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Kingston

Medical Quarterly

	PAGE.
I. THE CANADIAN MEDICAL ASSOCIATION. THE EDITOR.....	1
II. PRESIDENTIAL ADDRESS. J. C. CONNELL.....	4
III. THE ANNUAL MEETING OF THE CANADIAN MEDICAL ASSOCIATION.....	11
IV. FIFE FOWLER, M.D., L.R.C.S. EDINBURGH. THE EDITOR.....	14
V. THE TREATMENT OF TUBERCULOSIS. E. RYAN.....	18
VI. NOTE ON THE RELATION OF THE OS MAGNUM TO TUBERCULOSIS OF THE WRIST JOINT. D. E. MUNDRELL.....	22
VII. MODERN ASEPTIC SURGICAL TECHNIQUE. R. W. GARRETT.....	26
VIII. ANNUAL REPORT OF KINGSTON GENERAL HOSPITAL.....	33
IX. BOOK REVIEWS.....	35
X. D. V. SULLIVAN, M.D., C.M., M.R.C.S., ENG.	37



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FIFE FOWLER, M D., L.R.C S, Edin.

KINGSTON MEDICAL QUARTERLY.

VOL. V.

OCTOBER, 1900.

NO. I.

The KINGSTON MEDICAL QUARTERLY is presented to the Medical Profession with the compliments of the Editorial Staff. Contributions will be gladly received from members of the Profession and willingly published. JOHN HERALD, Editor

THE CANADIAN MEDICAL ASSOCIATION.

THE Annual Meeting of this Association was held in Ottawa on the 12th, 13th, and 14th of September last, and the Thirty-third Chapter was added to its history. Numerically we cannot say that the meeting was a success. When we consider the great distances to be travelled by many of the profession in order to reach the place of meeting, one cannot feel surprised that many of those from the distant Provinces were not present, and yet there were gentlemen from Nova Scotia, New Brunswick, Manitoba and the Territories. We expected a larger attendance from Ontario and Quebec.

The papers read and the addresses given were excellent. While it is true that most of these will be found in full in our Medical Journals and that the profession can read them at their leisure and at little expense of time or money, we think it is also true that much of the benefit to be derived from these meetings is in hearing the different members of the profession from the various sections of the country, and in listening to the remarks that are made by others at the close of a paper. We think there should have been a larger meeting.

Socially the meeting was all that could be desired. Besides the pleasure of meeting old friends and making acquaintance with other members of the profession whom you had not met before, but of whom, perhaps, you had frequently heard, the medical men of Ottawa surpassed the wildest dreams of any member of the Association who looked forward to having a good time in the Capital. Rides on the electric cars, visits to pleasure resorts, luncheons and a magnificent banquet were some of the pleasures provided by the fraternity in Ottawa.

Now as to the business of the meeting. Dr. Powell makes an ideal presiding officer, and fills a very difficult position with credit to himself and with great advantage to the Association, and, of course, anything we may say as to the conduct of the Association's business is not intended to reflect in any manner upon him. He carried out the constitution of the Association and conducted the programme of papers as far as it was possible for any one to do so as laid down in the printed programme. However, we have two suggestions to make as to the conduct of business at future meetings of this Association.

First we would suggest that the addresses be read and the general business transacted in open meeting and that then the Association divide into sections. At first, as a trial, we think it would be advisable to have but two sections—one on Surgery and one on Medicine. Many gentlemen attend these meetings who are not particularly interested in general surgery or in any of its specialities, and again, other gentlemen attend who devote their time and thought to general surgery or to some special department thereof, taking but little interest in purely medical subjects. Now it is manifest that it cannot be very interesting for a gentleman of either class to sit and listen to a paper and afterwards to a discussion upon a subject with which he is not familiar and for which he has no liking. How much more interesting, how much more instructive, of how much more good would these meetings be productive, if each class in the profession could meet by itself and discuss those questions which arise in the department of our profession to which each more especially devotes himself? This is merely a suggestion—not intended as an adverse criticism, but rather as a hint to the executive when arranging the programme for next year.

Our second suggestion is that no business should be brought on at a time prior to the time announced in the printed programme. To do so is manifestly unjust. Very few of those who attend the meeting can make it convenient to be present at every session, but each one will make his arrangements so as to be present at those sessions at which any matter in which he is specially interested is to be discussed. To bring up any question at a session of the Association before the advertised time is unfair to such an individual, and unfair to the Association, the

members of which will thus lose the opportunity of hearing the views of those who are opposed to any matter, as well as of those who are in favour of it. The cause for these remarks is that the report of the Committee on Dominion Registration according to the printed programme was to be introduced and discussed on Friday afternoon. It was read and adopted without discussion on Thursday. Now one might suppose that all the members of the profession were in favour of the Bill as suggested by the Committee. Such is very far from the case. Personally, we know of members who are opposed to the Bill in its present form and who intended to give to the Association their reasons for such opposition. Now would it not have been better in the interest of the Association, in the interest of the profession, in the interest of the proposed legislation, that the programme had been adhered to, the discussion brought on at the advertised time so that all would have had fair notice and no one could have had cause of complaint. The profession is far from being an unit in this matter. Many provisions in the proposed Bill are objectionable and must be modified if we are ever to have Dominion Registration.

While on this subject there was a suggestion made by the Committee in their report to which we wish to advert. It is proposed that there shall be added to the Council three members representing the homœopathic practitioners. This is right. The proposal is that these representatives shall be elected by the homœopathic physicians. This is right. But in the name of justice if the homœopathic physicians are to be trusted with the election of their representatives, why not the regular practitioners? Why should the Governor in Council appoint one third, why should the Provincial Councils appoint one-third, why should one-third be *ex officio* members? Before the authors of this Bill get through with it, before they have finished patching and repairing it, it will be something fearfully and wonderfully made and unlike anything in heaven above or on earth beneath. We would advise that the Committee do as the small boy so often suggests, "rub it all out and begin over again." The Committee knows what it wants and is beginning to learn what the profession wants. Make a fresh start and try when adopting the various suggestions that have been made to harmonize them when incorporating them in the Bill.

We would like also to congratulate the Association on the election of Dr. H. H. Chown of Winnipeg as the next President. We have known Dr. Chown for many years as man and boy, and we are confident that the Association made a wise selection. He will discharge the duties of the office faithfully and well. As Dr. Chown is a Kingstonian by birth and a graduate in medicine of a Kingston institution, we have a double pleasure in seeing him honoured by his fellow practitioners throughout the Dominion. We prophesy a very successful meeting next year under his presidency.

PRESIDENTIAL ADDRESS.

Kingston Medical and Surgical Society, Oct. 1st, 1900. DR. J. C. CONNELL.

MY first duty is to thank you for the honor you have done me in selecting me to be your President for the ensuing year. A man can have no greater honor than to be chosen thus by those best qualified to estimate his shortcomings, that is, by those of his own profession. I can only hope that with the help of the Secretary, the shortcomings may not be conspicuous during my year of office.

In the second place I must express an ardent and confident hope in the future of this Society. A Society, it is true, may be useful tho' temporary; but I believe a local society may have as long and useful a career as a provincial or a dominion one. Decentralization is one of the marks of progress. Whatever may be the general opinion of our future as a society there can be no doubt of the value of what has been accomplished during the four years of its existence, and this is a fitting time to review the past and to find in it if we can some stimulus for future effort. In the first place it is no small thing that meetings have been held here regularly during the last four years, and I do not hesitate to say that those who have attended have given and received benefit, and have maintained professional relationships more thoroughly than would otherwise have been the case. In the second place the community has been impressed with the

existence of the Society upon at least two occasions. One of these was when a member was threatened with prosecution and the other when an indignity was placed upon the whole profession by the Board of Education. So that individually and collectively we are better because of the society. Again, I believe that the profession in the whole of Canada is indebted to the Society for the effective protest made against hasty legislation on Dominion registration. We have not heard of any other organized effort to amend Dr. Roddick's bill, and had no protest been entered from any source, it is probable the Bill would now be law. In regard to our contentions it may be noted that their justice is acknowledged by all who give the matter any consideration, and it will not be possible now for the Bill to pass without amendments in regard to representation of the provinces and examinations.

So much for the past. As to the future, I trust our meetings may continue to be as well attended and as profitable. I beg to suggest that another open meeting be held. The success of these during the past two years warrants a repetition of the event. One other matter needs our attention. The membership list should be revised as some have forfeited their membership by non-attendance and some for other reasons. A committee should be appointed to act with the Secretary for this purpose. These are all the "family" matters that I desire to mention, and now I ask your indulgence for a short time while I speak of some general considerations. The topics of disease, treatment and profession of medicine are vast and varied and yet it would be difficult to find facts pertaining to these, possessing any novelty for you; but I give you my own opinions, and interpretations of the facts and invite your criticisms.

We shall soon be looking back on the greatest century medicine has ever known, a century of labor and results. It may be said of this as well as of the last that the end seems to be the most exciting part. The centennial turning point is regarded with some interest by us all and it furnishes an excuse for retrospection, for estimating existing conditions and for questioning the future as to its probable event. In the closing days of the last century medicine was represented by the great physician with his gold headed cane, the surgeon, also great but

of inferior grade, and the humble apothecary, who would not have ventured to sit down in the presence of these great beings. The century has been a period of transition of which the end is not yet. "The old order changeth yielding place to the new," but the old order has not completely passed away, nor the new arrived.

Medicine is ceasing to be empirical and becoming scientific. By empirical, I mean, as the dictionary has it, "practiced only by rote, without rational grounds." The reign of science has not yet been completely established but we can look forward to it as the time when the physician shall be as beneficent in act as he always was benevolent in intention. Up to very recent times the progress of medicine has been irrational and unscientific, not always contrary to reason and science but not often guided by them. The history of medicine begins with the accidental discovery that certain minerals and vegetables produce certain effects on the body. To this we owe many of the drugs we could least spare—opium, mercury, iodine, cinchona. This method has been at work since remote antiquity and it would be strange, if from it all, some things were not worth retaining. The debt which medicine owes to empirical therapeutics must be acknowledged as long as medicine is practiced. Surgery in the olden days, as compared with medicine, was a rude and simple art. "If an eye offend thee pluck it out; if there be tumor eradicate it; if there be a collection of pus, make a hole for its escape." All this is simple and at the same time scientific. Hence it is that with a few exceptions the most striking successes of the past have been in the department of surgery.

The advances of the century may be considered threefold.

1. We have learned that many of the processes of disease cannot be controlled by drugs; they run a definite course and can, by no method known, be brought to an end except it be an untimely one.
2. We have learned to use the influences of external nature, and
3. We have learned to trace many diseases and processes to minute organisms which were not only unknown to our forefathers, but impossible to be known by them because they did not have the instruments necessary for their discovery.

In reference to the first of these advances, we still hear once in a while of aborting typhoid and pneumonia but only from the patient or the friends who have been impressed by the wonderful knowledge and ability of the attending physician. Much of the progress in this respect has been negative, in abandoning what was injurious, but in respect to the second point we can count a positive gain. The treatment of disease by climate has probably been practised from time immemorial but not to the extent and with the certainty that prevails now. The wisdom of adjusting our geography to our infirmities is obvious when it is clearly proven that different organs possess degrees of activity in different temperatures, and that different diseases prevail in different regions. To touch for a moment upon tuberculosis, much as we have learned of the intimate nature of this disease, we can no more deal directly with the organisms on which it depends than we could before they were discovered. The bacillus seems to be more resistant in structure and more tenacious of life than the tissues among which it lies. It is, however, open to us to prevent the further admission of the bacillus and to fortify the tissues against those already present. The treatment of tuberculosis by climate is not new. For over one hundred years pulmonary tuberculosis has been dealt with in this way, but not with the bold appeal for fresh air that is now heard. In 1815 the great Thomas Young formulated the desirable conditions as warmth and equability. Consumptives were therefore sent to low-lying sheltered spots or crowded into hospitals where these surroundings could be had. We still maintain that protection from catarrhal colds is essential; but we recognize what our forefathers did not,—the paramount importance of fresh air. As some one has stated it, "we make alliance with the powers of the air;" high altitudes, open expanses, with an open-air life, even tho' somewhat careless, accomplish what has never been obtained by simple protection from cold.

The third line of progress which I have mentioned is by far the most striking illustration of the change from empirical to scientific methods. We have learned to recognize and to isolate the essential principles of many diseases and processes and have achieved in the way of prevention and cure what our forefathers would have regarded as impossible. The great series of discover-

ies relating to bacilli have been the result of minute observation, reasoning and experiment, the replacement of empiricism by science. The first discovery in 1850 of the bacillus of anthrax was not fully appreciated, nor was it until 1873 that its full relation to the disease was demonstrated. Since that comparatively recent period how many more of these have been exposed to view. It is unnecessary to enumerate them, but it now does not admit of doubt that every specific fever, most epidemics, every form of tuberculous disease, and all malarial disorders originate in living organisms, introduced from without. The generators of scarlet fever, measles, and smallpox have not yet been isolated but no doubt they soon will be.

Three methods have come into use for the prevention and control of processes produced by bacilli:—

1. Killing or excluding the bacilli.
2. Establishing immunity in the individual.
3. Employing antidotes in the shape of antitoxins.

The use of antiseptics in surgery is a typical instance of the first of these. Now this was no result of chance; it was in no sense empirical but based upon minute research and scientific deduction. As to the second method, that of immunity for the individual, the discovery of Jenner is the first and foremost illustration, and this remains exactly as Jenner left it with the addition of asepsis. Not the least astonishing of these methods is that which illustrates the third, viz.: the use of anti-diphtheritic serum. We have in this an illustration also of the saying that "there is nothing new under the sun." Mithradates we are told treated himself with small doses of poison until he was able to defy the doses that were ordinarily fatal. The discovery of anti-toxic serum is to my mind one of the greatest marvels of the century. A serum is made prohibitive of a disease by acting upon it with material which that disease has generated. A certain bacillus produces diphtheria, and the same bacillus secretes something that indirectly cures diphtheria. The secretion is not an antidote but it imparts that property to serum which both prevents and cures. When we consider what has been done in twenty-five years we are filled with hope for the future when zymotic disease will be equally under control. The progress of this age means that random observations, false theory and em-

pirical practice, have given place to minute investigation, exact experiment, logical deduction and rational procedure. But the end is not yet. What we deem advanced knowledge, our sons may regard as antiquated error.

As a result of these advances the prevalence of disease has considerably diminished within the memory of the present generation, and the character of disease is altering in the direction of attenuation. This is not merely fortuitous but the direct result of our successful interference.

The layman may express a doubt as to the truth of this statement for we often hear it said that such and such are new diseases and were never heard of years ago. This is the impression the layman has from the better classification of disease, which has resulted from diagnosis becoming more and more a science, depending on technical knowledge, skill, and instruments of precision. There are, however, certain diseases which are practically extinct. Typhus fever, relapsing fever, scorbutus, cholera are never heard of here. Then some are known to be preventable and might be extinguished by present methods if carried out more stringently; for example, small-pox and hydrophobia. A third class has been limited to a great extent, but we do not expect complete suppression; such as typhoid, diphtheria, scarlet fever, the minor exanthems and the septic infections. The increasing healthiness of the community is to my mind a feature of the end of the century. There is however a limit to this prospect. Altho' in the distant future all may live healthier lives and die of old age, some diseases must remain. If the elimination of disease continued at the same rate as during the last fifty years the time might be foretold when the profession should be represented only at the birth and death of our fellow creatures. But the most virulent diseases are those most easily prevented. Those which cannot be suppressed are likely to be perpetuated by our success in saving the weaker lives. The medical man will continue to be consulted for the medical needs of the various periods of life, for the numerous affections of women, for nervous diseases, for drug diseases and habits, for food diseases, and for dangers from tropical diseases. The dread of disease and the desire for prevention will remain. Tho' disease may be restricted the opportunities of the profession for

usefulness will widen. The health preserving function of the profession is of vital importance and is becoming more widely utilized by the intelligent public. Princes and men of wealth have always had their body physicians, and the time may come when it will be the rule in the case of families to make a yearly contract on the same plan. It will then be the object of the family physician to keep the family well.

All the changes which have taken place in the conditions of practice have led to greater pressure upon the doctor. Never has the laborer been more worthy of his hire. If disease has diminished, treatment has grown and is on the increase, and the labor of treatment is greater, as the details are amplified and require more minute care. There is not only the patient but the nurse to direct, whose skill renders many measures possible which without her could not be applied and so a great deal more is attempted and accomplished. The sick room is a busier field than it was wont to be and the doctor's call is not a formality wasted in ordinary conversation.

It is also one of the characteristics of the age that there is less inclination to bow to authority and, on the part of the patient and friends, to accept without question the advice of their once trusted attendant. There is a restlessness in their desire to consult various authorities and so the old relationship between the patient and his medical adviser is disappearing, much to the disadvantage of both. There is an old saying "it is much easier to treat the patient than to treat the patient's friends," who so often speak with assurance only proportionate to their ignorance of the subject. Formerly the family attendant felt secure, and from his knowledge of antecedents acted with more certainty than the casual attendant. How much better it is for the patient when he leaves to his own faithful adviser, as difficulties arise, the selection of the help most likely to be of service. The patient's advantage lies in a co-operation between his regular medical attendant and his occasional adviser, and the cultivation of this professional intercourse tends to strengthen the bond of professional brotherhood. "When doctors differ who shall decide? but when doctors agree who shall venture to differ?"

THE ANNUAL MEETING OF THE CANADIAN MEDICAL ASSOCIATION.

THE Annual Meeting of the Canadian Medical Association was held in Ottawa on Sept. 12th, 13th, and 14th last. It is not our intention to give a full account of the various papers read. Space will not permit. For the benefit of those who were not present we will give a resume of a few of what we consider the papers of most general interest. Those of a more special character will no doubt be published and those who are interested in the various specialties will be able to read them *in extenso*.

On the afternoon of Wednesday, Sept. 12th, Dr. R. W. Powell of Ottawa gave his Presidential Address. The President referred proudly to the fact that though few were required, no less than 120 doctors and 190 trained nurses volunteered for active service in South Africa. In this connection the doctor pointed out an anomaly which should not exist. The question being asked what standing could a Canadian doctor whose services were accepted have in the imperial forces and he quoted Mr. Broderick who in the British House of Commons said in reply to this question that he really did not know, and that the matter was too complicated to admit of discussion. A Canadian doctor is good enough to attend Canadians in Canada but he has no legal right to practise upon them outside of his own little Province. A strong argument in favor of Dominion Registration which would give to the holders of the Dominion License the right to British registration. The President also referred to the prevalence of tuberculosis and to the preventible character of this disease and claimed that the isolation of tuberculosis patients ought to be insisted upon. A committee of defence in case a practitioner was wrongfully proceeded against for malpractice was also advocated. All of the Presidents' suggestions met with the hearty endorsement of the members.

Dr. G. S. Ryerson of Toronto the same afternoon read a paper entitled "Some of my experiences in the South African War." He pointed out that the war was interesting from a sur-

gical point of view for two reasons :—The effect of modern arms of precision and of antiseptic methods on the field of battle and in the hospitals. Dr. Ryerson presented the following figures :— 936 officers and 11,701 non-commissioned officers and men had been wounded, or 12,637 in all, only 732 have died, *i.e.* a mortality of only 5.8 per cent. He then described the wound caused by the Mauser bullet. If fired at 200 yds. range the bullet has an explosive action causing a severe, lacerated and contused wound which heals slowly. Under such circumstances if it hits a bone it crushes and destroys it. When fired from a longer range it makes a clean drilled hole in the bone and in the soft parts a very small wound which bleeds but little, unless an important vessel is injured. Dr. Ryerson then defended the hospital administration against strictures which had been upon it by those who did not understand the conditions. When the character of the country, the difficulty of getting supplies, the poor railway accommodations, the vast numbers of men and animals to be provided for, the destruction of bridges, were taken into consideration, the wonder was not that a few had to do without mattresses, but that so many were so well provided with the necessaries of a sick room.

Sir James Grant of Ottawa read his paper on, "Our race and consumption." After pointing out the terrible havoc on the human family of this disease and the manner in which the contagion was spread, Sir James advanced the opinion that the responsibility of educating the public and our authorities as to the true nature of the disease and the methods to be adopted to prevent its spread rested upon the medical profession. Much has been done—more remains to be done. He looked hopefully forward to the good to be accomplished by the Provincial Bureau of Health and advocated the establishment of chemical and bacteriological laboratories in connection therewith. He also advocated the isolation of all patients affected by this dread disease.

This paper was followed by the report of the committee on this matter, which was adopted and ordered to be sent to all Provincial Premiers, and to Sir Wilfred Laurier.

In the evening Edward Owen, M.B., F.R.C.S., of London, Eng., gave his address on surgery, taking as his subject "Tuberculous Lesions from a Clinical Point of View." This paper no

doubt will be published in full, and all members of the profession will have an opportunity of reading it. We shall not, therefore, attempt to synopsis it. He concluded his address with a reference to Canada as a country, and to Canada's action in the Boer War, and by his eloquent and sympathetic words won a warm place in the affections of all who heard him.

On Thursday morning Mayor Payment welcomed the members to Ottawa and expressed the hope of himself and of the citizens that the members would receive much benefit from the discussions, and socially enjoy their stay in the Capital of the Dominion.

Dr. Wm. Gardner of Montreal then gave the address on Gynæcology. The doctor dwelt upon the mistakes which he himself and others had made, and pointed out how such and similar mistakes could be avoided.

The Committee on the best means of dealing with the consumptive poor, recommended the establishment and maintenance of rural sanitariums in connection with each municipality or group of municipalities, for the reception of such cases as admit of a reasonable hope of cure or improvement and the erection of isolated buildings for advanced cases, the funds to be provided by the co-operation of the government, municipalities, philanthropic and charitable organizations and individuals. The Act passed at the last session of the legislature providing for the establishment of sanitariums was approved as was also the organization in Toronto of an anti-consumptive league.

On Thursday afternoon Dr. F. S. Shattuck of Boston, Mass., gave the Address on Medicine, choosing as his subject Specialism in Medicine. Among the reasons for specialism in medicine given by Dr. Shattuck were the following:—Increase in knowledge, increase in the centres of population and inventive talent making possible a direct examination of organs and cavities formerly closed to our eyes and touch. While the profession and the public owe much to the work of men in special departments the doctor pointed out that there was danger of specialism being overdone. Another result of specialism referred to was that the work of a general practitioner was being more and more curtailed to the injury of the general practitioner so that it was becoming almost impossible for a man, no matter what his abil-

ities might be, to make a respectable living by the practice of medicine alone. The increase in accurate knowledge is the surest way to do away with "quackery."

The same afternoon the Committee on Dominion Registration presented its report and Dr. Roddick explained the provisions of the Bill. We have already editorially referred to this report.

On Friday morning the Association endorsed the formation of a league to be known as the Canada Association for the prevention of consumption and other forms of tuberculosis. Officers of this Associations were elected.

Dr. Bruce Smith of the Brockville Asylum read a paper on Mental Sanitation. There is no doubt insanity is on the increase. The condition of the mind largely depends upon the condition of the body. The proper care, therefore, of the body would tend to decrease the number of those who become insane. Heredity plays a most important part in the causation of insanity. Parents and children should be impressed with this fact and warned that marriages with those who have a strain of insanity in their family history are fraught with danger. Legislation should be enacted prohibiting the marriage of these who are so tainted. A careful study of the peculiarities of each child's mental condition by the family physician and the education of the child in accordance with the information thus obtained was recommended as another means of preventing the developing a condition of unsound mind.

Winnipeg was selected as the next place of meeting, and the Association closed its labours by passing the usual votes of thanks to the President, the local members of the profession, the Mayor and citizens of Ottawa, the Press and the Authorities for the use of the University Buildings.

FIFE FOWLER, M.D., L.R.C.S., EDIN.

DR. FOWLER was born in 1823 in the Town of Elgin, Scotland, and educated at the Grammar School in Aberdeen. At the age of fourteen he entered the Arts department of King's College, Aberdeen, where he attended for two years. He

was then apprenticed for a period of four years to the late Professor Pirrie, of Mareschal College, Aberdeen, from which institution he received the degree of M.B. in 1843. Later on, when he had earned the money to pay for it, he took the degree of M.D. from Mareschal College and the L.R.C.S. from Edinburgh. The M.D. at that time cost \$70, \$20 being for the Government Stamp. Between the third and fourth years of his Medical course he went as Surgeon on a whale ship to Greenland on a twenty months' voyage. After receiving his degree he practised his profession at Aboyne, a village on the Dee side, fourteen miles from Balmoral. In the spring of 1854 he took the position of Surgeon on an emigrant ship coming out to Canada. Landing at Quebec, he came to Kingston, where he has been in general practice ever since. At the time of his arrival in Kingston efforts were being made to establish the Medical Faculty of Queen's University. He was invited to take the position of Professor of *Materia Medica*. He accepted the invitation, and has been teaching continuously during the past forty-six years. On the retirement of the late Dr. Yates he became Professor of the Principles and Practice of Medicine and Dean of the Faculty. He has now resigned his Professorship, but in the interest of Queen's we are happy to say he still retains the position of Dean, and the earnest desire of his associate Professors and of all the students is that he may long be spared to give to the Faculty the benefits of his mature judgment on matters affecting the welfare of the institution.

For many years he represented the Royal College on the Ontario Medical Council and always advocated the raising of the standard of Medical education. In 1892 his fellow-members showed their appreciation of his work and worth by electing him their President.

Everyone who has taken a Medical course at the Royal College of Physicians and Surgeons or at Queen's University has sat under Dr. Fowler, and in the heart of each and every one of them he retains a warm place. Having had to work his own way in early life he was always sympathetic and uniformly kind to the poor student, and many a Queen's Medical graduate has received kindness at his hands. By those who at various times have been associated with him on the teaching staff he was always regarded

as a father. His deep interest in the College, his matured experience as an educator, and his calm, unbiased judgment won from his associates profound esteem and respect. His loss will be keenly felt by those now on the Medical Faculty.

In closing his career as a lecturer Dr. Fowler addressed the students in medicine as follows :—

“I take this opportunity to advert to the establishment of the medical department of Queen’s University, the more so as I alone remain of those who took part in its foundation forty-six years ago.

“It is very remarkable, almost incredible that the establishment of a medical school here in connection with the university was due to intolerable bigotry—not here by any means—but in the queen city of the west. Certain students, whose names I will read you from the first calendar (the only copy now extant I now hold in my hand) were informed that they could not obtain the degree of doctor of medicine unless they conformed to religious tests which were distasteful to them. These gentlemen petitioned us to establish a college in Kingston which would be open to all on the same terms. Their names were: Daniel Chambers, Robert Douglass, Samuel Dunbar, Weston L. Herriman, William Hillier, John F. Mercer, William S. Scott, H. W. Spafford. That there should have been such bigotry in Toronto fifteen years after Queen’s was established may appear to some of you incredible but such was the fact.

“A correspondence was opened up with these gentlemen by the late Dr. Stewart, and the result was the formation of the medical faculty, of Queen’s. The faculty consisted of Dr. Sampson, Dr. Stewart, Dr. J. R. Dickson, Dr. Horatio Yates, Dr. William Hayward, and myself.

“I remember well my first meeting with Dr. Stewart in the summer of 1854, a few weeks after my arrival from Scotland. He stopped me on the street without the formality of an introduction, and said: ‘You are the man I want’; and clapping me on the shoulders, he continued: ‘I want you to take the chair of materia medica in Queen’s college medical faculty.’ I answered: ‘Will the university appoint me?’ I was unused to this sudden mode of university appointment. He emphatically answered: ‘I, John Stewart, appoint you. The college will do as I say

I may say to you that principal Grant was not the head of Queen's then. Dear old Dr. Williamson was the head of the university. Dr. Stewart was a man of fine physique, six feet three inches high, straight as an arrow, and as he himself said, 'A gentleman, a scholar and a judge of liquor.' He was a temperate man, but was brought up with the old school notions that it was the duty of a host to have spirits on the table at all times.

"Queen's university heartily concurred in the formation of a medical faculty, and sanctioned the appointment of the various professors. The first session 1854-55 was held in a building on Princess street, in close proximity to the building occupied by Hon. Dr. Sullivan. Mainly through the consideration of the late Dr. Williamson, we occupied during the second and third sessions the wings of the building in which the principal and two professors now live. The anatomical department was in one of the wings, and the lecture rooms and laboratories in the other. The central portion at that time afforded sufficient accommodation for the arts and theological departments. Inasmuch as we received in common with other medical colleges in Ontario from the government \$1,000 per annum, we expended the money, not on salaries for ourselves, but in erecting the building we now occupy.

"A time of trial soon overtook the university. The grants were withdrawn and the arts department required accommodation, and so we had to leave the building towards which we had contributed a good deal, and remove to the building on the Montreal road, occupied now as the house of industry. We carried on our work there for one session, till we bought from the government property on Princess street. There was on it a substantial building well adapted for our purposes. When the university had completed the fine structure in which the arts faculty is now housed, this building was handsomely placed at our disposal, and we remained in it till the present day."

We believe it is the intention of the Faculty of Medicine of Queen's University in some way as yet to be determined on to establish a memorial of Dr. Fowler's long connection with the College. The Faculty are to be congratulated on their decision. We would suggest, however, that the Faculty be not selfish and retain all the honour to themselves. The hundreds of medical

graduates of Queen's who have listened to Dr. Fowler's lectures and appreciated the benefit they derived therefrom would like to be allowed to assist in this work of appreciation and love. In order to assist in the good work we will be willing to receive suggestions from any graduate of Queen's as to the best means of accomplishing what all desire. A portrait of the Doctor for Convocation Hall has been suggested. In our opinion this is too little. A scholarship in Medicine to bear the name of the Dr. Fowler Scholarship. This is much better and we are sure would meet with the Doctor's approval, who, as all graduates know, was ever anxious to assist the poor student. The Faculty must have enlarged buildings. The members of the Faculty will enlarge the buildings at their own expense. Would it not be a good plan to have new building called the Fowler Hall, and would it not be a graceful act to have that Hall erected by the Faculty and graduates as a mark of appreciation of the 46 years of labour which Dr. Fowler gave to the Medical Faculty of Queen's. Such are some of the suggestions already made. We are open for others. Which will be adopted will depend upon the graduates, their action and their contributions.

THE TREATMENT OF TUBERCULOSIS.

THE treatment of Tuberculosis may be discussed under three distinctive heads—

1. The specific treatment.
2. The symptomatic.
3. The Hygienic-dietetic.

The specifics recommended for the treatment of consumption are so numerous that no more than a passing reference can be made to the most important. The object of all specific treatment has been the introduction into the system of some disinfectant or antidote that will bring about the destruction of the tubercle bacillus. Chief among the specifics and one that was looked forward to with high hopes and anxious anticipations is the Tuberculine of Koch. Its expectations have not been realized.

The first tuberculine was proven dangerous on account of its liability to give rise to renewed activity in cases of quiescent tuberculosis and on account of the dangerous symptoms following its introduction to the system. It causes fever, malais, headache, pain in the limbs, nausea and vomiting.

The second tuberculine while it does not give use to these symptoms has not met with general favor. It has proved efficient in cases which are early detected and according to some British writers has given very satisfactory results. What future researches can bring forth in this direction remains to be seen.

Iodine, carbolic acid, corrosive sublimate and iodoform all have had their advocates, have been used at various times, in one form or another but have now practically fallen into disuse. The injection of iodoform emulsion into tuberculous joints is still highly recommended, but the discussion of this process belongs to the domain of surgery.

Formaline is strongly recommended for its germicidal action on the Tubercle Bacillus and the inhalation of a 40 % aqueous solution of Formaldehyde gas has strong advocates. Landerer of Stuttgart recommends the injection either subcutaneously or intravenous of cinnamic acid. The claim for this drug is that it brings about a process of encapsulation and thus prevents the degenerative and softening process of the tubercle. A leucocytosis or aseptic inflammation is set up in the neighborhood of the tuberculous nodules and a wall of lymph is created around each tuberculous mass, hence invasion of new tissue is prevented.

Of specific drugs there is no doubt but that creosote takes the lead. It has proven a decidedly useful drug. It is claimed for creosote that it relieves the cough, diminishes expectoration, lowers the fever, checks night sweats, improves the appetite and digestion and diminishes the tendency to diarrhœa. The carbonate of creosote is an agreeable preparation, or better still some of the many preparations of creosote wine and cod liver oil. It is best administered shortly after meals. Certainly this is a most useful drug and should in all cases be given a fair trial. The only drawback I have observed to the use of creosote is its effects on the digestive system. In some of the more recent combinations this difficulty is overcome. But it is a question if thus given the full value of the drug is obtained. I doubt it very much.

To the symptomatic treatment I shall but refer. It consists in applying the ordinary well known means to the reduction of the fever, cough, night sweats, and to the other manifestations of this disease. Needless to say, this treatment never results in cure, yet for the patients comfort it is necessary it should be followed.

The only treatment that offers any hope is the Hygienic-dietetic, good air and good food. While there is no doubt this treatment can be best obtained in Sanatoria, under proper medical direction and careful nursing, yet there is no locality nor walk in life where an attempt cannot be made to reach this end. To those suffering who can avail themselves of Sanatoria treatment we would say by all means take advantage of it. The Sanatorium at Gravenhurst is giving daily proofs of its usefulness. The regret is that more institutions of like character are not erected. Every city, every centre of population should do its share to rescue the victims of Consumption.

The question of climate plays an unimportant part. There is no climate so severe wherein the fresh air treatment cannot be successfully applied. Wherever phthisis exists there it can be treated. Neither country nor race nor color nor age forms an exception to the rule. The one essential of the treatment is the free exposure of the patient to open air. He must be bathed in fresh air day and night and this irrespective of whether the weather be good or bad. The more air and sunshine he can have the better for the patient. The patient should be protected from strong winds and even in this climate in most severe weather, this can be easily accomplished by means of tents or portable board structures. The patient should spend the greatest part of each day in the open air. In delicate cases he should be carried out in a reclining chair or the bed itself may be carried out without causing much disturbance to the patient. In such instances care should be exercised to have a plentiful supply of warm clothing. Chest protectors, respirators, and all such paraphernalia should be discarded. The windows of the sleeping room should be so arranged that fresh air is constantly admitted. Where double windows exist the outer one may be opened below and the inner one above. If, as in most country homes there be but a single window, a plank to be used in the day time can be placed on the in-

side below and the window raised thus allowing a gentle current of fresh air to circle the room. On no account should the atmosphere in a room be permitted to become stuffy. The patient should be kept as free as possible from dust. The sleeping apartment may be swabed with a damp cloth. Patients take to such a life with remarkable quickness. They soon realize the benefit of fresh air and sunlight. The close atmosphere is oppressive to the patient. When once custom is established even the coldest temperature will not deter the patient from following out his daily fresh air bath.

The open air life hardens the patient against fresh cold, increases the appetite, promotes sleep, reduces the night sweats and lowers fever. When all other means fail there is in this treatment both hope and relief. I have before me many cases where life was prolonged years by following this treatment here in this very district. A little firmness at the outset, a little leading a little driving may be required. Patience and tact on the part of physician and nurse are indispensable. Good food is as necessary to the patient as good air. Pure milk, fresh eggs, game, broths, beef tea, may all be used. A good nurse will soon discover what the patient can take and assimilate and no matter what rules or directions are laid down the success will depend on the care and capacity of the attendant.

I have been led to offer this article not in the hope of putting forward anything new for this I have not attempted, but to endeavor if possible to arouse the profession in this section of the country to some form of united action. In other countries the profession have, by continual and unremitting agitation succeeded in arousing the attention of those in authority and in the securing therefrom the means for the scientific application of modern treatment. No move has been made here in this direction. The ravages of Consumption are therefore continuing unchecked. We recommend to those who are financially able to seek treatment to go elsewhere. To the great mass of the afflicted we can give no comfort, no hope. We are compelled either to leave them to a speedy death in their own homes with all the danger of contamination to others resulting therefrom or we send them to the hospital wards to end their days.

It is within the knowledge of every physician who reads this

article that members of certain families one by one fall victims to this disease. And in the light of present day knowledge this is not due so much to the result of hereditary influences, though these influences must not by any means be ignored, as it is to direct contagion. It will be noticed too that in this part of the country the greatest mortality is in the spring of the year, the result of a winter's residence in close and ill ventilated rooms. Nothing can be more lamentable than to witness the consumptive in his own home, taking no sanitary precautions whatever discharging his deadly laden sputum on the floors, in the wood-box in country houses, occupying the same rooms and even sleeping with other members of the family. Is it not time the profession would say these things must no longer be.

E. RYAN.

NOTE ON THE RELATION OF THE OS MAGNUM TO TUBERCULOSIS OF THE WRIST-JOINT.

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IN May, 1899, I was consulted by Mrs. W., aged thirty-six, who gave the following history: When nineteen years of age she began to suffer from pain in left wrist. In about a year and a half the wrist became swollen, and finally, after suffering more or less for four or five years, an abscess formed and "broke" in upper part of palm near wrist. The sinus continued to discharge for about two years, but during most of this period of seven years she could use the wrist to some extent. Inquiry elicited no family history of tuberculosis, and during the succeeding ten years her wrist did not trouble her, but about two years ago pain, gradually increasing in severity, returned. When seen by me the wrist was enlarged and fusiform, and any movement of the joint was painful. Pressure over carpus elicited a very sensitive spot on a line between the bases of index and middle fingers. X-ray examination presented the appearance as seen in the accompanying skiagraph, the radius and ulna not being involved, though the carpal bones are. Rarefaction is most pronounced in the os magnum. Iodoformized glycerin and

Bier's method were tried, but the pain continuing excruciating, excision was advised, and, being accepted, Ollier's method was followed. Instead of removing the carpus *en masse*, the neck of the os magnum was divided so as to permit freer access to semi-lunar and scaphoid, which, with the other bones, were easily removed with the assistance of a dental root elevator. In a letter received a short time ago from her, she stated that she has been free from pain since the operation; there is no ulnar flexion, and she can perform her household duties as well as ever.

In June, 1897, I saw Mrs. M., tubercular parentage, who gave a history of swelling of wrist of two years' duration accompanied by gradually increasing pain. The skiagraph showed rarefaction of the carpal bones, most marked, however, in the os magnum. The usual treatment had no effect, but she would not submit to operative interference. She died about a year afterwards from acute pulmonary tuberculosis.

A third case, a Mrs. R., stated that her mother, two sisters two aunts, and two uncles had died from consumption. From the age of three until eleven she suffered from cervical adenitis, necessitating the removal of the glands. About six years ago she sprained her wrist, and since then swelling accompanied by severe burning pain has been constant. For the last two years a splint had been worn, but during this period she had very little rest night or day except from the use of morphine. The X-rays showed tubercular disease of the carpus, involving the os magnum to a greater degree than the other bones. A partial excision was done through a single posterior incision, removing the bones as described above, but leaving the pisiform and trapezium.

The results in this case are equally as good as in Case I. On examination of the skiagraphs of the cases above reported, the involvement of the os magnum, showing that the disease had started in this bone, or, if not, that it made most progress in it, arrested my attention; and on looking through the collection of the superintendent of the General Hospital the prominence of this bone as a factor in the development of tuberculosis of wrist-joint was emphasized, for in the three cases in his collection the os magnum showed most disease. Tubercle bacilli manifest themselves in bone by a process of rarefaction; hence that bone most rarefied would in all probability be the one in which the

processes are most active. It is hardly likely that the disease would start in all simultaneously and develop to such a degree that the os magnum, as shown by the skiagraph, would be almost entirely destroyed, and some of the others hardly involved; hence, the inference is that in the os magnum the tubercular process first began. Ollier emphasizes the importance of juxta-epiphyseal strain in the production of tuberculosis of long bones. And on the same principle, repeated strains on any bone may favor tuberculosis on account of minute foci of inflammation resulting from the "jarring" of the trabeculæ. As an explanation of why this would likely affect the os magnum, the following considerations seem pertinent. The os magnum is a pivot, being the central and main bone of the carpus, and articulates with seven other bones, the unciform coming next with five articulations, and, being super-imposed on the middle or chief metacarpal, it would receive the effects of traumatism to which the latter is subjected, as well as those of the index and ring-fingers with which it also articulates. Again, the midcarpal joint, composed principally of os magnum and tip of the unciform which form an enarthrodial joint with the semilunar and scaphoid, participates in every movement of flexion and extension of the wrist. And as two strong bands—oblique fibres of anterior annular ligament from both radius and ulna and the radial fibres of posterior ligament, as well as accessory bands from semilunar, scaphoid, and unciform—are attached to this bone, it follows that, in the frequent movements of the midcarpal joint, the tension of these ligaments causes strain on the os magnum. Following out her general rule of strengthening weak parts, or of assisting them to resist traumatism, Nature has caused the centre of ossification to appear earlier in this than in other carpal bones,—a few months before the unciform, which is also subjected to strain, though in lesser degree and years before those of the other bone. Further, she hastens the ossifying process in the os magnum, since, in a child of two and a half years of age, I found that, though the centres for the os magnum and the unciform had started within a few months of each other, that for the os magnum measured six millimetres in diameter, while in the unciform it was only three millimetres in diameter.

Again, as the posterior border of the overhanging receiving

cavity for the os magnum is more prominent than the anterior border, a greater amount of flexion than extension is permitted at the midcarpal joint ; hence the posterior surface of os magnum would be subjected to greater strain than the anterior, from the tension of the ligaments resisting flexion ; and I found the ossifying process developed more towards the posterior aspect of the bone than the anterior, so that there was only a thin shale of bone between the centre and the posterior surface, whereas, in front, there is an appreciable wall of two millimetres. At ten years of age I found that while the other bones exhibit a varying degree of ossification the os magnum is almost completely ossified. These facts would seem to indicate provision against, and therefore acknowledgment of the great amount of strain on the os magnum. On making a coronal section of a fresh adult bone, there appears a slight condensation of osseous tissue on the radial side of section, and on a forced injection of an arm with carmine gelatine the main vascular supply was on the posterior aspect of the bone, and the cancellous inner portion was more richly supplied with blood than the slightly more compact outer part. Summing up, then, the above considerations, we find that the os magnum, the main bone in the wrist, is the earliest to ossify ; that it is so situated as to receive the effects of injuries from three metacarpal bones ; that it performs more movement in flexion and extension than the other bones ; that in these movements greater strain is thrown on it than on the other carpal bones, from the numerous ligaments connected with it and resisting such movements ; that the cancellated structure of the os magnum is uneven ; that that portion, the inner, which has the wider spaces, and is therefore less strong, has a richer blood supply. For the above reasons, it seems to me that vibrations the result of traumatism would affect the os magnum more often than the other carpal bones, and especially that portion of it referred to above which consists of less numerous trabulæ. Therefore it would seem reasonable that tubercle bacilli in the blood or lymph would be more prone to concentrate here than in any of the other carpal bones, and would, in all probability involve the inner portion of the bone.

Lastly, the pain has been described by patients as of a burning, aching character, and, in my opinion, is the result, in the

early stage of the disease at least, of pressure on the synovial membrane between the os magnum and trapezium, because these two are more closely bound together than any of the other bones; hence the enlargement of the os magnum from the tubercular process—though this enlargement would be very slight, for tuberculosis of bone is accompanied by very little increase in size—will be sufficient to “nip” the synovial membrane between it and the trapezium. The point of greatest tenderness in the above cases was on a line between index and middle-finger, corresponding, therefore, to this situation. Again, Barwell, in “International Encyclopædia of Surgery,” states that in tuberculosis of wrist-joint the point of special tenderness is on the outer side of the extensor indicis tendon, a situation corresponding to the junction of os magnum and trapezium.

D. E. MUNDELL.

MODERN ASEPTIC SURGICAL TECHNIQUE.

AN OUTLINE DESCRIPTION OF ITS PRACTICE IN THE GYNÆCOLOGICAL DEPARTMENT OF THE KINGSTON GENERAL HOSPITAL.

IN these days when the principles of aseptic surgery are so widely practised, one can scarcely believe that less than twenty-five years ago Von Langenbeck was heard to say at his clinic in Berlin:—“A new method has been advanced by an English surgeon who predicates the principle of wound treatment upon the destruction of organic germs which he assumes to be the cause of wound disturbances. The excellent results claimed by him are not in accord with those we obtain, hence I can hardly grasp their perfection, yet, notwithstanding my experience, I feel it incumbent upon me to test them in practice.” Yet such was the case, and the old master, then reputed throughout the world as the father of joint resection, became a disciple of Joseph Lister, and soon learned that Listerism was not a phantasm.

Notwithstanding the mighty upheaval made in surgery by

the dawn of antiseptics, its progressive tendency did not permit Listerism to rest upon its achievements. The advance movement was primarily manifested in bacteriological investigations, and in 1888 Robert Koch was able to announce, and prove by indisputable evidence, that the microbes found in the air were mainly of an innocuous character. With the acknowledgment of this fact came the downfall of the spray and the birth of asepsis.

Under a conscientious practice of this method delicate structures are now saved from contact with toxic substances; wounds are found to heal without reaction; skull and abdomen are opened without thought of danger, and operations are now performed daily which in the past would not even have been dreamed of by the most daring surgeon. The successful results which attend these operations are in a large measure the result of a careful operative technique, and the proper care of the patient before, during, and after operation. It is true that with experience comes increased manipulative skill on the part of the operator, but often the greatest danger to the patient lies not in the accidents which arise from the defects in manipulative skill as in the carrying into the wound pathogenic organisms, the result of a faulty technique. In order to carry out with any degree of certainty an aseptic technique, it is necessary to have a well-organized staff of assistants and nurses, each knowing his or her place, and the work expected of them.

The members of the staff and nurses are arranged as follows:— The first assistant stands opposite the operator and helps him directly. By his side stands the second assistant (a nurse) with the sponges, etc. The third assistant (a nurse) stands by the side of the operator, in charge of the instruments, needles and ligatures. The fourth assistant has charge of the anæsthetic and devotes his whole time to that duty. The fifth assistant (the outside nurse) watches for opportunities to be of service to the surgeon or his assistants.

A. PREPARATION OF THE PATIENT BEFORE OPERATION.

1. Whenever it is possible it is best to have the patient under observation for a few days previous to operation, in order that an acquaintance may be made with the condition of the various organs of the body. A thorough physical examination is made, and the urine, and if necessary the blood, carefully examined.

2. A bath of soap and water and a vaginal douche are given daily for the three days preceding operation.

3. A cathartic is administered two nights before the operation, followed next morning by a saline purgative, and, if it has not been thoroughly effectual, by an enema shortly afterwards.

4. If the bowels have not then been moved satisfactorily a simple enema is given in the afternoon.

5. Only light diet is allowed, and during the last 48 hours the patient is restricted to milk or broth. Some albumen water or broth is given three hours before operation, and, unless in need of some stimulant, nothing afterwards.

6. On the morning of operation a thoroughly effectual enema is administered.

7. The urethral catheter is passed before the patient is taken to the operating room.

8. When being brought to the operating room, and during the administration of the anæsthetic, every precaution is taken to avoid the danger of becoming chilled, and of undue exposure. Long sterile stockings which reach well above the knees are put on, and the patient protected with sterile blankets and sheets.

B. PREPARATION OF THE FIELD OF OPERATION.

1. The abdomen, pubes and vulva are shaved during the afternoon preceding the day of operation.

2. The skin from the ensiform cartilage to the pubes, as well as the vulva, is given a thorough scrubbing with soap and water, paying particular attention to the umbilicus and folds of the skin.

3. A vaginal douche of bichloride (1-2000) followed by one of sterile water is given when the vulva is being prepared.

4. A poultice of green soap is now applied to the abdomen for two hours.

5. With hands well sterilized the soap is then removed by scrubbing with a brush and hot sterile water, changing three or four times, or until clear. Then wash the area with alcohol, next with mercuric bichloride solution (1-1000).

6. A large sterile gauze shield is next laid over the cleansed part, and a separate one over the vulva, and kept in position.

7. On the morning of operation, and subsequent to the enema referred to, a bichloride douche (1-1000), followed by

sterile water is administered. The vulva is washed with a bichloride solution (1-1000) and a sterile pad applied.

8. All aseptic precautions as to dishes, hands, etc., are to be observed in the preparation.

9. When placed upon the operating table the vagina as well as the vulva is finally prepared by washing with green soap and water, followed by several changes of sterile water, next with bichloride solution (1-1000), then by sterile water, and a gauze shield placed over the vulva.

10. The abdominal field of operation is now exposed by separating the division in the blankets. Rubber sheeting is placed above and below the exposed area, the gauze shield removed, and the abdomen well washed with green soap and sterile water, next with alcohol, next with bichloride (1-1000), and finally flushed freely with sterile water and covered with a moist gauze protector.

11. Four towels are then placed around the area of operation, pinning them at the corners, leaving only sufficient of the abdomen exposed as will be required for the incision. The laparotomy sheet is now laid on and four more towels placed around the opening in a similar manner to the first set. Finally moist towels are placed above and below the field of operation.

C. PREPARATION OF THE OPERATOR AND HIS ASSISTANTS.

1. The surgeon and his assistants are required to clothe themselves in long operating gowns which have been previously sterilized.

2. The hands and arms are thoroughly scrubbed for ten minutes with green soap and warm water, using a sterilized hand brush. They are then immersed for a few minutes in a warm saturated solution of permanganate of potash; next in a warm saturated solution of oxalic acid until the stain is removed; next in sterile water; next in bichloride solution (1 to 1000), and finally washed off in sterile water or salt solution.

D. THE FURTHER MAINTENANCE OF THE CHAIN OF ASEPSIS.

1. The *trays*, *basins* and *jugs* are rendered sterile, by moist sterilization, in a large steam sterilizer.

2. The *instruments* are boiled for ten minutes in water to which has been added a few crystals of carbonate of soda.

3. *Ligatures* and *sutures*. Three kinds of sutures are usually employed—silk, silk-worm gut and catgut.

a. *Silk.* For all classes of abdominal work four sizes of silk, cut into appropriate lengths, will be found amply sufficient. One of heavy cable twist silk, 24 inches long; one of medium sized silk, 16 inches long; one of fine silk, where carriers are to be used, 16 inches long; and one of fine iron-dyed silk, 16 inches long, for intestinal work.

After the silk has been cut into the required lengths each size is bunched into fours and wound together on glass reels. The reels are placed in sterilized ignition tubes which have previously been padded at the bottom with sterilized non-absorbent cotton, four reels all of the same size being placed in each tube. The mouth of the tube is then plugged with sterilized non-absorbent cotton and sterilized by moist fractional sterilization. Previous to each operation the silks that may be required are resterilized.

b. *Silk-worm gut* is admirably adapted for suture material. In preparing it for use the twisted ends are cut off, and great care should be observed in the selection of each strand. They should be run through the fingers to detect unevenness or fraying, and tested as to their strength and pliability. They are first boiled for one hour in bichloride solution (1 to 1000) and slowly dried between sterile towels in a hot air oven at a temperature of 100° C. A dozen strands, folded once, are placed lengthwise in each of the glass tubes in which they are to be kept, the mouth closed with sterilized non-absorbent cotton, after which they are sterilized by fractional sterilization.

c. *Catgut.* The value of absorbable suture and ligature materials has been for years so apparent that much work has been done to secure one which would answer the conditions imposed by the requirements of aseptic surgery. Catgut is the cheapest and best of such materials. Its properties are well known, but the principal objection to its use as sutures or ligatures is the difficulty experienced in its sterilization. There are two conditions which must be fulfilled, and several which it is desirable to meet in the preparation of catgut for surgical purposes. The first essential condition is that the *sterilization* must be perfect. Not only must the pyogenic cocci be killed, but the spores of the most resistant bacteria, whether pathogenic or not, must likewise be destroyed.

The second essential condition is that the catgut must be strong and pliable. After fulfilling these the ideal method of sterilization should fulfil others; the method should not require too much time, nor be too troublesome, the catgut should not be swollen, it should be so kept as to be easy of transportation and not easily contaminated, and it should be free from poisonous or irritating chemical substances.

The various methods in use depend upon heat, chemical agents, or the combination of the two. Chemical agents are uncertain in their bactericidal properties and investigators are becoming daily more sceptical as to these properties. It has been found that catgut which has been thoroughly dried will stand a high degree of heat without much injury, and it is upon this principle that the Cumol or modified Kronig method adopted by us depends.

The principal features of this method of sterilization consist of drying the catgut in a dry air sterilizer at temperature of 80° C. and then transferring it to a vessel containing cumol and heated on a sand bath to 165° C. and kept there for one hour.

Cumol, although not explosive, is highly inflammable, and accordingly the heating of it in the ordinary way is dangerous. For the safe manufacture of cumol catgut a special apparatus consisting of a hollow jacketed closed cylinder, with sand within the jacket, and containing a wire cage and high registering thermometer, has been devised. The catgut, cut into desirable lengths, 15 inches, is wound into small coils or rolls, each containing six strands. It is then placed in the wire basket surrounded by a few layers of butter cloth or filter paper, and placed within the sterilizer. Heat by means of a Bunsen burner is slowly applied, and the temperature gradually raised to 80° C. and held there for one hour. It is to be remembered that the raising of the temperature *must* be done very slowly. Rapid rise of temperature renders the catgut brittle on boiling, and besides, after reaching the 80° C. limit it is apt to go far beyond that and thus wholly destroy the catgut by excessive heat before it is properly dried. From one to two hours should be devoted to reaching the 80° C. limit, the heat being turned off for a few minutes from time to time. Should the thermometer show that the temperature was rising above the limit, the top of the sterili-

zer may be opened slightly, when the temperature will at once decline.

After being thoroughly dried the cage is removed and the cumol (sufficient to completely cover the catgut after the cage has been returned) is poured into the sterilizer and the temperature raised to 100°C . On reaching this point the cage with the catgut is placed in the cumol and the temperature raised to 165°C . and held there one hour. A good heat is now required and, as the temperature rises rather slowly, there is not so much danger of it going rapidly over the prescribed temperature. It is well however to be on the watch when the temperature is reaching the limit and prepared to turn down or off the heat if such is required. A fairly good heat however is necessary all the time to keep the temperature up for the hour. Watchful care should be observed and the apparatus never left from the time the heat is first started until it is finally turned off, lest the catgut be burned or the cumol vaporized and become ignited.

At the end of the hour the flame is *first* put out and *then* the cumol drawn off. The catgut is allowed to remain in the sterilizer for an hour longer, without any additional heat, for the purpose of removing the excess of cumol from the catgut and thoroughly drying it.

At the end of this time the catgut is transferred to perfectly dry and sterile ignition tubes, after which the tubes are plugged with sterile cotton batten.

As so much depends upon the dryness and sterility of the tubes they should be sterilized by moist sterilization for three days in succession, and on the day they are required baked for two hours in a hot oven or dry air sterilizer.

Plain and *iodoform gauze* should be in readiness. Each is cut into such lengths and sizes as will be found most serviceable for wipes, packings "walling off" material, drainage and dressings. Each variety of gauze is packed in loose layers in large ignition tubes which are closed and sterilized in the usual way.

The iodoform gauze is prepared by adding six ounces of sterilized salt-solution-soap-suds to ten drams of fine iodoform powder, and mixing thoroughly. These proportions will be sufficient for three yards of gauze. Fold the gauze lengthwise so as to make a width of nine inches and dip into the mixture, rubbing

the solution well into the meshes. When the gauze has been thoroughly impregnated, free it of the superfluous moisture and place in sterilized glass jars for further use.

5. The *sponges* used are made from folded gauze, and are of two sizes, the larger size being 10 x 18 inches. At the corner of each is attached a piece of tape 10 inches long for fixation outside the abdomen when in use. These, along with the necessary occlusion dressings, are sterilized by fractional sterilization and again sterilized before operation.

6. An abundance of .06 *salt solution* (two even teaspoonsful to the quart of distilled water) in glass beakers are always in readiness for flushing out the abdominal cavity and for intravenous, intracellular or rectal injection. Salt solutions in excess of the normal strength are kept for emergencies. A solution of approximately the proper strength and temperature may be obtained by adding a pint of boiling water to a quart of solution containing one hundred and forty grains, or two large teaspoonsful of salt, the latter solution being kept at the room temperature.

R. W. GARRETT.

THE KINGSTON GENERAL HOSPITAL.

Once again the Governors of this Institution have placed before the public their Annual Statement. From it we glean the following information :—

Number of indoor patients,	-	-	-	1,350
Number of outdoor patients,	-	-	-	1,150
Total number of patients,	-	-	-	2,485
Total receipts,	-	-	-	\$16,976.37
Total expenditure,	-	-	-	17,010.01
Deficit,	-	-	-	36.04

The revenue was derived from a variety of sources :—Government Grant, Municipal Grants, Proceeds of Entertainments, Students' Fees, Church Collections and Private Subscriptions. It is gratifying to those who are interested in the work of this Hospital to find that it is so generally appreciated and aided by the public not of Kingston but of the surrounding county. No

less than 19 municipal councils outside of Kingston made grants to this institution during the past year. Collections were taken up in no less than 39 of the Protestant churches in the district surrounding Kingston, and in 17 of Kingston's churches. These grants and collections show that the people of this district who have the opportunity of but knowing the Hospital's good work appreciate it and are willing to give voluntarily of their means towards its support. This must be very gratifying to the officials, to the governors and the attending staff.

We extend our congratulations to Dr. A. R. B. Williamson upon having successfully passed the examination for M.R.C.S., Eng. Dr. Williamson left Kingston in July last and passing the examination so soon is very creditable to him and to his training in this country.

Kingston by the votes of her property owners has granted \$50,000 to Queen's University to enable her to increase her buildings, and thus provide accommodation for her ever increasing number of students. This action of Kingston is unparalleled in Canada, if not on this continent, and shows in a most practical manner what Kingstonians think of the work and worth of Queen's. We congratulate Queen's on receiving this splendid and substantial expression of goodwill from the citizens of Kingston, but more especially would we congratulate the citizens of Kingston on the public spirit which prompted them so handsomely to come to the assistance of an educational institution. Queen's is not a local institution. Her students come from far and near, and her graduates are to be found in every quarter of the habitable globe. She adds to Kingston's reputation, and by the generosity of the citizens will be enabled to carry on her good work more successfully in the future.

BOOK REVIEWS.

Manual of Diseases of the Eye. By Charles H. May, M.D., Chief of Clinic and Instructor in Ophthalmology, Eye Department, College of Physicians and Surgeons, Columbia University, New York. William Wood & Co.

This is one of the best of the smaller books on the eye. The essential fundamental facts of ophthalmology are set forth in a remarkably clear and concise style and while the rarer conditions are not entirely overlooked, those which are frequently met with are described in detail. The illustrations are particularly good for so small a work, and this is the more creditable as they are almost entirely original. The illustrations in color are equal to anything published. Dr. May is to be congratulated on the production of a first-class work from both the literary and the professional point of view.

Diseases of the Tongue. By Henry T. Butlih, F.R.C.S., D.C.L., and Walter G. Spencer, M.S., M.B. (London) F.R.C.S. Cassell & Company. 1900.

A comparison of this book with the first edition published in 1885 shows a remarkable advance both in letterpress, in illustration and in additional information. This is the only valuable treatise on diseases of the tongue. It is especially of value when one meets for the first time, with one of the rarer affections. The list of references as classified at the close of the book, makes a complete record of the literature in this department of medicine and surgery.

Eye, Ear, Nose and Throat. By W. L. Belanger, M.D., and A. G. Wippen, M.D., Lea's Series of Pocket Text-Books. Lea Brothers & Co., Philadelphia, 1900.

This is a very well arranged manual on these subjects, suitable for the student, in haste to require the knowledge necessary to pass his examinations. No work so condensed as this makes interesting reading, but it is a great advance on the "Quiz-compend" style of treatise. The book is recommended without hesitation to the student whose time and money are limited.

Post-mortem Examinations. Methods and Technique. By John Caven, B.A., M.D., Prof. of Pathology, University of Toronto, pp 40. Interleaved and illustrated. J. A. Carveth & Co., Toronto. Price \$1.

This little book deals in a concise manner with the ordinary methods of procedure in a regulation autopsy. In it we first find a list of the requisite instruments and apparatus, and then in detail in order of procedure the methods examination by inspection and section. The points to which particular attention must be directed in examinations of the bodies of infants and of individuals suspected of having been poisoned, are given special consideration. A couple of pages are added on the means of preservation of pathological tissues. While the author properly places a simple bacteriological outfit in the list of requisites, he nowhere mentions their use, nor does he make any note of how organs might be preserved for a later bacteriological examination. This is a serious error we think in a book dealing with this subject even so shortly as this one does. The book contains a few good illustrations, is interleaved for further notes, and taken altogether covers pretty fully the subject with which it deals from the purely morbid anatomy view points.

D. V. SULLIVAN, B.A. ; M.D. ; C.M. ; M.R.C.S. Eng.

FOR the sixth time in eight years Death has visited the Medical Faculty of Queen's University and carried off a member of the Staff. On Sunday evening, Nov. 6th last, Dr. D. V. Sullivan, who had been away for his health, received his summons and passed away, being denied the privilege of again seeing those whom he loved and to whom he was dear. Dr. Sullivan was the eldest son of Hon. Dr. M. Sullivan. He graduated as B.A. at Queen's University in 1890, and as M.D. and C.M. in 1892. He then went to Europe studying at London, Dublin, Paris, The Prague and Vienna. While abroad he secured the degree of M.R.C.S. Eng. He returned to Canada in 1895 and at once entered upon the practice of his profession in his native city, Kingston. In 1897 he began his duties as Demonstrator of Anatomy in Queen's University, where his genial manner, his accurate knowledge of the subject and his power of imparting knowledge soon made him a general favorite with the students. Dr. Sullivan was one of the Surgeons of the Hôtel Dieu Hospital and Surgeon to the Grand Trunk Railway. His ability was marked and his prospects the brightest, but about a year ago his health began to fail and he had to give up work. While his death was not unexpected the suddenness of it and the circumstances surrounding it make it particularly sad. To his father and mother, his brother and sisters the loss is incalculable; in the Faculty he will leave a blank hard to fill, and by the students he will be sadly missed. To his family the QUARTERLY extends most heartfelt sympathy.