "movements of the eyeballs and their anomalies." This space is well used and the subject treated in a very clear manner. The author is in this chapter not a faddist but gives the procedures he himself finds of most value. In cases of stricture or obstruction of the nasal duct the author says (page 626) "in nearly every case of disease of the lacrymal sac and of the lacrymo-nasal duct morbid conditions of the nasal chambers and of the naso-pharynx are present."

Under the head of extirpation of the lacrymal sac no mention is made of the rapid and certain method of putting a bead of silver nitrate into the sac. This will very rapidly destroy the *entire* mucous membrane. Eighty-two pages are devoted to operations and we think this the best and clearest part of the entire work. The illustrations are very profuse and clear. The general practitioner will find this chapter on operations, which includes and illustrates the most simple procedures, of very great assistance in his daily practice and all who read the work will admit that it is a clear and concise treatise on ophthalmology.

A SYSTEM OF PHYSIOLOGIC THERAPEUTICS.

A practical exposition of the methods, other than drug-giving, useful in the prevention of disease and in the treatment of the sick. Edited by Solomon Solis Cohen, A. M., M. D., Senior Assistant Professor of Clinical Medicine in Jefferson Medical College; Physician to the Jefferson Medical College Hospital, and to the Philadelphia, Jewish and Rush Hospitals; one time Professor of Medicine and Therapeutics in the Philadelphia Polyclinic, etc. Vol. V. Prophylaxis, Personal Hygiene, Civic Hygiene, Care of the Sick. Illustrated. Philadelphia: P. Blakiston's Sons & Co. Toronto; Chandler & Massey. 1903.

The contributors to this volume are well-known, and include the names of Joseph McFarland, Henry Leffmann, Albert Abrams, and W. Wayne Babcock. This volume is a very suggestive one, and shows how much there is in the science of medicine other than drugs. The editor has rendered a real service in bringing so much valuable information before the notice of the profession on the subjects of climatology, sanitary science, the care of the sick, public hygiene, etc. This volume, with the others in the series, makes a splendid reference library upon these subjects. The illustrations are good, and the make-up of the book in keeping with the reputation of the well-known publishers. This series of volumes occupies a unique place in medical literature, covering as it does the wide domain of electrotherapeutics, climatology, dietotherapy, mechanotherapy, rest treatment, hydrotherapy, pneumotherapy, serotherapy, and the present volume. We can very cordially recommend these volumes to the medical profession.

THE INTERNAL SECRETIONS AND THE PRINCIPLES OF MEDICINE.

By Charles E. De M. Sajous, M. D., Fellow of the College of Physicians of Philadelphia, etc., etc., etc. Volume First, with Forty-two Illustrations. Philadelphia: F. A. Davis Company, Publishers, 1903.

A SHORT time ago we announced that this work was well under way. We have now had the pleasure of perusing the first volume. It

is truly a work of fundamental principles. The author in this volume discusses at great length the Adrenals, the Pituitary Bodies, Internal Secretions in Relation to Immunity, and the Internal Secretions and the Preservation of Life. A vast amount of information is gathered together in this volume. The inter-relationship between the adrenals and the thyroid and thymus glands is dwelt upon fully.

A study of the book throws much light upon the important subject of auto-intoxication. When the suprarenal glands become diseased the system becomes poisoned. Following upon this poisoning there are a long chain of effects, as derangement of the cardio-vascular, muscular, and nervous systems. But it is shown that the adrenals may be over-active as well as inadequate. The active principles of the adrenals are shown to have a decided influence on the function of the thyroid and thymus glands, on the pituitary body, and on the salivary, lacrymal, sudoriferous and mammary glands. Indeed, through the nervous and vascular systems the suprarenals influence the liver, the spleen, and the pancreas; and thus exercise a marked power over the metabolism of the body.

The sections of the book treating of the internal secretions in their relations to immunity are most interesting. The relations of the adrenals to phagocytosis, the bacterial alexins, the vulnerability of children to infectious diseases, the tuberculin test, and antitoxic serum, afford much food for reflection.

The last portion of the book deals with the power of internal secretions in the preservation of life. The limits of serum therapy and immunizing medication are carefully examined. The book can be said to be one that opens up a new line of study, and cannot but give a material impulse to that phase of the philosophic pathology of disease, in which the derangements of the secretions of the various glands of the body play so prominent a part. We feel sure that this work will be widely read.

A TEXT-BOOK OF PRACTICAL MEDICINE.

By William Gilman Thompson, M.D., Professor of Medicine in the Cornell University Medical College, New York; Physician to the Presbyterian and Bellevue Hospitals, New York. Second edition, revised and enlarged. Illustrated with sixty-two engravings. Lea Brothers & Co., Philadelphia and New York. Price, Cloth, \$5; Leather, \$6; Half Morocco, \$6.50.

Professor Thompson's Practical Medicine is no longer a stranger. The first edition appeared three years ago. An examination of the present, second, edition clearly shows with what care the revision has been

performed. The work consists of over one thousand pages. He discusses the various diseases under the headings Infectious Diseases, Digestive System, Glandular System, Vascular System, Respiratory System, Urinary System, Nervous System, Muscular System, Miscellaneous Diseases, Poisons and Drug Habits. Among the infectious diseases the author includes acute rheumatism and hydrophobia. Acute anterior poliomyelitis is grouped with nervous diseases. There are some who would classify it with the infectious diseases. No mention is made of the infectious theory of the disease. Arthritis deformans and osteitis deformans are given as among the trophic and vaso-trophic disorders. At the present moment there are high authorities who group arthritis deformans with the chronic infections. All this only goes to show that there is much in medical science that is not yet settled. On the whole, the work is got up in attractive form and ably written, and forms a trustworthy text-book on the practice of medicine.

A MANUAL OF PRACTICAL HYGIENE FOR STUDENTS, PHYSICIANS AND MEDICAL OFFICERS.

By Charles Harrington, M.D., Assistant Professor of Hygiene in the Medical School of Harvard University. Second edition, revised and enlarged. Illustrated with twelve plates in colors and monochrome, and one hundred and thirteen engravings. Lea Brothers & Co., New York and Philadelphia. Price, Cloth. \$4.25.

The contents of this work are food, air, soil, water, habitations, schools, sewage, garbage, disinfection, military hygiene, naval and marine hygiene, tropical hygiene, insects and disease, hygiene of occupation, vital statistics, personal hygiene, vaccination and other preventive inoculations, quarantine, disposal of the dead. This is a full bill of fare. Under these various headings is given a large amount of the most recent views upon the topics discussed. The illustrations are good and add much to the usefulness of the book. The work is a safe guide on the important subjects of which it treats. The author and publishers are both to be congratulated upon having given the profession so useful a manual on the very interesting subject of hygiene, for preventive medicine is assuming a large place in the thought of medical men.

A TEXT BOOK ON THE DISEASES OF THE EAR, FOR STUDENTS AND PRACTITIONERS.

By Professor Dr. Adam Politzer, of Vienna, translated at the personal request of the author, and edited by Milton J. Ballin, Ph.B. M.D., and Clarence L. Heller, M.D. Fourth edition, revised and enlarged, with 336 original illustrations. Lea Brothers & Co., Philadelphia and New York, publishers. Curswell & Co., agents, Toronto.

It is absolutely impossible to review, in a somewhat limited space, such a classical work as this. Those whose special practice is con-

fined to the eye and ear have long recognized Politzer as the father of otology, and as the first authority on diseases of the ear. The translators have been able to give the English text in very simple language. This is frequently not accomplished in books that are translations, and many practitioners object to buying a foreign work because of the difficulty of absorbing what they read. Politzer's book is one the general practitioner should have, because it contains everything of value in otological practice, written in very simple language, and profusely illustrated.

The methods of examining aural patients, the use and their meaning of the various tests for the detection of auditory defects, are very clearly and fully given. Treatment throughout the entire book is unusually fully mentioned. Pathological anatomy could not be neglected in a work written by Adam Politzer. The chapter on sclerosis of the middle ear is splendid, and is enhanced greatly by many excellent illustrations. Ear disease and Life Insurance, Nasal and Naso-Pharyngeal Catarrh and Adenoids, are treated in so far as they affect the ear. The prescriptions commonly used in "Poltizer's Clinic" are appended to the book. The book contains 700 pages and is excellently printed and well bound.

A TEXT BOOK OF PHARMACOLOGY AND THERAPEUTICS, OR THE ACTION OF DRUGS IN HEALTH AND DISEASE.

By Arthur R. Cushny, M.A., M.D., Aberd.; Profesoor of Materia Medica and Therapeutics in the University of Michigan; formerly Thompson Fellow in the University of Aberdeen, and assistant in the Pharmacological Institute of the University of Strassburg. Third edition, revised and enlarged octavo, 750 pages; illustrated with fifty-two engravings. Lea Brothers & Co., Philadelphia and New York. Price, Cloth, \$3.75 net; Leather, \$4.75 net.

The very fact that within eighteen months of the publication of the second edition, a new one is required, speaks for the popularity of this work. Dr. Cushny has not attempted to rewrite the whole book, but has put in such necessary corrections and additions as are indicated by the progress made in pharmacology during the past two years. The general scheme, then, which is followed, remains the same as before, namely, to illustrate the action of drugs by means of experiments on animals, and apply the results obtained to therapeutic practice; hence it is not the place of the reviewer to refer to the whole subject matter but rather to touch upon the points which are new.

The article on Alcohol has been materially extended, and the results of the experiments conducted by Neumann, Atwater and Benedict, have been recorded, the general conclusions being that alcohol can, under cer-

tain conditions, replace a chemically equivalent amount of fat in the dietary.

Under the heading, Cocaine, there is found an admirable account of spinal cocainization, and Schleich's method of obtaining local anæsthesia—neither of these subjects having been touched upon in the first edition—with a short discussion of the limitations and uses of each. The writer thinks that spinal cocainization will never replace general anæsthesia, but that it will be reserved for special cases.

The most substantial addition to the work is found under the head of suprarenal or adrenal glands, for besides the experiments on the physiological action of the extract, we have a very clear and concise article on the general and local effects from its administration. Taken by mouth it is said to give no results, and even when administered hypodermically its action is nil; however, if directly injected into a vein, it will cause a sudden rise in blood pressure, and it is suggested that this last method might be adopted in cases of heart failure from chloroform, as it is of great use in similar conditions in animals.

These new articles, together with a list of drugs, classified according to their therapeutic uses, has increased the size of the book by some 20 pages, and the best possible use has been made of this slight increase to the bulk of the volume.

A TEXT BOOK OF LEGAL MEDICINE AND TOXICOLOGY.

Edited by FREDERICK PETERSON, M.D., Chief of Clinic, Nervous Department of the College of Physicians and Surgeons, New York; and WALTER S. HAINES, M.D., Professor of Chemistry, Pharmacy and Toxicology, Rush Medical College, in affiliation with the University of Chicago. Two imperial octavo volumes of about 750 pages each, fully illustrated. Philadelphia, New York, London: W. B. SAUNDERS & COMPANY, 1903. Toronto, Canada, J. A. CARVETH & Co., 413-415 Parliament St. Per volume: Cloth, \$5.00 net; Sheep or Half Morocco, \$6.00 net.

This work presents to the medical and legal professions a comprehensive survey of forensic medicine and toxicology in moderate compass.

For convenience of reference the treatise has been divided into two sections, Part I and Part II, the latter being devoted to Toxicology and all other portions of legal medicine in which laboratory investigation is an essential feature. Under "Expert Evidence" not only is advice given to medical experts, but suggestions are also made to attorneys as to the best methods of obtaining the desired information from the witness. The Bertillon and Greenleaf-Smart systems of identification are concisely and intelligently described, and the advantages of each stated. An interesting and important chapter is that on "The Destruction and

Attempted Destruction of the Human Body by Fire and Chemicals ;” for on the determination of the human or animal source of the remains frequently depends the legal conduct of a given case, and the guilt or innocence of the accused. A chapter not usually found in works on Legal Medicine, though of far more than passing significance to both the medical expert and the attorney, is that on the medicolegal relations of the X-Rays. The responsibility of pharmacists in the compounding of prescriptions, in the selling of poisons, in substituting drugs other than those prescribed, etc., furnishes a chapter of the greatest interest to everyone concerned with questions of medical jurisprudence. Also included in the work is the enumeration of the laws of the various States relating to the commitment and retention of the insane. In fact, the entire work is overflowing with matters of the utmost importance, and expresses clearly, concisely, and accurately the very latest opinions on all branches of forensic medicine and toxicology.

Saunders' Medical Hand-Atlases.

ATLAS AND EPITOME OF DISEASES OF THE MOUTH,
PHARYNX AND NOSE.

By Dr. L. Grunwald, of Munich. From the Second Revised and Enlarged German Edition. Edited, with additions, by James E. Newcomb, M.D., Instructor in Laryngology, Cornell University Medical School ; Attending Laryngologist to the Roosevelt Hospital, Out-Patient Department. With 102 illustrations on 42 colored lithographic plates, 41 text-cuts, and 219 pages of text. Philadelphia and London : W. B. Saunders & Co., 1903 ; J. A. Carveth & Co., Toronto. Cloth, \$3.00 net.

In designing this atlas the author has kept constantly in mind the needs of both student and practitioner, and, as far as possible, typical cases of the various diseases have been selected. The illustrations are described in the text in exactly the same way as a practised examiner would demonstrate the objective findings to his class, the book thus serving as a substitute for actual clinical work. The illustrations themselves are numerous and exceedingly well executed, portraying the conditions so strikingly that their study is almost equal to examination of the actual specimens. The editor has incorporated his own valuable experience, and has also included extensive notes on the use of the active principle of the suprarenal bodies in the materia medica of rhinology and laryngology. The work, besides being an excellent atlas and epitome of the diseases of the mouth, pharynx, and nose, serves also as a text book on the anatomy and physiology of these organs. Indeed, we wonder how the author has encompassed so much within such a limited space. We heartily commend the work as the best we have seen.

TUBERCULOSIS.

Recast from lectures delivered at Rush Medical College, in affiliation with the University of Chicago. By Norman Bridge, A.M., M.D. Emeritus Professor of Medicine in Rush Medical College; Member of the Association of American Physicians. Handsome 12mo volume of 302 pages, illustrated. Philadelphia, New York, London: W. B. Saunders & Co., 1903; J. A. Carveth & Co., Limited, 413-415 Parliament st., Toronto, Canada. Cloth, \$1.50 net.

In this excellent work the practical side of the care and management of those sick with the various non-surgical forms of tuberculosis has been concisely stated. Full consideration has been given to prophylaxis, an all-important phase of the subject that has heretofore been much neglected. There are also chapters upon the Bacillus of Tuberculosis; on the Pathology, Etiology, Symptoms, Physical Signs, Diagnosis, and Prognosis of the disease, each treated in the judicious and thorough manner to be expected in a work by such a well-known authority as Dr. Bridge. Treatment is accorded unusual space, there being chapters upon Hygienic Treatment, Management of the Diseased Lung, Climatic Treatment, Medicinal and Local Treatments, Special Treatments, besides a chapter devoted to the subject of Sanatoria. Altogether the work is a most valuable one, and we heartily recommend it to practitioners as the latest and best work of its pretensions it has been our good fortune to review.

REFERENCE HAND-BOOK OF THE MEDICAL SCIENCES.

Embracing the entire range of Scientific and Practical Medicine and Allied Science. By various writers. A new edition, completely revised and rewritten. Edited by Albert H. Buck, M.D., New York City. Vol. V. Illustrated by chromo-lithographs and five hundred and seventy-six half-tone and wood engravings. New York: Wm. Wood & Co. Price per Volume, \$7.00 cloth.

This volume contains articles from "Inflammation" to "Mosquitoes." What has been said of the previous volumes can be said of this volume. Every feature of an excellent publication is embodied in these volumes. The articles are reliable in matter, they are of convenient length for reference, the illustrations are as good as it is possible to make them, the paper is of superior quality, and the typography very clear.

While there are many encyclopædias on medical and allied sciences, there is none to take the place of Woods' Reference Hand-Book. It is not limited in scope to medicine, or surgery, or chemistry, or therapeutics, but covers the entire field of thought and study coming within the range of the medical practitioner in the broadest sense of the word.

From constant use of these volumes we can speak in the highest terms of their great value.

SURGICAL ANATOMY.

A Treatise on Human Anatomy in its Relation to the Practice of Medicine and Surgery. By John B. Deaver, M.D., Surgeon-in-Chief to the German Hospital, Philadelphia. In three Volumes. Illustrated by 499 plates, nearly all drawn for this work from original dissections. Vol. III., Abdomen; Pelvic Cavity; Lymphatics of the Abdomen and Pelvis; Thorax; Lower Extremity. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1903.

Dr. Deaver's work on surgical anatomy is no doubt the leading work on this subject. It consists of three large volumes, most richly illustrated. The descriptions of the various plates and regions are clear and terse. They leave nothing to be desired. It is much to be regretted that such a work does not find a place in every doctor's library. It is a work that lays a sure foundation for all other medical and surgical study and work.

The plates are superb, and render the greatest assistance to the student of anatomy—and who that practices the healing art should not be such a student. The publishers have placed the entire medical profession under a deep debt in bringing within its reach this monumental work.

OPERATIVE SURGERY.

By Herbert Wm. Allingham, F. R. C. S., Surgeon to the Household of His Majesty the King; Surgeon-in-Ordinary to His Royal Highness the Prince of Wales; Senior Assistant Surgeon and Lecturer on Operative Surgery at St. George's Hospital; Consulting Surgeon to the Surgical Aid Society; late Surgeon to the Great Northern Hospital, and late Assistant Surgeon to St. Mark's Hospital for Diseases of the Rectum. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden, 1903. Price, 7/6.

This book is got up in a really handsome form. The paper, printing and illustrations are very attractive. It is bound in limp leather, and suitable for carrying about. The illustrations are exceedingly well done, and of such a character and selection as to aid the descriptions very materially. The accounts of the several operations are given in a short and concise manner, and in most perspicuous language. There are 215 illustrations throughout the text. All the operations of surgery are described. The book can be referred to with much confidence. We congratulate the author on the excellent book he has given the profession, and state the pleasure we have had in reading it.

CLINICAL TREATISES ON THE PATHOLOGY AND THERAPY OF DISORDERS OF METABOLISM AND NUTRITION.

By Carl Von Noorden, Senior Physician to the City Hospital in Frankfurt. Part I., Obesity, the Indications for Reduction Cures. New York: E. B. Treat & Co. 1903. Price, 50c.

Dr. Carl Von Noorden has long been known as an ardent and scientific worker upon the disorders of metabolism, under which class

he includes diabetes, chronic nephritis, obesity, and colica mucosa. His opinions are entitled to much weight, and physicians will no doubt welcome the presentation of his opinions in English form. We can say that under the direction of Dr. Boardman Reed the translation has been excellently done. We have read this little book with much pleasure, and feel sure it will not disappoint those who turn to its pages for advice on the question of obesity and reduction cures.

PRACTICAL POINTS IN NURSING. THIRD EDITION. THOROUGHLY REVISED.

For Nurses in Private Practice. With an Appendix containing Rules for Feeding the Sick; Recipes for Invalid Food and Beverages; Weights and Measures; Dose Lists and a full Glossary of Medical Terms and Nursing Treatment. By EMILY A. M. SROXBY, late Superintendent of the Training School for Nurses, Carney Hospital, South Boston, Mass. *Third Edition. Thoroughly Revised.* Handsome 12 mo. of 458 pages, fully illustrated, including 8 colored and half-tone plates. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Toronto, Canada, J. A. Carveth, & Co., Limited, 413-415 Parliament St. Cloth, \$1.75 net.

The continued and increasing popularity of this little volume has placed the publishers under the obligation of keeping it abreast of the times, of making it reflect the latest advances in the progressive profession of nursing. The revision has been extensive, every page showing evidences of careful scrutiny. Considerable portions of the work have been either amended, modified, or amplified in accordance with the progressive spirit of medicine and its indispensable handmaid, nursing. The sections treating of certain diseases, especially the infectious diseases, as well as the treatment of the common poisonings, have been in large part recast and rewritten. By the extensive revision the usefulness of the book has been greatly extended and its trustworthiness enhanced. There is no doubt that the work in its third revised form, will maintain the popularity justly won by the earlier edition.

THE CARE OF THE BABY. THIRD EDITION, THOROUGHLY REVISED.

A Manual for Mothers and Nurses, containing Practical Directions for the Management of Infancy and Childhood in Health and in Disease, by J. P. Crozer Griffith, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania; Physician to the Children's Hospital, Philadelphia. *Third edition, thoroughly revised, handsome 12 mo. volume of 436 pages, fully illustrated.* Philadelphia, New York, London: W. B. Saunders & Co., 1903; J. A. Carveth & Co., Limited, 413-415 Parliament st., Toronto, Canada. Cloth, \$1.50 net.

Dr. Griffith's manual on the care of the baby is without question the best work on the subject we have seen. The fact of a third edition

being called for within such a short time, is sufficient evidence of its popularity. In preparing this edition every part of the book has been carefully revised and brought fully in accord with the latest advances in the subject. Several new recipes have been included in the appendix, making this excellent part of the work even more complete than before. A large number of new illustrations have been added, greatly increasing the value of the book to mothers and nurses. As we mentioned above, of the many works on this important subject that have come to our desk, this is, undoubtedly, the best, distinguished by soundness of advice, conciseness of expression, and clearness of style. Physicians could not perform a better service for their patients than the recommending of this excellent work to every mother.

MEDICAL JURISPRUDENCE, INSANITY AND TOXICOLOGY.
THIRD EDITION, THOROUGHLY REVISED, ENLARGED
AND RESET.

By Henry C. Chapman, M.D., Professor of Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College, Philadelphia. Third edition, thoroughly revised, greatly enlarged, and entirely reset. Handsome 12mo volume of 329 pages, fully illustrated, including four colored plates. Philadelphia, New York, London: W. B. Saunders & Co., 1903; J. A. Carveth & Co., Limited, 413-415 Parliament st., Toronto, Canada. Cloth, \$1.75 net

This work is based on the author's practical experience as Coroner's Physician of the city of Philadelphia for a period of six years. Dr. Chapman's book, therefore, is of unusual value to the medical and legal professions, presenting, as it does, the information gained from active participation in medicolegal cases. This third edition, enlarged by the addition of new matter to the extent of seventy-five pages, has been entirely reset, and it is evident that in its preparation every page has undergone a careful scrutiny, so as to include the very latest advances in this important branch of medical science. Much of the matter has been re-arranged, the text has been more fully illuminated by additional references to cases, and a number of new figures and tables have been added.

In reviewing this excellent work we have found that it covers the field completely and thoroughly, nothing of practical importance to the physician or lawyer having been omitted. In our opinion, there is no doubt that the work will meet with as great favor as the previous edition—a popularity which it certainly deserves.
